



## Follow-Up Study of War Neuroses (1955)

Pages  
415

Size  
5 x 9

ISBN  
0309340152

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WORLD WAR  
FOR  
GILBERT

# A FOLLOW-UP STUDY OF WAR NEUROSES

by

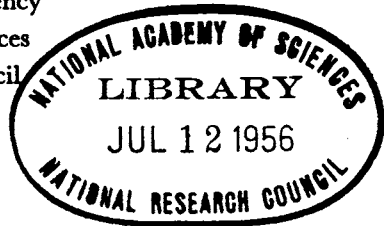
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22 JANUARY 1955

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The work reported herein is part of the program of studies of the Follow-up Agency of the National Research Council developed by the Committee on Veterans Medical Problems in cooperation with the Veterans Administration, the Army, and the Navy.

This investigation was supported by the Veterans Administration upon the specific advice of the Committee on Veterans Medical Problems of the National Research Council. It was begun while the senior author was Assistant Chief, Neuropsychiatry Division, Department of Medicine and Surgery, Veterans Administration, and was conducted under contracts with George Washington University School of Medicine (Winfred Overholser, M. D., Professor of Psychiatry, being the responsible investigator) and the National Research Council.

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**This volume is dedicated  
to the men and women  
who served in the United States Armed Forces  
in World War II**

# Foreword

## *To the Series of Monographs on Medical Follow-up Studies*

Following World War II, The Surgeon General, U. S. Army, Major General Norman T. Kirk, suggested that a research program be organized to take advantage of the scientific potentialities of the recorded medical experience of the armed services in World War II, and the extensive observations which would subsequently be made on veterans in the hospitals and regional offices of the Veterans Administration. Research in the natural history of disease is greatly facilitated by certain characteristics of the medical experience of the Armed Forces, both in war and in peace; and of veterans as a class of beneficiaries of the Federal Government. Since 1946 the Veterans Administration has placed great emphasis upon the encouragement of essential investigations in this area. In war especially, but also in time of peace, the military personnel comprise a large population with a great diversity of stress, trauma, and disease, in which each illness or injury generates a permanent record; all such episodes (or a fair statistical sample thereof) are indexed by means of punched cards, and there also exists a uniquely complete and centralized reservoir of pathological material. The veteran population is now in excess of 20 millions and is both more easily located and more readily motivated to participate in specific studies than any other large segment of the U. S. population. It is served by an integrated system of medical care, with emphasis upon service-connected illness or injury, administered by 172 hospitals with a rated aggregate capacity in excess of 118,000 beds, by clinics in 69 regional offices, and by many additional supplementary medical and dental services.

Several efforts had previously been made to extract scientific information on the natural history of disease from the medical experience of World War I, supplemented by the later records of what was then called the Bureau of Veterans' Affairs. This led to the publication of special reports in the History of the U. S. Army in the World War. However, no systematic program had been established and the opportunity was never fully realized.

In 1946 Major General Paul R. Hawley, then Chief Medical Director of the Veterans Administration, requested that the National Research Council advise the Veterans Administration on the organization and conduct of its developing program of medical research. For this purpose the Committee on Veterans Medical Problems of the National Research Council was established. This Committee was charged with the broad responsibility for initiating and fostering a general program of medical follow-up studies based on experience with the military and veteran population.



Under this Committee was organized the Follow-up Agency of the National Research Council to carry out the staff functions associated with the planning and organization of research projects, arranging access to medical records, and providing statistical analysis. The Veterans Administration has provided the direct financial support for the majority of the studies in this program and the Armed Forces have provided strategic support in the form of access to necessary records and ancillary services. Many Federal, State, and private agencies have also given generous assistance to the work as required.

The program is a general one, its unity arising out of the availability of a research tool of broad applicability in clinical medicine, especially in the area of the natural history of disease. Some studies have been based entirely on existing records (military, clinical, pathological, mortality, disability, etc.) while in others the recorded information has been supplemented by intensive laboratory and clinical observations.

The Veterans Administration is deeply indebted to the members of the Committee on Veterans Medical Problems for their vision and foresight in organizing and directing this program of medical follow-up studies.

Much of the product of the program will be found in medical periodicals appropriate to the subjects of investigation. However, some of the studies are of such magnitude as to require that they be reported at greater length than would be possible even in a series of journal articles. The Veterans Administration has, therefore, inaugurated a series of monographs as the most effective means of presenting the results of these larger studies.

A handwritten signature in cursive script that reads "George M. Lyon". The signature is written in dark ink and is positioned above the printed name and title.

GEORGE M. LYON, M. D.,  
*Assistant Chief Medical Director  
for Research and Education.*

## *Foreword*

This study is the result of cooperative efforts between governmental agencies and also represents a partnership of government and civilian medicine. It would be difficult to overemphasize the pertinency of the subject matter to our national welfare. The experiences of two world wars and their aftermaths demand imaginative and exhaustive investigations of causative, therapeutic and rehabilitative factors in psychiatric illnesses. The pension and compensation functions of the Veterans Administration give factual and startling evidence of these needs.

Our defense efforts including the present and future requirements of the armed services, as well as the ever-present spectre of total mobilization in an emergency, all underline the necessity for continued evaluation of the manpower resources of the nation. This includes a study of psychiatric morbidity and how it can be more effectively combated, as well as treated, together with an analysis of the optimum use of the disabled, particularly those with marginal disabilities.

This inquiry into the "war neuroses" offers the opportunity for an examination of our present knowledge of the psychoneuroses, particularly as applied to the military setting. It provides a well-documented record of the results of selection, preventive efforts and treatment and rehabilitative procedures. It allows a thoughtful evaluation of screening criteria, assignment methods and treatment programs. It permits conclusions to be drawn with profit to civilian psychiatry, the military and those charged with the after-care of the veteran. That this difficult and laborious research effort could be brought to fruition constitutes a recognition of the dedication and resourcefulness of the authors and those who assisted them.

HARVEY J. TOMPKINS, M. D.

## *Preface*

The problem of emotional breakdown was one of the most serious medical problems with which the Armed Services had to contend during World War II. Much of what had been learned in World War I had been forgotten and had to be learned again. Those who did not understand the nature of emotional disorders were inclined to be intolerant and even contemptuous of the men who could not control their feelings by "pulling themselves up by their boot-straps." This was apt to be the case particularly with men who broke down in training camps or in any situation other than combat.

Not a few medical officers had been sensitized to the diagnosis of psychoneurosis by the fact that so many veterans of World War I were receiving compensation from the Veterans Administration for neurotic disorders which in many instances bore little or no relationship to their military service. There were pressures to subordinate scientific medicine to practical realities. It was feared that men who received medical discharges for psychiatric reasons would be compensated for their failures. It was predicted that they would cling to their ills and become burdens for the rest to bear. Even the reality of their difficulties was questioned and little distinction was made by some between simulation of illness and neurotic disability.

The need for a systematic unbiased study was apparent, and we are greatly indebted to the Veterans Administration for the generous financial support which made it possible. When this follow-up study was undertaken, it was not thought that some of the answers we were seeking would be needed so quickly. The onset of the Korean conflict caused us to bring our attention sooner than we had planned to the military applications of our findings. Partial and preliminary reports were published in the *American Journal of Psychiatry* and in the *Armed Forces Medical Journal*. We are indebted to the editors of these journals for permission to use in this volume material and figures from these early reports.

The study has been a large, cooperative undertaking. We have been greatly helped by the many officers and civil servants in the Department of Defense who provided the rosters of cases, access to medical records, and related statistical material from which the study takes its departure. We are deeply indebted also to those in the central and regional offices of the Veterans Administration who helped us in so many ways. Specific acknowledgement is made in the text to the more than 200 psychiatrists who participated in the study, to the medical officers in the Army who examined

the control group, and to members of the staff of the Follow-up Agency of the National Research Council where the records and statistical functions were performed. We must also express our gratitude to the American Red Cross for the great assistance it gave in the actual follow-up work. Finally, acknowledgement must be made of the fine spirit of cooperation manifested by the subjects themselves. With no real prospect of personal gain, and often with some anxiety about reviewing unpleasant events of the war years, the majority of them nevertheless presented themselves for study as a contribution to the further understanding of the neuroses of war.

NORMAN Q. BRILL, M. D.

GILBERT W. BEEBE, PH. D.



# *Table of Contents*

	<i>Page</i>
Foreword to the Series of Monographs on Medical Follow-up Studies . . . . .	iii
Foreword . . . . .	v
Preface . . . . .	vi
Introduction . . . . .	1
<b>PART ONE. The Basic Findings.</b> . . . .	<b>25</b>
I. Military and Sociological Characteristics of the Population Sampled . .	26
II. Psychiatric Aspects of the Preservice History . . . . .	56
III. Period of Military Service . . . . .	106
IV. Follow-up Status . . . . .	120
<b>PART TWO. Analysis of Follow-up Data.</b> . . . .	<b>137</b>
V. Disability . . . . .	138
VI. Diagnosis at Follow-up . . . . .	167
VII. Adjustment at Follow-up . . . . .	183
VIII. Treatment Since Separation From Service . . . . .	190
IX. Improvement Since Separation From Service . . . . .	193
X. Man's Own Comparison of Health at Follow-up and at Entry . . . . .	198
XI. VA Compensation for Psychiatric Disability . . . . .	205
<b>PART THREE. Analysis of Military Experience.</b> . . . .	<b>215</b>
XII. Nature of Stress . . . . .	216
XIII. Location at First Breakdown . . . . .	233
XIV. Severity of Illness at First Breakdown . . . . .	251
XV. Treatment in Service . . . . .	256
XVI. Pattern of Disposition . . . . .	262
<b>PART FOUR. Analysis of Preservice Period.</b> . . . .	<b>271</b>
XVII. Family History . . . . .	272
XVIII. Preservice Personality . . . . .	280
XIX. Preservice Adjustment . . . . .	311
<b>PART FIVE. Implications for Induction, Utilization, and Disposition Policies.</b>	<b>321</b>
<b>Appendices:</b>	
I. Abstracting Form for Military Personnel History . . . . .	336
II. Abstracting Form for Medical History, Military Period . . . . .	337
III. Form Letters Used in Follow-up . . . . .	338
IV. Examination Booklet Used by Psychiatrist . . . . .	343
V. Sample Case Summaries, Based on Psychiatric Interviews . . . . .	357
VI. History Outline Used by Red Cross Social Worker . . . . .	367
VII. Questionnaire Used in Follow-up . . . . .	372
<b>Index</b> . . . . .	<b>379</b>

## TABLES

<i>Table</i>	<i>Page</i>
1. Distribution of Final Sample by Proximity to Psychiatrists and Branch of Service.....	5
2. Distribution of Final Sample by Proximity to Psychiatrists and Branch of Service, for Clinical and Record Cases.....	6
3. Disposition of Referrals to Red Cross.....	11
4. Comparison of Examined and Unexamined Men as to Disciplinary Indices.....	15
5. Distribution of Examining Psychiatrists by Number of Men Examined....	22
6. Comparison of Observed and Expected Numbers of Cases Classified as Without Psychiatric Disability at Follow-up, Among Sets of Five Seen by Single Examiners.....	23
7. Estimated Average Increase in Variance Attributable to Examiner Variation, as Percentage of Maximum Increase Possible, Selected Rating Scales.....	24
8. World War II Admissions, by Cause.....	26
9. World War II Noneffective Rates and Disability Discharges, by Cause....	28
10. Age at Entry Into Service for Men With Psychoneurosis and Controls....	28
11. Region of Residence at Time of Separation for Men With Psychoneurosis and Controls, Army Personnel Only.....	29
12. Size of City of Residence at Time of Separation for Men With Psychoneurosis and Controls, Army Personnel Only.....	30
13. AGCT Scores for Men With Psychoneurosis and Controls, Army Personnel Only.....	30
14. Civilian Occupation Before Entry Into Service for Men With Psychoneurosis and Controls, Army Personnel Only.....	32
15. Highest Educational Grade Completed Prior to Entry Into Service, for Men With Psychoneurosis and Controls, Army Personnel Only.....	32
16. Estimated Admissions per 1,000 Men per Year for Psychoneurosis, by Education Prior to Entry, White Army Enlisted Men.....	33
17. Marital Status at Entry Into Service for Men With Psychoneurosis and Controls, Army Personnel Only.....	33
18. Religion of Men With Psychoneurosis and Controls, Army Personnel Only.....	34
19. Length of Service and the Chance of Breakdown, Personnel in the Army During 1944.....	35
20. Months of Service Following First Admission for Psychoneurosis, Army Clinical + Record Cases Only.....	36
21. Total Months of Service for Men With Psychoneurosis and Controls, Army Personnel Only.....	36
22. Months of Overseas Service for Men With Psychoneurosis and Controls, Army Personnel Only.....	37
23. Year of Separation for Men With Psychoneurosis and Controls, Army Personnel Only.....	37
24. Component of the Army of the United States, for Men With Psychoneurosis and Controls.....	38
25. Grade at Separation for Men With Psychoneurosis and Controls, Army Personnel Only.....	40
26. Highest Decoration or Award, for Men With Psychoneurosis and Controls, Army Personnel Only.....	41
27. Number of Courts-Martial, for Men With Psychoneurosis and Controls, Army Personnel Only.....	42
28. Type of First Court-Martial Offense for Men With Psychoneurosis and Controls, Army Personnel Only.....	43
29. Unauthorized Loss of Time for Men With Psychoneurosis and Controls, by Reason for Losing Time, Army Personnel Only.....	43

*Table*

	<i>Page</i>
30. Arm or Service at Separation, for Men With Psychoneurosis and Controls, Army Personnel Only . . . . .	44
31. Mission of Unit at Time of Breakdown for Men With Psychoneurosis and During 1944 for Controls, With Estimated Admission Rates for Psychoneurosis, Army Personnel Only . . . . .	44
32. MOS at Time of Breakdown for Men With Psychoneurosis and During 1944 for Controls, With Estimated Admission Rate for Psychoneurosis, Army Personnel Only . . . . .	46
33. Number of Battles and Campaigns During Entire Period of Service, for Men With Psychoneurosis and Controls, Army Personnel Only . . . . .	46
34. Correlation Coefficients Between Number of WIA and Number of NP Admissions Weekly in Individual Combat Divisions, ETO, 1944-1945 . . . . .	47
35. Admissions per 1,000 Men per Year, by Cause, for Men With Psychoneurosis and Controls, Army Personnel Only, for Period Prior to Breakdown . . . . .	48
36. Admissions per 1,000 Men per Year, by Cause, in Interval After Breakdown and in Entire Period of Military Service, for Army Clinical and Record Cases of Psychoneurosis . . . . .	49
37. Multiplicity of Army Admissions for Psychoneurosis in 1944 . . . . .	49
38. Percentage of Cases With Specified Second and Third Diagnoses, 1944 Army Roster of Admissions for Psychoneurosis . . . . .	50
39. Percentage of Cases Remaining and Percentage Returned to Duty at Selected Intervals After Admission, by Diagnosis, Army Data . . . . .	52
40. Percentage of Men With Psychoneurosis Remaining in Hospital Over Time . . . . .	52
41. Percentage Distribution of Cases of Psychoneurosis as to Place of Final Treatment, 1944 Army Roster . . . . .	53
42. Echelon of Final Treatment, 1944 U. S. Army Admissions for Psychoneuroses in Three Overseas Theaters . . . . .	53
43. Psychiatric History of Parents and Siblings of Men in Clinical Sample . . . . .	58
44. Psychiatric History of the Mother, Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry . . . . .	59
45. Psychiatric History of the Father, Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry . . . . .	59
46. Psychiatric History of the Siblings and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	60
47. Parental Withdrawal in the Clinical Sample . . . . .	61
48. Parental Withdrawal in Preservice Histories of Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry . . . . .	62
49. Degree of Parental Affection and Rejection Experienced by Men in Clinical Sample . . . . .	63
50. Degree of Maternal Affection or Rejection and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	64
51. Degree of Paternal Affection or Rejection and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	64
52. Extent of Parental Discipline and Indulgence Experienced by Men in Clinical Sample . . . . .	65
53. Extent of Maternal Discipline or Indulgence and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	66
54. Extent of Paternal Discipline or Indulgence and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	66
55. Extent of Parental Protection or Grant of Independence Experienced by Men in Clinical Sample . . . . .	67



<i>Table</i>	<i>Page</i>
56. Extent of Maternal Protection or Grant of Independence and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	67
57. Extent of Paternal Protection or Grant of Independence and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	68
58. Evident Attitude of Men in Clinical Sample Toward Their Parents . . . . .	69
59. Evident Attitude Toward Mother and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	69
60. Evident Attitude Toward Father and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	70
61. Economic Status of Parental Families of Men in Clinical Sample . . . . .	70
62. Economic Status of Parental Families of Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry . . . . .	71
63. Role of Religion in Family Life of Men in Clinical Sample . . . . .	71
64. Role of Religion in Family Life and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	72
65. Overt Sibling Rivalry Experienced by Men in Clinical Sample . . . . .	73
66. Overt Sibling Rivalry and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	73
67. Parental Conflict Experienced by Men in Clinical Sample . . . . .	74
68. Parental Conflict and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	75
69. Cultural Assimilation and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	75
70. Parental Figures Before End of Adolescence of Men in Clinical Sample . . . . .	76
71. Parental Figures Before End of Adolescence of Men With Psychoneurosis and Controls, Army Personnel Only . . . . .	77
72. Summary of Psychiatric Signs in Family Histories of Men in Clinical Sample . . . . .	78
73. Summary of Psychiatric Signs in Family History and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	78
74. The Chance of Breakdown in Relation to Various Elements in Psychiatric History of Family, Army Personnel Aged 18-25 at Entry . . . . .	79
75. Position in Family Constellation, Men in Clinical Sample . . . . .	80
76. Position in Family Constellation for Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry . . . . .	81
77. Predominant Pattern of Preservice Personality of Men in Clinical Sample . . . . .	82
78. Predominant Pattern of Preservice Personality and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	83
79. Degree of Psychiatric Impairment of Men in Clinical Sample . . . . .	84
80. Preservice Psychiatric Impairment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	84
81. Preservice Adjustment to Parental Family and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	86
82. Preservice Sexual Adjustment of Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry . . . . .	87
83. Preservice School Adjustment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	88
84. Preservice Work Adjustment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	89
85. Preservice Social and Recreational Adjustment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	90
86. Preservice Community Adjustment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry . . . . .	91

*Table*

	<i>Page</i>
87. Preservice Adjustment Summary and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry.....	92
88. Preservice Psychiatric Treatment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry.....	94
89. Relative Screening Efficiency of Individual Preservice Characteristics, Army Personnel Aged 18-25 at Entry.....	96
90. Relative Efficiency of Individual Preservice Characteristics in Selecting Men of High Resistance to Stress, Army Personnel Aged 18-25 at Entry.....	97
91. Method of Scoring Preservice Adjustment to Parental Family, Army Personnel Aged 18-25 at Entry.....	98
92. Contributions of Nine Preservice Characteristics to Predisposition Rating, and Correlation Ratio of Each With Chance of Breakdown.....	101
93. Predisposition Ratings for Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry.....	102
94. Predisposition Ratings for Controls and for Men Who Broke Down in the Z/I and in Combat, Army Personnel Aged 18-25 at Entry.....	104
95. Percentage of Men in Clinical Sample Reporting Specific Civilian Forms of Stress.....	107
96. Percentage of Men in Clinical Sample Reporting Specific Forms of Inherent Military Environmental Stress.....	108
97. Percentage of Men in Clinical Sample Reporting Specific Military Frustrations and Excessive Demands.....	108
98. Percentage of Men in Clinical Sample Reporting Specific Forms of Combat Stress.....	109
99. Percentage of Men in Clinical Sample Reporting Specific Forms of Environmental Stress.....	110
100. Major Area of Stress Precipitating Breakdown of Men in Clinical Sample..	110
101. Location in Space and Military Career at Breakdown, Men in Clinical Sample.....	111
102. Type of Combat Engaged in Prior to Breakdown, Men in Clinical Sample..	112
103. Days of Combat Prior to Breakdown, Men in Clinical Sample Who Engaged in Ground Combat.....	113
104. Relative Weight of Predisposition and Precipitating Stress in Breakdown of Men in Clinical Sample.....	114
105. Severity of Illness Upon First Hospitalization for Psychoneurosis, Men in Clinical Sample.....	115
106. Pattern of Disposition for All Psychiatric Admissions of Men in Clinical Sample, by Branch of Service.....	117
107. Observed and Expected Deaths Among Entire Clinical and Record Sample, Following Separation.....	121
108. Percentage of Examined Men Having Specified Symptoms at Follow-up...	122
109. Comparison of Health at Entry With Health at Separation and at Follow-up, Men in Clinical Sample.....	123
110. Relative Emphasis Placed Upon Somatic and Emotional Origins of Their Illness at Separation and at Follow-up by Men in Clinical Sample.....	124
111. Usual Occupation of Men in Clinical Sample at Time of Follow-up, and of Veterans Generally.....	125
112. Employment Status of Men in Clinical Sample at Follow-up.....	126
113. Adjustment Ratings of Men in Clinical Sample at Follow-up, by Area of Activity.....	127
114. Relation of Any Maladjustments at Follow-up to Preservice Maladjustments.	128
115. Relative Psychiatric Disability at Follow-up, Men in Clinical Sample.....	128
116. Psychiatric Condition at Separation From Service and Change Prior to Follow-up, for Men in Clinical Sample.....	129

<i>Table</i>	<i>Page</i>
117. Psychiatric Diagnosis at Follow-up, Men in Clinical Sample.....	130
118. Prognosis (Without Treatment) of Men in Clinical Sample at Time of Follow-up.....	131
119. Amount of VA Compensation for Disability Received by Men in Clinical Sample at Time of Follow-up.....	134
120. Prevalence of Symptoms and Maladjustments at Follow-up in Relation to Psychiatric Disability .....	139
121. Psychiatric Disability at Follow-up and VA Compensation Status .....	140
122. Psychiatric Disability at Follow-up and Amount of VA Compensation, Men Compensated on Psychiatric Grounds Only.....	141
123. Psychiatric Disability at Follow-up and Examiner's Estimate of Need for Treatment.....	142
124. Relation Between Psychiatric Disability at Follow-up and Veteran's Own Estimate of Need for Treatment.....	143
125. Psychiatric Disability at Follow-up and Veteran's Opinion of Change in His Condition Since Entering Service.....	144
126. Psychiatric Disability at Follow-up and Veteran's Emphasis on Emotional or Organic Components of His Illness.....	145
127. Location at Breakdown and Psychiatric Disability at Follow-up.....	146
128. Psychiatric Disability at Follow-up and Severity of Illness in Service.....	149
129. Psychiatric Disability at Follow-up and Response to Treatment in Service..	149
130. Psychiatric Disability at Follow-up and Pattern of Disposition Following All Psychiatric Admissions in Service.....	150
131. Psychiatric Disability at Follow-up and Psychiatric Status at Separation....	151
132. Psychiatric Disability at Follow-up and Parental Psychiatric History.....	152
133. Psychiatric Disability at Follow-up and History of Parental Conflict.....	153
134. Psychiatric Disability at Follow-up and Summary of Psychiatric Signs in Family History.....	153
135. Psychiatric Disability at Follow-up and Preservice Personality.....	154
136. Percentage With at Least Moderate Disability at Follow-up, by Preservice Personality and Impairment.....	155
137. Change in Disability From Entry to Follow-up, by Preservice Personality Pattern.....	157
138. Psychiatric Disability at Follow-up and Preservice Adjustment Status.....	159
139. Overall Adjustment Status and Psychiatric Diagnosis at Follow-up.....	168
140. Psychiatric Diagnosis at Follow-up and Amount of VA Compensation, Men Compensated on Psychiatric Grounds Only.....	169
141. Psychiatric Diagnosis at Follow-up and Examiner's Estimate of Need for Treatment.....	170
142. Psychiatric Diagnosis at Follow-up and Veteran's Attitude Toward Seeking Psychiatric Help.....	170
143. Psychiatric Diagnosis at Follow-up and Prognosis.....	171
144. Psychiatric Diagnosis at Follow-up and Location at Breakdown.....	172
145. Psychiatric Diagnosis at Follow-up and Major Area of Stress Precipitating Breakdown.....	173
146. Psychiatric Diagnosis at Follow-up and Pattern of Disposition Following All Psychiatric Admissions in Service.....	174
147. Psychiatric Diagnosis at Follow-up and Psychiatric History of Parents and Siblings.....	177
148. Psychiatric Diagnosis at Follow-up and Preservice Personality.....	178
149. Preservice Personality Pattern and Psychiatric Diagnosis at Follow-up....	179
150. Psychiatric Diagnosis at Follow-up and Preservice Adjustment Summary..	180
151. Relation Between Economic and Occupational Adjustment at Follow-up..	184
152. Maladjustments in Work Area at Follow-up, and Preservice Personality...	185

<i>Table</i>	<i>Page</i>
153. Quality of Adjustments in the Family Area at Follow-up and Preservice Personality.....	186
154. Maladjustments in the Family Area at Follow-up and Preservice Personality.....	187
155. Overall Adjustment at Follow-up and History of Psychiatric Illness in Parental Family.....	188
156. Overall Adjustment at Follow-up and Preservice Personality.....	189
157. Overall Adjustment at Follow-up and Preservice Adjustment.....	191
158. Improvement in Psychiatric Status After Separation, by Occupation at Follow-up, Men Ill at Separation From Service.....	194
159. VA Compensation for Psychiatric Disability and Change in Condition Since Separation, for Men Ill at Separation From Service.....	194
160. Marital Status at Follow-up and Change in Condition Since Separation, Men Ill at Separation From Service.....	195
161. Type of Separation and Change in Condition After Separation, Men Ill at Separation From Service.....	196
162. Percentage of Men With Mild or Moderate Neuroses at Separation Who Improved After Separation From Service, by Location at Breakdown, and by Treatment Since Separation.....	196
163. Change in Condition After Separation, by Preservice Adjustment, Men Ill at Separation From Service.....	197
164. Mean Length of Service Prior to Breakdown, by Man's Own Estimate of Change in Health Between Entry Into Service and Follow-up.....	198
165. Major Area of Stress Precipitating Breakdown and Attitude Toward Change in Health Between Entry Into Service and Follow-up.....	199
166. Major Area of Stress Precipitating Breakdown and Attitude Toward Change in Health From Entry Into Service to Follow-up, for Men Who Described Their Health at Entry as Excellent.....	200
167. Major Area of Stress Precipitating Breakdown and Attitude Toward Change in Health Between Entry and Follow-up, for Men Who Described Their Health at Entry as Only Fair.....	200
168. Relation Between Attitude Toward Change in Health Between Entry Into Service and Follow-up and Attitude Toward Health at Entry, for Non-combat Cases Only.....	201
169. Man's Opinion of Health at Entry and at Follow-up, by Combat Status....	201
170. Man's Opinion on Change in Health From Entry Into Service to Follow-up, by Duration of Combat, for Ground Combat Cases Only.....	202
171. Man's Opinion on Change in Health From Entry Into Service to Follow-up, by Educational Attainment.....	203
172. VA Compensation for Psychiatric Disability and Census Division of Residence.....	205
173. VA Compensation for Psychiatric Disability and Size of Community.....	206
174. VA Compensation for Psychiatric Disability, and Origin of Symptoms and Psychogenic Complaints Made at Follow-up.....	207
175. VA Compensation for Psychiatric Disability and Man's Own Estimate of Change in Health From Entry Into Service to Follow-up.....	208
176. VA Compensation for Psychiatric Disability and Examiner's Estimate of Need for Psychiatric Treatment.....	208
177. Amount of Compensation for All Causes and Length of Service Prior to Breakdown.....	210
178. VA Compensation for Psychiatric Disability and Location at First Breakdown.....	211
179. Amount of Compensation for Psychiatric Disability and Severity of Combat.....	211

<i>Table</i>	<i>Page</i>
180. Percentage With VA Compensation for Psychiatric Disability and Percentage Drawing \$30 or More Monthly Among Those Compensated for Any Type of Disability . . . . .	213
181. Percentage of Men Experiencing Various Forms of Stress Prior to Breakdown, and Major Area of Stress Precipitating Breakdown . . . . .	216
182. Major Area of Stress and Pattern of Disposition . . . . .	218
183. Major Area of Stress and Psychiatric History of Parents and Siblings . . . . .	220
184. Major Area of Stress and Parental Withdrawal . . . . .	221
185. Conflict Between Parents and Percentage With Breakdown Under Minimal Stress . . . . .	222
186. Major Area of Stress and Religious Faith . . . . .	223
187. Major Area of Stress and Summary of Psychiatric Signs in Family History . . . . .	224
188. Major Area of Stress and Age at Entry Into Service . . . . .	224
189. Major Area of Stress and Educational Level at Entry Into Service . . . . .	227
190. Major Area of Stress and Marital Status at Entry . . . . .	227
191. Major Area of Stress and Subject's Own Evaluation of Health at Entry . . . . .	228
192. Preservice Adjustment and Breakdown Under Minimal Stress . . . . .	229
193. Major Area of Stress and Preservice Personality . . . . .	230
194. Location at Breakdown and Apparent Severity of Illness at Breakdown . . . . .	234
195. Location at Breakdown and Pattern of Disposition . . . . .	236
196. Location of Z/I Breakdown and Subsequent Service Overseas . . . . .	236
197. Location at Breakdown and Man's Own Evaluation of Change in Health From Entry to Separation . . . . .	237
198. Location at Breakdown and History of Psychiatric Illness in Parents and Siblings . . . . .	238
199. Location at First Breakdown and Attitude Toward Mother . . . . .	239
200. Location at Breakdown and Preservice Personality . . . . .	240
201. Preservice Adjustment and Early Breakdown . . . . .	240
202. Location at Breakdown and Preservice Educational Attainment . . . . .	241
203. Location at Breakdown and Preservice Occupation . . . . .	242
204. Location at Breakdown and Subject's Own Evaluation of Health at Entry . . . . .	243
205. Location at Breakdown and History of Preservice Treatment for Psychiatric or Presumably Psychosomatic Disorder . . . . .	243
206. Location at Breakdown and Presence and Origin of Symptoms at Follow-up . . . . .	244
207. Location at Breakdown and Man's Own Evaluation of Change in Condition Between Entry Into Service and Follow-up . . . . .	244
208. Location at Breakdown and Psychiatric Improvement Following Separation From Service . . . . .	245
209. Location at Breakdown and Psychiatric Diagnosis at Follow-up . . . . .	246
210. Location at Breakdown and Prognosis Without Treatment . . . . .	247
211. Location at Breakdown and VA Compensation for Psychiatric Disability . . . . .	248
212. Severity of Illness at First Breakdown and Response to Treatment in Service . . . . .	252
213. Severity of Illness at Breakdown and Health at Separation . . . . .	252
214. Severity of Illness at First Breakdown and VA Compensation for Psychiatric Disability . . . . .	254
215. Severity of Illness at First Breakdown, and Amount of VA Compensation for Psychiatric Disability, Men Compensated for Psychiatric Disability Only . . . . .	254
216. Type of Psychiatric Treatment at First Breakdown in Military Service and Subsequent Length of Service . . . . .	257
217. Type of Psychiatric Treatment at First Breakdown in Service and Return to Duty . . . . .	258
218. Type of Treatment in Service and Quality of Any Duty Subsequent to First Breakdown . . . . .	258

<i>Table</i>	<i>Page</i>
219. Type of Treatment in Service and Response to Treatment . . . . .	258
220. Type of Psychiatric Treatment for First Breakdown in Service and Response to Treatment . . . . .	259
221. Response to Individual Therapy in Service and Site of Breakdown . . . . .	260
222. Disposition of Men With Z/I Breakdown, by Branch of Service . . . . .	262
223. Disposition and Emotional Health at Separation . . . . .	263
224. Pattern of Disposition and Summary of Psychiatric Signs in Family History . . . . .	264
225. Pattern of Disposition in Relation to Preservice Personality . . . . .	264
226. Pattern of Disposition and Follow-up Diagnosis . . . . .	266
227. Disposition and Treatment in Service . . . . .	266
228. Pattern of Disposition and Veteran's Opinion on His Need for Psychiatric Treatment . . . . .	266
229. Pattern of Disposition and Various Follow-up Characteristics . . . . .	269
230. Diagnosis at Follow-up by Disposition in Service . . . . .	270
231. Preservice Personality and Psychiatric History of Parents . . . . .	273
232. Psychiatric History of Parents and Siblings and Overall Preservice Adjustment . . . . .	274
233. Summary of Psychiatric Signs in Family History and Preservice Personality . . . . .	276
234. Emotional Health at Separation and Summary of Psychiatric Signs in Family History . . . . .	277
235. Preservice Personality and Preservice Psychiatric Impairment . . . . .	280
236. Extent of Maternal Protection or Grant of Independence and Preservice Personality . . . . .	281
237. Clinical Impression of Intelligence and Preservice Personality . . . . .	282
238. Religious Preference and Preservice Personality . . . . .	283
239. Preservice Adjustment to Parental Family and Preservice Personality . . . . .	283
240. Preservice School Adjustment and Preservice Personality . . . . .	284
241. Preservice Work Adjustment and Preservice Personality . . . . .	284
242. Preservice Community Adjustment and Preservice Personality . . . . .	285
243. Preservice Marital Adjustment and Preservice Personality . . . . .	285
244. Preservice Adjustment Summary and Preservice Personality . . . . .	286
245. Percentage of Men With Impaired Preservice Adjustment, by Psychiatric Impairment and Preservice Personality . . . . .	286
246. Preservice Marital Status and Preservice Personality . . . . .	287
247. Age at Entry Into Service and Preservice Personality . . . . .	287
248. Man's Own Opinion of Health at Entry and Preservice Personality . . . . .	287
249. Personality Pattern and Treatment for Emotional Disorder Prior to Entry Into Service . . . . .	288
250. Component of the Army of the United States and Preservice Personality . . . . .	288
251. Court-Martial Rates and Preservice Personality Pattern . . . . .	289
252. Average Days Lost Under Article of War 107 and Preservice Personality . . . . .	290
253. Mean Months Overseas Prior to First Breakdown, by Preservice Personality . . . . .	290
254. Severity of Combat Prior to Breakdown and Preservice Personality, for Men With at Least Mild Combat Stress . . . . .	292
255. Emotional Health at Separation and Preservice Personality . . . . .	293
256. Occupational Adjustment at Follow-up and Preservice Personality . . . . .	295
257. Employment Status at Follow-up and Preservice Personality . . . . .	295
258. Psychiatric Diagnosis at Follow-up and Preservice Personality . . . . .	296
259. Examiner's Prognosis Without Treatment and Preservice Personality . . . . .	300
260. Preservice Personality Pattern and Examiner's Prognosis at Follow-up, Men With Mild Psychoneurosis at Follow-up . . . . .	300
261. Summary of Psychiatric Signs in Family History and Preservice Personality, 1951 Army Control Sample . . . . .	306

# INTRODUCTION

## BACKGROUND AND PURPOSE

Comparatively little is known about the natural history of the neuroses. Whereas physicians can prognosticate fairly well about a case of subacute bacterial endocarditis or virus pneumonia, when confronted with a psychoneurosis many doctors have difficulty in deciding whether they are dealing with a situational reaction having a good prognosis or with a severe, deeply rooted disorder for which little can be done. Also, failure to understand the specificity of the neuroses has in the past led to the adoption of certain inefficient practices and policies of military psychiatry. For example, early in World War II it was felt that a civilian neurosis would not only continue in a military setting but also usually get worse. Despite the fact that there now is abundant clinical experience to indicate that this is not necessarily the case, and even in the face of a change in military policy in this regard, many physicians, including some psychiatrists, persist in the belief that individuals with emotional disorders do not belong in the military services.

For a period of time during the war it was mandatory to discharge from the Army anyone with a psychoneurosis. Later it was decided that a psychoneurosis in itself was not cause for discharge and that each case would be individually evaluated and only those who were significantly disabled would be discharged.

At the close of the war it was not known just how great a problem the veteran with "war neurosis" would be. The term "war neurosis" was applied to the entire range of psychoneurotic disorders seen in the military services. The adjective "war" referred as much to the fact that the disorder occurred *while* the individual was in the Armed Forces as it did to any etiological influence of military service. The term was applied to those longstanding difficulties which clearly antedated service as well as to those which resulted from severe combat in men who had previously been well. So, it was not known to what extent the "war neuroses" existed prior to the war, and to what extent they were induced or aggravated by the various stresses of military service. An answer of some sort was needed in each case in order to determine compensability. The determination was simplified by a Veterans Administration directive that in case of doubt the benefit would be given to the veteran. While this might solve an administrative nightmare, it hardly satisfied the criteria of a scientific determination.

After the war, at the suggestion of The Surgeon General, U. S. Army, there was established at the National Research Council a Committee on Veterans Medical Problems to develop a program of medical follow-up studies based on the vast medical experience of the Armed Forces and the Veterans Administration. As part of this program, directed by the Na-

tional Research Council, financed by the Veterans Administration, and given all necessary support by all the military services and the Veterans Administration, the present study was undertaken on men with psychoneuroses during the war.

It was hoped that such a study would yield some information on the natural course of psychoneurotic disorders and be of some practical value to the Armed Forces in connection with problems of personnel selection, utilization, and discharge, and to the Veterans Administration in connection with its plans and policies for medical care and compensation of veterans. Of primary interest, of course, was the condition of the men several years after they had been treated for a psychoneurosis in the service and the comparison of the combat and noncombat cases; but in addition it was expected that valuable data could be obtained on the present needs for treatment, on the relationship between predisposition and military usefulness, on the effect of compensation on prognosis, and on many other questions which are considered in this report.

When the study was explicitly designed, it seemed impractical to include a control sample so as to provide rigorous information on etiology, and it was at first deliberately confined to a sample of men who broke down in service. Etiology was to be approached only on the basis of the relation between predisposition and stress in the individual man who broke down. Later, after the data had been collected and the analysis begun, the exigencies of the Korean situation permitted a change in the design, and arrangements were made with Army authorities for the psychiatric examination of a representative sample of 500 men inducted in August and September 1951. The latter data have been used in developing the controlled comparisons which are essential to the study of the probability of breakdown as a function of preservice experience and psychiatric status at entry.

## **SAMPLING PLAN**

The complete reporting systems of the Armed Forces, implemented as they are by punched cards on all or representative samples of admissions, offer ideal opportunities for sampling on the basis of specific criteria as to diagnosis, time, geography, and many other variables. The specific objectives of the study required a representative, nationwide sample of men with psychoneuroses in World War II, which might ideally be obtained by selecting men solely on the basis of an arbitrary choice of terminal digits of the service serial number. However, circumstances necessitated some compromise with this ideal. At the time the rosters were required, it was inconvenient for the Army to provide admissions for the years 1942 and 1943, and the year 1944 was chosen as a representative year. The ratio of Navy to Army admissions during the period 1942-1945 is on the order of 1:9, and although it was desired to work with a sample representing the experience of both services it was also felt that the sample should include enough Navy cases to permit comparisons to be made between Army and Navy cases, a purpose for which 10 percent of a proposed sample



of 1,000 cases seemed insufficient. Furthermore, a nationwide sample was desired, and it was known that arranging a psychiatric interview would be especially difficult in the less populous south and west, where few psychiatrists were available.

A request was made to the Medical Statistics Division, Office of the Surgeon General, U. S. Army, for a representative sample of about 8,000 Army (including Air Force) admissions for psychoneurotic disorders during 1944. The following types of psychoneurotic disorders were included:

hysteria; anxiety state (including hypochondriasis); neurasthenia; neurocirculatory asthenia; obsessive compulsive (psychasthenia); mixed (including phobias); reactive depression; psychoneurosis, other, unqualified, unspecified, including combat exhaustion.

The Medical Statistics Division maintained an 18 percent sample for 1944, chosen on the basis of terminal digits of the eight-digit Army serial number (ASN), and including all who lost time for psychoneurosis in 1944. For the above diagnoses this file included 44,000 admissions equally divided between those of Z/I<sup>1</sup> and of overseas origin. Attention was confined to the first or primary diagnosis and the file was also pruned of all officers, females, nonwhites, and men who did not survive the admission. On the basis of an arbitrary choice of terminal digits of the ASN, the file was further reduced to 8,343 1944 admissions, and it was this set which was transmitted to the NRC as the basic Army roster. At the NRC it was successively reduced to 1,233 cards on the basis of terminal digits of the ASN. Of these, 157 were duplicates so that identification and subsequent records work proceeded on the basis of 1,076 individual men, of which 985 were finally used.<sup>2</sup>

A parallel request was made to the Medical Statistics Division, Bureau of Medicine and Surgery, U. S. Navy. Since it was known that only a few hundred Navy cases could be chosen, and that a considerable part of

---

<sup>1</sup> Zone of Interior, which in World War II was confined to the continental limits of the United States.

<sup>2</sup> The other 91 were eliminated for the following reasons: (1) The ASN on the punch-card failed to draw a name from the Army personnel files; (2) a few additional nonwhites were discovered as the individual medical and personnel records were being abstracted; (3) in some instances a thorough search of all available records failed to provide documentary proof of an admission for psychoneurosis, and it was not desired to approach a man for psychiatric re-evaluation without having such proof; (4) in a few instances NRC locator requests were not returned by the VA in time for the allocation of the case to a psychiatrist, and since it was considered necessary to make up the entire sample at one time, these were not considered further from the standpoint of allocation but were studied as to mortality; and (5) although men back in service were retained in the sample, others known to reside outside the continental limits of the U. S. were dropped. These eliminations amount to about 8.5 percent of the roster chosen on the basis of ASN only. Although some of them are doubtless such as to introduce a slight bias into the material, the bulk of them represent the influence of presumably random errors, e. g., errors in card-punching, and it may with confidence be asserted that the sample of 985 men was chosen in such fashion as to give it every opportunity to represent faithfully the Army population of admissions for psychoneurosis.

any roster might prove unusable on technical grounds, the request was made for a representative sample of about 2,000 cases and a roster numbering 2,216 admissions was received. Since the Navy cards for 1942-1945 do not contain the service serial number, and experimentation showed that other numbers on the punchcard were not entirely uncorrelated with type of case, the file was reduced by choosing every third case from the 1942-1944 files and every fourth from the 1945 file. After this had been done, and all duplicates removed, there remained 517 individuals. This number was further reduced by 5.2 percent during the period of identification and abstracting of military records, for the same reasons mentioned above for the Army cases. Finally available for the study were 490 men, approximately half the number of Army cases.

There remained only the problem of coping with the fact that psychiatrists do not have the same geographical distribution as the general population, but tend to be concentrated in the cities, and in the east and middle west, far more than the general population. Approximately 225 psychiatrists throughout the country participated in the study.<sup>3</sup>

<sup>3</sup> Joseph Abrahams, Alfred L. Abrams, Spafford Ackerly, Kurt Adler, Morris Adler, George H. Allison, Leon L. Altman, Camilla M. Anderson, Peter G. Angelos, John W. Appel, Nathaniel Apter, Herbert Arnold, Kenneth L. Artiss, Eduard Ascher, Harry E. August, C. C. Ault, Frank Ayd, Jr., Henry H. Babcock, Benjamin Balsler, Lewis Barbato, Clarke H. Barnacle, Walter E. Barton, Gilbert M. Beck, Martin Berezin, Edward G. Billings, H. Waldo Bird, Nathan Blackman, W. J. Bleckwenn, Charles A. Bohnengal, Douglas Bond, Ellis Bonnell, Joseph B. Bounds, Walter Briehl, Robert Brooks, Henry W. Brosin, Arthur W. Brown, Douglas G. Campbell, Hugh Carmichael, Edward J. Carroll, Roscoe Cavell, S. Alan Challman, Ewin S. Chappell, Paul Chodoff, Robert B. Clarke, Robert A. Coen, R. Robert Cohen, Jules Coleman, Harold F. Corson, John M. Cotton, David Crocker, Stanley Crosbie, Eugene Davidoff, Henry A. Davidson, J. D. Davidson, John E. Davis, Jr., Murray DeArmond, Herman A. Dickel, Henry H. Dixon, Calvin S. Drayer, William H. Dunn, Jarl Dyrud, Franklin Ebaugh, John Edelstein, Jan Ehrenwald, Jack Ewalt, Mordecai L. Falick, Chester Farrell, Malcolm J. Farrell, William H. Fleeson, David J. Flicker, John Flumerfelt, Henry A. Foster, Kenneth V. Francis, Maurice R. Friend, Moses M. Frohlich, Clements C. Fry, Samuel Futterman, Lawrence H. Gahagan, Hugh M. Galbraith, Herbert S. Gaskill, S. W. Geshell, Edwin F. Gildea, Nicolai Gioscia, Albert J. Glass, Eugene G. Goforth, Abe A. Goldman, Edward D. Greenwood, John H. Greist, Roy R. Grinker, Manfred S. Guttmacher, George C. Ham, Walter W. Hamburger, Werner Hamburger, W. W. Hampe, Donald W. Hastings, Gerhard B. Haugen, Robert G. Heath, Arthur O. Hecker, Jesse L. Henderson, James M. Henninger, Louis Herman, Samuel Hibbs, Aaron A. Hilkevitch, Edward R. Hodgson, Edward D. Hoedemaker, Leslie B. Hohman, Charlton G. Holland, Charles B. Huber, Wilfred Hulse, Bellenden R. Hutcheson, Irving Hymann, Edward R. Janjigian, Melvyn Johnson, Paul H. Jordan, Ralph J. Kahana, Mark G. Kanzer, Alex H. Kaplan, Frank A. Kay, William K. Keller, Douglas M. Kelley, Robert P. Kemble, Joseph G. Kepecs, Morris M. Kessler, Baldwin L. Keyes, Milton H. Kibbe, Isham Kimbell, Jr., Isham Kimbell, Sr., A. A. Kippen, Bernard S. Klauber, John A. Kneipp, Joseph Lander, Martin Lazar, David Leach, Zigmond M. Lebensohn, Henry D. Lederer, H. Halbert Leet, Roland A. Leslie, David Lester, Lawrence A. Levitin, Norman A. Levy, Theodore Lidz, Louis Linn, Barbara Lipton, Robert C. Longan, Jr., Alfred O. Ludwig, Frank H. Luton, Ott B. McAtee, George T. McMahan, John F. McMullin, Leon J. Malock, Oscar B. Markey, Ben Marks, Sidney Marvin, Bernard S. Matthews, R. S. Matthews, John R. S. Mays, Michael Mendelson, Earl W. Mericle, Nicholas Michael, Joseph J.

A spot map of the country was then made showing the location of each psychiatrist. About the location of each was drawn a circle with a radius of 50 miles, and the area included within all the circles thus inscribed on the entire map was designated as the "covered" area, the rest as "uncovered." About two-thirds of the total of 1,485 men were in the "covered" area at the time the sampling plan was crystallized, in April 1948. Although both subjects and psychiatrists moved about the country somewhat, and the latter moved in and out of the study as well, the original designations made in April 1948 were retained for purposes of classification throughout the study. The final tabulation on this basis is shown in table 1.

**TABLE 1**

*Distribution of Final Sample by Proximity to Psychiatrists and Branch of Service*

Branch of Service	Proximity to psychiatrists		
	Covered area	Uncovered area	Total
Army.....	621	364	985
Navy and Marine Corps.....	305	185	490
Total.....	926	549	1,475

Once the above classification was in hand it was possible to make the final selection of men to be examined, it being considered unwise to allocate all the men in the uncovered areas because of the much lower probability of achieving a psychiatric interview and the much greater cost which would be involved. It was decided that the sampling of the uncovered

Michaels, James G. Miller, John C. Montgomery, Robert J. Mueller, Paul Nielson, John Novak, Leo L. Orenstein, Douglass W. Orr, Eli H. Orr, John J. O'Shea, Dwight M. Palmer, Samuel Paster, Joseph Pessin, M. R. Plesset, George E. Poucher, John Prusmack, Eugene Pumpian-Mindlin, Angus C. Randolph, William C. Redmond, Norman Reider, Louis Reik, Kenneth G. Rew, Lewis L. Robbins, J. Franklin Robinson, Alexander S. Rogawski, Howard J. Rome, John H. Rompf, Nathan N. Root, Victor H. Rosen, Milton Rosenbaum, M. P. Rosenblum, W. Donald Ross, Irving Rubins, I. J. Sarfatty, Earl Saxe, Isidore Schnap, Lawrence E. Schneider, Robert S. Schwab, Herman Selinsky, Donald Shaskan, Herman Shlionsky, Joseph H. Shuffleton, Norman R. Shulack, Daniel Silverman, Benjamin Simon, Joseph S. Skobba, Howard B. Smith, Lauren H. Smith, Heyman Smolev, Robert W. Southerland, Herbert X. Spiegel, John P. Spiegel, William G. Srodes, Harry A. Steckel, W. David Steed, Aaron Stein, Saul Steinberg, George A. Streeter, Marvin Sukov, Perry Talkington, Samuel M. Tarnower, Harry A. Teitelbaum, James Thickstun, Lloyd J. Thompson, Walter A. Thompson, Charles W. Tidd, Sidney J. Tillim, George J. Train, Andre R. Tweed, Vladimir Urse, Philip S. Wagner, Charlotte F. Walker, Edmund F. Walker, James K. Ward, Samuel R. Watson, James Watson, Robert W. Webb, Edwin A. Weinstein, Harry Weinstock, Erwin Wexberg, Morris S. Wheeler, Carl A. Whitaker, Roy M. Whitman, Benjamin Wiesel, Robert Wigton, David A. Wright, Orin R. Yost, Meyer Zelig, Isadore S. Zfass, Morton Zwerling. *Also*, Stuart K. Bush, James S. New.

cases should not be allowed to fall much below 100 cases, and with this final objective sampling ratios were set so as to subdivide the sample of 1,485 cases into "clinical" and "record" groups, the former to be allocated to psychiatrists for examination and the latter to be studied on the basis of records only. As the study progressed it became apparent that follow-up material of the quality and extent required for this study could not be obtained from available VA records. Accordingly, the record study was limited to the military records and no follow-up information was ever obtained on this group except cause of death. The final structure of the sample appears in table 2.

**TABLE 2**

*Distribution of Final Sample by Proximity to Psychiatrists and Branch of Service, for Clinical and Record Cases*

Branch of service	Proximity to psychiatrists						
	Covered area		Uncovered area		Total		
	Clinical	Record	Clinical	Record	Clinical	Record	Total
Army.....	604	17	61	303	665	320	985
Navy and Marine Corps.....	255	50	35	150	290	200	490
Total.....	859	67	96	453	955	520	1,475

The final plan thus provided a sample in which about one in every 240 1944 Army cases (without allowing for duplicate admissions), and one in every 150 Navy cases, were taken. The clinical sample, consisting of those earmarked for psychiatric examination, reflects parallel ratios of 1:350 and 1:250. These are, of course, small sampling ratios, but the reliability of a sample is more directly a function of its absolute size than of the ratio employed in selecting it from its parent population. The present sample was considered to be about as large as could be handled in a moderately intensive survey. Its aggregate size is such as to provide conclusions about the population of World War II admissions for psychoneurosis which are much more reliable, in the statistical sense, than can usually be obtained in follow-up studies in the psychiatric field. The frequency of events which are quite rare, e. g., homicide or other capital crimes, cannot, however, be reliably estimated from a sample of even the present size.

Two other sampling features of the present study require explanation. In the planning of the present study it was considered important to have a control group representing enlisted men in the Army in 1944, with information on their military and medical histories during service. For this purpose a control group of 397 Army enlisted men was so chosen that the number among them who saw service during each month in 1944 was

proportional to the number of psychiatric admissions during each month of that year. It was part of a roster chosen by Dr. Bernard M. Cohen of the National Research Council in connection with other studies conducted by the Committee on Veterans Medical Problems. Men were originally picked for this roster on the basis of a random set of Army serial numbers. It was not considered feasible to have these men receive psychiatric examinations, and since no other type of follow-up information seemed worthwhile within the framework of the study, attention was confined to the period of their military service.

A second control group was added after a preliminary analysis<sup>4</sup> had shown that the examiners' estimates of preservice personality, family history, and adjustment provided relatively powerful predictors of men's subsequent performance and the Korean mobilization again forced attention to the problems of etiology. Reintroduction of the induction system of recruitment having been forced by the Korean conflict, it was felt that an opportunity existed for the psychiatric examination of a cross section of men at the point of entering the Army. With the help and advice of Col. John M. Caldwell, M. C., then Chief, Psychiatry and Neurology Consultants Division, Office of the Surgeon General, U. S. Army, plans were drawn up for sampling inductees as they were received in the large training divisions immediately after induction. Six training divisions were chosen on the basis of training activities, geographical dispersion, and availability of experienced psychiatric examiners.<sup>5</sup> All but one had training programs in the arms, especially infantry, and the exception was a training installation under the Chief of Engineers to which were sent representative men not eligible for the arms for a variety of reasons. At each post the sampling plan was set up on the basis of terminal digits of the ASN so as to provide the psychiatrist with the first 90 (or 50) new white arrivals after 15 August 1951 and meeting the ASN criterion. Steps were taken to prevent losses from the group thus arbitrarily chosen.

In later analyses and tables reference will be made to various samples of men in the following terms:

*Original World War II Rosters*—About 8,000 Army and 2,000 Navy admissions for psychoneurosis from which clinical and record samples were chosen.

*Clinical Sample* (or cases)—955 Army and Navy cases of psychoneurosis selected for re-examination.

*Record Sample* (or cases)—520 Army and Navy cases of psychoneurosis on which supplementary data were taken.

*1944 Army Controls*—Dr. Cohen's sample of the Army in World War II.

*1951 Army Controls*—New recruits entering the Army, summer of 1951.

<sup>4</sup> Brill, Norman Q. and Beebe, Gilbert W.: Psychoneurosis, Military Applications of a Follow-up Study. *Armed Forces Med. Bull.* 2:15-33, Jan. 1952.

<sup>5</sup> Maj. S. D. Rapinchuk, Fort Riley, Kans.; Lt. Col. R. F. Mulholland, Fort Dix, N. J.; Lt. Col. J. J. Nannarello, Fort Jackson, S. C.; Lt. Col. Alex Brown, Fort Knox, Ky.; Maj. Cloyce L. Duncan, Fort Ord, Calif.; and Maj. Robert L. Christensen, Fort Leonard Wood, Mo.

## ORGANIZATION OF THE STUDY

The plan of the follow-up study provided for the psychiatric examination of the entire clinical sample, although it was recognized from the start that all of the men would not cooperate in such an examination. Because of the practical problems involved in obtaining the cooperation of both subjects and examining psychiatrists, it was decided to provide for only a 4-hour examination. The limitations of so brief an examination were realized and accepted. Prolonged contact with a patient is necessary for an accurate and complete understanding of his psychiatric illness, and what is reported at one time by a patient is often reversed at another time. Furthermore, any study of veterans is bound to be influenced by considerations of compensation. It was to be expected that in many instances the subjects would minimize any emotional difficulty they had prior to entering service and perhaps consciously or unconsciously exaggerate the role that military stress played. This would be in contrast to the tendency in some instances to do the opposite while in service. When the pressure was to get out of the service many men tried to prove their inadequacy by emphasizing their pre-existing difficulties—as if to say—“I was so bad off before—how can I be any good now?” An examination by a trained psychiatrist, however, is far superior to a mail questionnaire and it was felt that a 4-hour examination would provide an examiner with some basis for an overall impression of the man especially since he was given in advance the man’s military medical records. All arrangements with participating psychiatrists were handled by mail and telephone. The project was explained to them and their assistance invited. Without their help this study could not have been done. A majority of them were known personally by the senior investigator and were selected because of their outstanding competence. The vast majority had had military service and could be expected to understand both the need for the study and the stresses and problems that the men had been exposed to. Psychiatrists who were employed full time by the Veterans Administration were asked to participate only when necessary, because it was felt the chances of getting a true picture of the veteran’s condition were better if the study were dissociated from the VA and from any possibility of secondary gain.

Psychiatrists were paid \$10 an hour with a maximum of \$40 for each case since it was felt that they would be somewhat more conscientious if they were compensated—even though inadequately. In many instances far more than 4 hours were spent in getting the man in for the examination, in performing the examination, and in working up the report. The utilization of a large number of psychiatrists was the only practical approach to a nationwide sample. It was recognized that inconsistencies in psychiatric approach, orientation, and technique would arise in examinations performed by many different psychiatrists, but the advantage of a cross section of American psychiatrists seemed very great.

In order to eliminate as many obstacles as possible in getting the men to report for their examinations, they were paid traveling expenses if they had to come from out of town and a per diem of \$6 to cover expenses for meals, etc., if the greater part of a day were occupied by the examination. Since the examiners were taking the initiative in calling men in for an examination, and since it could be predicted that many men would no longer be ill, and that some would feel they never had been psychiatrically ill, examiners were urged not to approach the men initially as though they were still psychiatric patients. They were asked to explain the purpose of the follow-up examination and then to obtain an overall picture in approximately the 4 hours allotted—recognizing that it would necessarily be somewhat superficial. The examiner was asked to obtain, not merely the details of the veteran's condition and adjustment at the time of follow-up, but a complete life history including the period of military service. It was hoped that family history, childhood influences, and preservice emotional status could be related to breakdown in service and the subsequent course of illness.

## METHOD

Once the sampling plan had been organized to the point where the specific subjects could be chosen, it became possible to begin the collection of data essential to the psychiatric interviews. The examiners were provided with three types of information:

1. A summary of the military personnel history of the examinee, reproduced as Appendix I;
2. A summary of the medical admissions and diagnoses of the examinee during World War II, reproduced as appendix II; and
3. Photostatic copies of military medical records covering all admissions involving psychiatric diagnoses.

Items 1 and 2 were prepared by personnel<sup>6</sup> of the NRC Follow-up Agency in St. Louis, Garden City, N. Y., and Washington, D. C., under arrangements made by the Chief of Records Operations, Miss Nonamurray Lucke. Selection of material for photostatic reproduction was accomplished at the time item 2 was being prepared. Allocations of specific cases to individual examiners were begun in October 1948 and were made by the Follow-up Agency on the basis of geographical considerations and a desire to limit the allocations to the individual examiner to six cases or less. In a form letter (see appendix III) each examiner was given specific instructions for the follow-up of his cases, including a suggested form letter to be sent by him to the examinee on his own stationery. Provided as an enclosure to be sent to the examinee was a letter on VA stationery with a facsimile signature of the Administrator; this had been planned

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<sup>6</sup> Most of the records work on the project was done by the following members of the staff of the Follow-up Agency: Mrs. Barbara Linden, Mrs. Virginia Harris, Mrs. Dorothea Kimball, Mrs. Helen R. Luchuk, Miss Katherine Dorsey, Mrs. Florence Larkins, Mrs. Patricia Cosgrove, Mrs. Dorothy Mahon, Mrs. Marie Franklin.

when General Bradley was Administrator, and it was hoped that his military prestige and the weight of his office would help the examiner to overcome some of the expected resistance to the examination, especially if the latter were an individual practitioner with no evident connection with either the military or the VA. At the same time, the wording of the Administrator's letter provided concrete assurance to the examinee that he could talk freely to the examiner without fear that the content of the interview would be made available to the VA in a context which might affect his compensation status.

An examination form was provided for each case and is reproduced as appendix IV. It was developed after an earlier version was pretested on 20 cases. It did not carry the name of the examinee, or any VA or other official number, identification being by means of a code number. It also carried, on the cover page, the following statement about the confidential nature of the examination:

This form and the information it contains will *not* be available for purposes of adjudicating or reviewing pension claims by the VA officials. The development of the examination booklet was, of course, governed to some extent by a need to reduce the resulting observations to a form suited to statistical analysis. Summaries of sample cases will be found in appendix V.

The work of the first 2 years consisted chiefly of giving assistance to the examiners in locating elusive examinees, and in assisting them in making effective contact. If the first form letter met with no success, the examiner phoned or wrote one or more individual letters appropriate to the particular circumstances and endeavored to obtain the assistance of the examinee's own physician if the opportunity presented itself. In the main such efforts were rewarded in proportion to the energy and thought expended upon them by examiners. Most of the time of one person<sup>7</sup> was required to keep track of the progress of the work, entirely apart from supervisory and planning time. Reassignment of cases was frequent, and occasionally a subject was lost sight of and had to be tracked down. The examiners were confronted with a difficult problem and often made slow progress, but in the interests of the study it was necessary to prod them periodically to report, or to make further efforts, or to certify a case to the Red Cross. As soon as there began to be accumulated a set of cases with whom the examiners had failed, arrangements were made with the American Red Cross, under the terms of a general agreement with the Committee on Veterans Medical Problems, to provide assistance of two kinds, both of which proved highly effective. After an examiner had certified that he had sent repeated letters, but without success, to an examinee whose whereabouts were known, he asked the project director to obtain the assistance of the Red Cross. Arrangements were made with Miss Marie Youngberg,

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<sup>7</sup> This assignment was handled by several members of the staff of the Follow-up Agency, but for the longest and final period it was the responsibility of Mrs. Helen R. Luchuk.



Director of Home Service, National Headquarters, to obtain the assistance of a member of the home service department of the appropriate local chapter of the Red Cross. The local worker then undertook to visit the examinee and to encourage him to report for examination. If the Red Cross worker, often a skilled social worker, was unable to persuade the examinee to schedule an appointment with the examiner, she obtained such information as she could along the lines of an interview form which was developed to parallel the psychiatrist's examination form. A copy of this history outline appears as appendix VI. A great deal of very thoughtful work was done by Red Cross workers in the course of providing this assistance, and even if a detailed social history proved unobtainable a letter report summarizing available facts was almost always submitted and invariably proved useful in the final coding of the case for analysis. In all there were 495 referrals, disposed of as shown in table 3.

**TABLE 3**

*Disposition of Referrals to Red Cross*

Disposition	Number of cases
Brought to examiner.....	140
Social history.....	132
Letter report.....	200
Location problem.....	23
Total.....	495

If neither an examination nor a Red Cross social history could be obtained for a subject, a questionnaire was sent. This is reproduced in appendix VII and reflects a choice of some of the more important and accessible elements of the history. In a few cases repeated inquiries had developed sufficient hostility on the part of the subject to make it unwise to send a questionnaire. Also, a few men had specifically asked, or had been assured, that no further efforts would be made to urge their participation. The rest all received the questionnaire and 42, or 22 percent, returned them. The mailing was made only once; half received a form letter and half an individual letter in which all advantage was taken of any details which had become known through the previous efforts at follow-up. In some instances a motive for refusal had become apparent and an appeal could be fairly specific, but in other instances there was very little upon which to build an appeal. The response was virtually the same in both groups, which were randomly chosen, and it was concluded that the individualized letter offered no advantage in dealing with resistant cases.

A few men were back in service, particularly in the Army, and for them it was usually possible to arrange for a psychiatric examination if they were stationed within reach of an Army psychiatrist. Several Army psychiatrists interviewed men overseas who would otherwise have been lost to the study.

For all men who had neither an examination nor a Red Cross social history, the Follow-up Agency obtained VA claims folders which were then reviewed and usable information extracted to complement whatever other information had been obtained. Not all men had active compensation status, of course, but the claims folders did provide useful information for 156 such cases. Any rating examinations which had been made were to be found there, as well as an occasional social worker's report, correspondence from the subject about his health, and evidence of hospitalization in the VA system. In addition, supplementary information was obtained in this way on 81 cases with Red Cross social histories.

The next step was the development of a code and coding criteria by which the information in the examination and various reports could be converted into a form that would permit comparison and statistical analysis.<sup>8</sup> Routine coding was begun in August 1949 and completed in April 1950.<sup>9</sup> The senior author held weekly meetings with the coders for the purpose of clarifying any problems which arose and spot checked the coding of approximately 10 percent of the records.

Because of their bulk it is impractical to include the code and criteria in the appendices, but the structure of the code is evident in the tabular material and accompanying discussion throughout the book.

An extensive statistical analysis has been made on the observations obtained on the three periods into which each life history falls. The authors have been greatly aided along methodological lines by Mr. Seymour Jablon, mathematical statistician of the NRC Follow-up Agency, who undertook the discriminant analyses and advised on finer points of statistical method; tabulation and computation were under the immediate supervision of Miss Loewenstein, assisted by Mr. A. Hiram Simon and Mr. Sidney Wald. All conclusions as to relationships found in the data are based on appropriate statistical tests of significance, whether or not the explicit language of probability is used.

## THE PROBLEM OF BIAS IN FOLLOW-UP

Whenever follow-up is incomplete, and particularly when the convenience and intent of the individual patient largely determine whether or not he is numbered among those examined, one runs the risk that conclusions based solely upon examined men will not apply to the entire population of patients one set out to study. In this study psychiatric examinations were completed on 592 men, or 62 percent of the entire clinical sample. In an effort both to minimize bias and to provide a basis for its estimation, use

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<sup>8</sup> The authors were greatly assisted in this work by Donald Bradshaw, Paul Leahey, and Rebecca Rieger, who were graduate students in the Department of Psychology, Catholic University, and Dr. Sidney Marvin. The code for the nonmedical data was developed under the supervision of Miss Regina Loewenstein, Chief of Statistical Operations for the Committee on Veterans Medical Problems.

<sup>9</sup> Those who coded the psychiatric material were George S. Baroff, Donald Bradshaw, Marilyn Einhorn, Paul Leahey, and Thomas D. Haupt.

was made of the supplementary follow-up methods described earlier, and once all the follow-up data had been gathered, a systematic comparison was made of the 592 cases who were examined and the 363 who were not examined but for whom varying amounts of information had been obtained. Although efforts were made to handle the two groups so as not to introduce any extraneous variation, there was necessarily some difference in the coding of the data of the two groups. The family and preservice history of the man who had been examined was coded on the basis of all the information available to and recorded by the examiner, whereas for the man who was not examined coding was necessarily based upon military and VA records supplemented by a Red Cross social history or by a questionnaire. It was not feasible to code the examined cases twice, once for military records only and again from all available sources, but by coding a small sample both ways it was learned that the military records alone provided a somewhat less optimistic view of the preservice personality than was formulated by the examiner on the basis of both his examination and the available military records. It is inevitable, therefore, that insofar as material gathered at different times and in different contexts should be in disagreement, the two groups of examined and not examined will in all probability appear different when they are not, or more different than they truly are.

Statistical comparisons of the two groups on the basis of personnel information showed them to be homogeneous with respect to the following characteristics:

Branch of service.

Covered and uncovered areas, i. e., living within a radius of 50 miles from an examiner.

Whether inductee, regular Army, or National Guard (Army only).

Age at entry into service.

Geographical region of residence at separation.

Geographical region of residence at follow-up.

Total months spent in military status.

Months of service prior to first diagnosis of psychoneurosis.

Months of service after first diagnosis of psychoneurosis.

Type of separation from service.

Score in general classification test (Army and Marine Corps).

Arm or service at separation from service (Army only).

Civilian occupation prior to military service.

Educational attainment prior to military service.

Marital status prior to military service.

Change in marital status during military service.

Religion.

Military occupational specialty (Army only).

Months of service overseas if overseas.

Months of service overseas prior to first diagnosis of psychoneurosis.

Military mission of unit at time of first diagnosis of psychoneurosis (Army and Marine Corps).

Number of battles and campaigns.

Whether decorated, if overseas.

Whether wounded in action.

Type of court-martial offense (first offense).

Number of days confined or incapacitated while in military service.

Admission rate, entire period of service, all causes.

Admission rate, entire period of service, psychoneurosis only.

Admission rate, entire period of service, diagnosis of psychosomatic interest.

Admission rate, entire period of service, infectious & parasitic diseases.

Admission rate, entire period of service, accidental injuries.

Admission rate, entire period of service, causes not specifically classified.

The groups appear *not* to be homogeneous with respect to certain other characteristics, listed below:

Size of city of residence at separation.

Size of city of residence at follow-up.

Year of separation from service.

Military grade at separation.

Overseas theater of service.

Number of courts-martial, all offenses.

Number of courts-martial, AWOL only.

Number of days lost under Article of War 107, for men who lost time.

Number of days lost for AWOL, for men who were AWOL.

Admission rate, entire period of service, all causes except psychoneurosis.

Admission rate, entire period of service, psychiatric diagnosis other than psychoneurosis.

The difference with respect to residence arises from the fact that men living in cities of a million or more population were not examined as frequently as men living in smaller places. The difference is barely significant at the 5 percent level, but is characteristic of residence at both separation and follow-up 5 years later. The percentage of men examined is 56 for cities of a million or more at follow-up and 67 for smaller places.

The bias with respect to year of separation reflects a tendency for those separated early to be less accessible to psychiatric examination; the percentages examined are 46 for 1943 and earlier, 56 for 1944, 66 for 1945, and 66 for 1946-47. The differences are highly significant in the statistical sense and have been found in other NRC follow-up studies.

The men with the highest two grades at separation were examined at the rate of 83 per 100 studied, in contrast to 60 percent for men of lower grades.

The difference between the groups with respect to theater of service at time of diagnosis reflects only the fact that the follow-up rate is 56 percent

for admissions in the U. S. and 64 percent for those in overseas theaters. This difference is undoubtedly linked to that concerning year of separation noted above.

The differences found in measures of disciplinary action are all highly significant statistically and are listed in table 4.

**TABLE 4**

*Comparison of Examined and Unexamined Men as to Disciplinary Indices*

Disciplinary index	Examined	Not examined
Courts-martial per year of service:		
All causes . . . . .	0.076	0.137
AWOL . . . . .	.045	.081
Median days lost, Article of War 107, for men losing time:		
All causes . . . . .	6	14
AWOL . . . . .	4	8

Although the admission rates for psychoneurosis itself are not different for the two groups, the rates for other psychiatric diagnoses (psychosis, psychopathic personality, etc.) are significant at the 5-percent level. The examined group sustained admissions of the latter type at the rate of 15 per 1,000 men per year, the unexamined at 28.

For all causes except psychoneurosis the admission rates differ significantly, being 812 per 1,000 men per year for the examined men and 663 for the unexamined.

Comparison of data covering preservice psychiatric history and adjustment, precipitation of the illness, treatment of the illness, and disposition covers the essentials of the psychiatric history prior to follow-up, and provides the best basis for exploring the question of bias associated with incomplete follow-up. Of the 54 items of information available for the comparison, half show the two groups (examined and not examined) to differ by no more than chance. Of the remaining half, some are suggestive of real differences between the two groups, others possibly so, and still others may be explained on the basis of variations in the completeness and quality of the information available when the case was coded. That is, certain of the details of the preservice and the military history could be adequately elicited only through psychiatric examination, being present in military records only sporadically or not at all.

The characteristics on which the two groups do *not* differ significantly (in the statistical sense) are as follows:

(The asterisk (\*) beside an item denotes that only 20 to 29 percent of the 363 unexamined cases were known for this characteristic, the rest being unknown. The dagger (†) indicates that 40-49 percent were known. For items not so marked, at least 50 percent of the cases not examined are known.)

### *I. Family History*

Psychiatric history of father.

Parental death before end of adolescence.

Parental divorce, separation, or desertion before end of adolescence.

\*Degree of affection or rejection manifested by mother.

\*Degree of affection or rejection manifested by father.

\*Degree of discipline or indulgence manifested by father.

\*Degree of protection or independence granted by mother.

\*Evident attitude of patient toward mother.

\*Evident attitude of patient toward father.

†Overt sibling rivalry.

†Parental conflict or harmony.

Cultural origin of family.

Parental figures (substitute parents, etc.) before end of adolescence.

Summary of positive evidence of emotional disorders in family history.

### *II. Veteran's Preservice Personality and Adjustment*

Position in family constellation.

Intelligence (clinical evaluation generally).

Preservice adjustment to his parental family.

Preservice school adjustment.

Preservice work adjustment.

Preservice social and recreational adjustment.

Preservice community adjustment (to the mores).

Preservice marital adjustment.

Summary of preservice adjustment.

†Veteran's evaluation of health on entry into service.

### *III. Precipitating Stress, Treatment, and Disposition*

Civilian type of stress while in service.

Major area of stress precipitating episode.

Type of combat.

Duration of any ground combat.

Pattern of hospital dispositions following psychiatric treatment (whether reassigned, evacuated, or given medical discharge).

\*Patient's evaluation of emotional health on separation from service compared with health at entry.

Severity of first episode of psychoneurosis in service.

Characteristics in which differences were found to be significant are the following:

#### *I. Family History*

Psychiatric history of mother.

Psychiatric history of siblings.

Frequency of chronic incapacitating illness in parents.

\*Discipline and indulgence by the mother.

\*Protection and independence granted by father.

*I. Family History—Continued*

Economic status of parental family.

†Influence of religion on parental family life.

*II. Preservice Personality and Adjustment*

Predominant pattern of preservice personality.

Degree of psychiatric impairment.

†Sexual adjustment.

†Psychiatric treatment.

*III. Precipitating Stress*

Proportion affected by inherent military environmental stress.

Proportion affected by military frustrations and excessive demands of an interpersonal nature.

Proportion with combat stress.

Severity of major stress.

†Specific personality factors seemingly related to breakdown.

Relative weight accorded predisposition and stress.

Location at breakdown.

Severity of combat.

*IV. Psychiatric Treatment and Diagnosis in Service and Quality of Subsequent Service*

Examiner's concurrence with service diagnosis.

Type of treatment.

Adequacy of treatment.

Response to treatment.

Evaluation of health at separation.

Veteran's view of somatic and emotional components of illness at separation.

Quality of duty performed after return to duty.

Certain of the above differences between the examined and unexamined in the following items are probably more apparent than real; they seem best attributed to incomplete data for the unexamined:

*Psychiatric History of Mother.* The unexamined have fewer mothers with clearcut emotional or personality disorders.

*Frequency of Chronic Incapacitating Illness Among Parents.* The unexamined have fewer parents with chronic incapacitating illness. However, on a major characteristic like parental mortality, they do not differ. Such information is more apt to be included in the military or VA medical histories.

*Influence of Religion in the Home.* This is ordinarily a relatively unstressed aspect of a family history.

*Sexual Adjustment Before Service.* Adequate information in this area would require a careful psychiatric examination.

*Severity of Stress.* The unexamined include as many or more with severe stress but a deficit of those with moderate stress.

*Examiner's Concurrence With Service Diagnosis.* The psychologists coding the data on examined cases were reluctant to disagree with a service

diagnosis (3.4 percent), whereas psychiatric examiners did so more freely (12.0 percent).

*Economic Status of Parental Family.* Examiners obtained more systematic information in this area than is usually found in military medical records and it is not surprising that the unexamined cases exhibited a deficit of instances of real economic deprivation.

Other differences among those listed above as statistically reliable are probably attributable at least in part to fundamental differences between the service medical histories and those which were obtained by the examiners several years after discharge, but cannot be entirely dismissed as artifacts. To the extent that these differences may be real, however, they suggest that more of the unexamined men were ill at entry than is true of the examined.

*Preservice Personality.* The unexamined have a deficit of essentially normal men and of those with neurotic traits, and an excess of those with a suggestive or overt neurosis. The proportion coded as having pathological personalities of one type or another is the same for examined and unexamined groups. From a coding experiment it was found that the preservice personality classification is markedly affected by the time-period of observation. Data on preservice personality of the unexamined come largely from the period of the acute illness in service when men almost surely sought to increase their chances of early separation by establishing some continuity between the acute illness and their preservice history; examiners at follow-up were confronted with an opposite tendency. Some, but probably by no means all, of the apparent difference between the two groups undoubtedly reflects this difference in motivation.

*Preservice Psychiatric Impairment.* The unexamined manifest considerably more impairment before service. This difference is interpreted here in the same way as that for preservice personality. For 32 percent of the unexamined there was evidence of previous treatment in contrast to 13 percent of the examined. As with preservice personality, data on the unexamined came largely from the period of hospitalization in the service, a time when there would be a greater tendency on the part of men to relate their difficulties to the preservice period.

*Military Frustrations and Excessive Demands (Interpersonal).* The psychiatric examiners were asked to code specific stresses in detail. Although certain stresses, especially combat, are fairly obvious in military records, others are not. The fact that the unexamined men reported fewer military frustrations and excessive demands may reflect only this fact.

*Inherent Military Environmental Stress.* Since examiners were asked for a complete catalog of stress, it is likely that any stress of secondary importance will appear more frequently in the examined group, as is the case here.

*Specific Personality Factors Related to Breakdown.* Coders had considerable difficulty with this item, and tended to fall back on a single factor (generalized anxiety) in the absence of more explicit information in the history, information which the military histories often did not contain. The dis-



crepancy between the two groups, which consists largely of an excess with generalized anxiety among the unexamined, is therefore regarded as at least partly artificial and may be wholly so.

*Type of Psychiatric Treatment in Service.* The two groups do not differ significantly as to proportion with no treatment, but do as to proportion that received some form of individual psychotherapy. Service medical records do not systematically specify psychiatric treatment, whereas examiners recorded this item more carefully.

*Adequacy of Psychiatric Treatment.* The unexamined include too few with adequate treatment, probably for the same reason given above in connection with type of treatment.

*Evaluation of Patient's Emotional Health on Separation From Service.* More of the unexamined cases were coded as having had a severe neurosis at separation; in the less adequate records there was undoubtedly some failure to distinguish sharply between a man's condition at admission from that at discharge from hospital.

*Response to Psychiatric Treatment in Service.* The unexamined less often made an adequate response to treatment. This difference, again, is thought to reflect largely the comparative lack of detail in service medical records.

*Quality of Any Duty Performed Following First Admission for Psychoneurosis.* There was positive evidence of good and continued service for too few of the unexamined who were returned to duty after the first breakdown. Such information is difficult to obtain from military records alone and this was the major source for the unexamined cases.

*Psychiatric History of Siblings.* The unexamined have an excess of siblings with positive evidence of psychiatric illness and a deficit with clear-cut emotional or personality disorders. The latter may well reflect inadequate historical detail, but hardly the former.

*Maternal Discipline and Indulgence and Paternal Protection and Independence.* The unexamined are found more often at both ends of these scales, which strongly suggests that coders grasped at anything resembling a positive statement in relatively meager records on the unexamined men.

Other differences seem more reliable and are consistent with the view that predisposition was more extensive in the unexamined group, especially location at breakdown. More of the unexamined appeared to have had treatment (largely symptomatic) for emotional difficulties prior to service, and more of them first broke down in the Z/I than is characteristic of the examined. Consistent with these differences is the observation that the unexamined men more often manifested an emotional orientation toward their illness at separation.

Because of the confounding between source of information and examination status the foregoing analysis fails to provide a decisive answer to the question: Are the examined and unexamined homogeneous in all major respects? However, the observations do suggest that the unexamined men were somewhat more emotionally ill at entry than were the examined.

The magnitude and nature of the observed differences are such that no serious bias would be introduced by the omission of the unexamined group. However, in the interests of minimizing bias and of maintaining the size of the sample, the analysis was conducted on the entire clinical sample, distinguishing between the two groups when it seemed indicated.

The examined and unexamined groups were also compared as to follow-up status. It was felt this would constitute a further check to the extent to which they did vary, especially if the comparison included those items which did not depend to any great extent on actual examination of the men. For example, if the compensation status of the two groups differed greatly it would certainly strongly suggest that the two groups were really different.

No significant differences were found in the incidence of a majority of the symptoms that were reported at follow-up, in the veteran's evaluation of the change in his condition since entry into the service, in most adjustment areas, and in diagnosis and prognosis. However, men in the unexamined group were more apt to be ill at both discharge and follow-up. Less of them were drawing compensation and when they did it was more often for organic illness than for psychiatric reasons. They more often exhibited distinctly negative attitudes toward getting any psychiatric help and toward their superiors in service and toward the community.

At follow-up, therefore, the picture is one of a little more illness, but less compensation, in the unexamined men, which is consistent with the conclusion reached from the study of the preservice history that they were somewhat sicker to begin with.

Two other preliminary studies were made in accordance with the principles underlying the sampling plan: (1) comparison of Army and Navy cases; and (2) comparison of "covered" and "uncovered" cases. The sampling area was found to have no effect on the following follow-up characteristics:

- Presence of symptoms.
- Disability.
- Treatment since separation.
- Need for treatment.
- Prognosis.
- Overall adjustment pattern.

Some discrepancy was, however, noted in the examiner's psychiatric diagnosis, in that men from uncovered areas were more often given the diagnosis "mild neurosis" than men from covered areas. On the whole, the two samples seemed sufficiently homogeneous to permit the analysis to go forward without further regard for sampling area, and accordingly the distinction was dropped from further tables.

Army and Navy veterans were also compared as to follow-up status, and somewhat more evidence of heterogeneity observed, yet not enough to require that the analysis be conducted separately for Army and Navy cases. Examiners regarded more of the Navy veterans as ill at follow-up and re-

quiring treatment. Most follow-up characteristics, however, failed to distinguish the two groups, viz:

- Presence of symptoms.
- Disability.
- Overall adjustment.
- Treatment since separation.
- Prognosis.

In addition it was noted that more of the Navy veterans were ill at discharge, which is in keeping with the fact that most of them were invalidated from service for psychoneurosis.

During the follow-up period a preliminary tally was made of the reasons given to the Red Cross by 98 men to explain their refusal to participate in the examinations. Twenty-five gave economic reasons, chiefly that their working hours would not permit them to cooperate. Forty-five manifested antagonism toward psychiatry, the VA, the Armed Forces, or generally. Twenty-eight gave a variety of reasons including "too busy" (9), "don't need help" (6), "don't want to talk about it" (9) and "don't see the point of it" (4).

## THE EXAMINERS

The multiplicity of examiners was dictated by the requirement that the study include a nationwide sample of about 1,000 men. In addition, and in view of their heterogeneity as to training, orientation, and experience, the participation of a large number of psychiatrists, no one of whom examined more than 10 subjects, was considered highly advantageous insofar as it insured that the product of the study would reflect average psychiatric opinion. Quite obviously, however, confidence in the average picture which emerges from the examinations was purchased at some increased cost in variation from one subject to the next, introduced by this very multiplicity of examiners. The total observed variability among examined men may be viewed as the sum of two components: (1) variation among examiners; and (2) variation among subjects independent of examiners. The first would be illustrated by the different findings of psychiatrists who examined the same individual, the second by the variation within a set of men examined by one psychiatrist.

However great might be the variation introduced by the multiplicity of examiners, it had necessarily to be borne as a cost of the study, but it seemed of some interest to ascertain its approximate magnitude for a few of the more summary ratings. Estimates were made, therefore, on the assumption that the subjects were allocated to different examiners in accordance with a random process. Table 5 shows that there were 29 psychiatrists, each of whom saw 5 or more men, 33 who saw 4, and 38 who saw 3. For each classification, e. g., a particular personality pattern, a proportion ( $p$ ) was defined as the average for all examiners who had a fixed number of subjects. Then, on the hypothesis that the examiners do not differ among themselves, the binomial expansion  $(p+q)^k$ , where  $q=1-p$  and  $k$  is the

number of subjects seen by each examiner, provides a basis for calculating the expected proportion of examiners who would tag in any given way all  $k$  of their subjects, or  $k-1$ , etc., down to 0 men. This process may be illustrated with reference to the category "no psychiatric disability at follow-up" as it was applied by the 29 examiners who saw 5 subjects each.<sup>10</sup> The observed proportion thus classified is .48, and multiplication of each term of the expansion  $(.48 + .52)^5$  by 29 provides the expected values in table 6 corresponding to counts of psychiatrists according to whether all 5, 4, 3, etc., were placed in the category "no psychiatric disability at follow-up." How the examiners actually classified their men is shown by the column of observed values. It will be noted in table 6 that more of the examiners than had been expected classified all 5, or 4 of their subjects in this way, and that more of them classified none or only 1 in this way; they less often fall into the mixed groups than one would expect with a proportion near one-half. The disparity may be put to a test, and when this is done it is seen to have a probability, under the hypothesis tested, of about .01.<sup>11</sup> In short, examiners do seem to differ among themselves, and this variation has been added to the inherent variability of the subjects themselves. In this particular illustration the expected variance, on the binomial hypothesis, is 1.248 and the observed 2.173. If the examiners were as different as possible, i. e., either put all or none of their men in this category, the variance would be 6.240. The increment of variation attributable to the examiners may be expressed in relation to the difference between the binomial expectation and this maximum as about 19 percent.

**TABLE 5**  
*Distribution of Examining Psychiatrists by Number of Men Examined*

Number of men examined per psychiatrist	Number of psychiatrists	Total number of examined men
1.....	72	72
2.....	52	104
3.....	38	114
4.....	33	132
5.....	16	80
6.....	7	42
7.....	3	21
8.....	1	8
9.....	1	9
10.....	1	10
Total.....	224	592

<sup>10</sup> Thirteen examiners saw 6 or more subjects; in each instance, 5 were picked at random from the set.

<sup>11</sup> Throughout this book such statements will be made to summarize appropriate statistical tests of significance, and the quantity  $P$  will be used to denote the probability that the observed event might occur by chance under the particular assumptions underlying the test.

**TABLE 6**

*Comparison of Observed and Expected Numbers of Cases Classified as Without Psychiatric Disability at Follow-up, Among Sets of Five Seen by Single Examiners*

Number of men in set classified as without disability	Terms of binomial expansion	Number of examiners	
		Expected distribution	Observed distribution
5.....	0.025	0.73	2
4.....	.138	4.00	6
3.....	.299	8.67	5
2.....	.324	9.40	7
1.....	.175	5.08	6
0.....	.038	1.10	3
Total.....	.999	28.98	29

Such a study as the above was done for sets of 3, 4, and 5 subjects, for three of the most summary scales, and for each position on the scale, and is summarized in table 7 in the form of estimates of the relative contribution of the examiner in the form of the increase in the variance as a percentage of the maximum increase possible. It is an average percentage in that the three independent estimates derived from the sets of 3, 4, and 5 have been averaged. Thus, for the designation "no psychiatric disability at follow-up" it was observed that the variance changed by +19 percent in the sets of 5 subjects, minus 1 percent in the sets of 4, and +21 percent in the sets of 3, and it is the average of these 3 estimates (+13 percent) which appears in table 7. Categories for which examiners appeared to contribute significantly to the observed variation are two: normal pre-service personality pattern and no disability at follow-up.

On the whole, it will be seen from table 7 that the increment of variation attributable to the examiners is not large. In fact, it is considerably smaller than the authors had anticipated. It seems likely that variation among examiners may have been somewhat reduced by the coding process, especially as it pertained to the use of scales which were made up only after the examination reports had been received and on the basis of a more detailed, factual reporting by the examiner. Coders were under the supervision of the senior author, and the effect of the coding process may have been to offset some of the examiner variation, as by moderating more extreme points of view. No parallel study has been made on variation among coders, but it would be expected that they had some influence on the total variation. However, insofar as it can be estimated from the present data variation among examiners was not prohibitive.

**TABLE 7**

*Estimated Average Increase in Variance Attributable to Examiner Variation, as Percentage of Maximum Increase Possible, Selected Rating Scales*

Scale	Category	Percentage increase
Psychiatric disability at follow-up . . .	None . . . . .	+12.8
	Slight . . . . .	+2.4
	Moderate or more . . . . .	+3.2
Preservice personality pattern . . . . .	Normal . . . . .	+7.1
	Neurotic traits . . . . .	-2.0
	Suggestive neurosis . . . . .	+4.6
	Overt neuroses . . . . .	-3.1
	Pathological personality . . . . .	-1.4
Preservice psychiatric impairment . . .	None . . . . .	+4.2
	Questionable . . . . .	+4.9
	Mild . . . . .	-0.3
	Moderate and marked . . . . .	+0.8

A study was also made of the effect of certain characteristics of the examiners. Since they necessarily differed as to age, training, type of psychiatric work in which engaged, and, to a lesser extent, military service, these factors were isolated for study. Forty-three percent of the subjects were examined by men with psychoanalytic training and the remainder by psychiatrists without such training. Fifty-four percent were examined by men in private practice, 16 percent by men whose primary activity was teaching, 10 percent by men working in private institutions or clinics, 13 percent by psychiatrists who were employed by the Veterans Administration, and 6 percent by psychiatrists employed by public agencies other than the VA. These characteristics of the psychiatric examiners were tabulated against some 25 key items having to do with family history, pre-service personality and adjustment, military experiences, and condition on follow-up. In most instances the results of such comparisons were completely negative and in the few instances in which discrepancies were found they were neither large nor important. Such consistency in fact was quite surprising.

# *Part One*

## **THE BASIC FINDINGS**

The first goal of the study was to determine the characteristics of the clinical and record samples and the ways in which they differed from the general military population both before and during military service. Both sociological and psychiatric characteristics were investigated in relation to the chance of breakdown in service.

A second objective was to learn the specific circumstances precipitating breakdown, the subsequent course of the illness during service, and the quality of any further duty. A third and the major goal was to learn what happened to these men after they left service and to describe their psychiatric status at follow-up, about 5 years after breakdown.

The studies undertaken in the pursuit of the above objectives form the basis of the four chapters which follow. Subsequent chapters are primarily concerned with the interrelations among the characteristics which are first introduced and defined in this part.

## CHAPTER I

# MILITARY AND SOCIOLOGICAL CHARACTERISTICS OF THE POPULATION SAMPLED

During World War II there were approximately 17,500,000 admissions (to hospital and quarters) for all causes (battle and nonbattle) in the Army and 5,300,000 in the Navy and Marine Corps, of which admissions for psychoneurosis number about 630,000 in the Army total and 73,000 in the Navy total. Table 8 presents a summary of the total admission picture of the war as a background for understanding the role played by psychoneurosis as a cause of admission. Psychoneuroses were responsible for about 3.1 percent of all admissions in World War II, 3.6 percent in the Army, and 1.4 percent in the Navy and Marine Corps.<sup>12</sup> They made a larger relative contribution to the noneffective rate in the Armed Forces; in the

**TABLE 8**

*World War II Admissions, by Cause*<sup>1</sup>

Cause of admission	Thousands of admissions		
	Army	Navy <sup>2</sup>	Total
Nonbattle injury . . . . .	2,005	464	2,469
Battle wound . . . . .	592	91	683
Psychiatric and neurological:			
Psychoneurosis . . . . .	630	73	703
Other . . . . .	370	115	485
Other disease . . . . .	13,876	4,524	18,400
Total . . . . .	17,473	5,267	22,740

<sup>1</sup> Sources: Menninger, William C.: *Psychiatry in a Troubled World*, New York, Macmillan, 1948, p. 589.

The History of the Medical Department of the U. S. Navy in World War II, Vol. 3, *Statistics of Disease and Injury*, Washington, Government Printing Office, 1950.

Beebe, G. W., and DeBakey, M. E.: *Battle Casualties*, Springfield, Ill., Thomas, 1952.

*Army Battle Casualties and Nonbattle Deaths in World War II, Final Report*, Office of the Adjutant General, Department of the Army, June 1953.

<sup>2</sup> Including the Marine Corps.

<sup>12</sup> The diagnosis of psychoneurosis in the Navy may have been based on much more rigid criteria than in the Army.



Army the total days lost by men with this diagnosis represents about 8.8 percent of the noneffective rate, in the Navy about 4.7 percent. Table 9 presents some of the comparative figures on this point and on discharges for disability; among the latter psychoneuroses are even more important, accounting for 27 percent of Army, and 16 percent of Navy, separations for disability.

The data presented here on men with psychoneurosis are based on tabulations of the various rosters already defined (p. 7) supplemented by incidental tables prepared by the Army on 1944 admissions as a whole or as sampled at that time. The data on the military population as a whole, i. e., without regard to admission for psychoneurosis, are for the most part Army data obtained from the following sources:

1. Population data already published or furnished by the Department of Defense for comparative purposes here.
2. Samples of men utilized in other NRC follow-up studies, notably Dr. Cohen's 1944 control sample already described; these are specifically characterized in the context where they are used.

## CHARACTERISTICS PRESENT AT ENTRY INTO SERVICE

### Age at Entry on Active Duty

Those with psychoneuroses are quite clearly ( $P < .01$ )<sup>13</sup> somewhat older than a cross section of the total Army population. Table 10 compares the data on age at entry into the service of those who broke down with two Army control samples. The percentage 30 or older is 22.3 for psychoneurotics and 13.1 for controls. This is consistent with the finding reported in a previous follow-up study of enlisted men discharged from the Army for psychoneuroses<sup>14</sup> and with analogous Navy data<sup>15</sup> on admissions for all psychiatric and behavior disorders. The specific relation of age to the chance of breakdown is considered more fully below (pp. 38 and 223-225).

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<sup>13</sup> This particular test may be taken as an example of the large number of tests of statistical significance referred to here and in subsequent chapters. It involves the calculation of the probability that two samples drawn randomly from a single homogeneous population will differ by as much or more than actually observed. The statistic  $X^2$ , with 2 degrees of freedom, was found to be 20.1 in this comparison, which corresponds with a probability of less than .001 under the hypothesis tested; that is, the observed difference, or one more extreme, would be expected by chance less than once in 1,000 trials under the conditions of random sampling from a single, homogeneous population.

<sup>14</sup> Brill, N. Q., Tate, M., and Menninger, W. C.: Enlisted Men Discharged From the Army Because of Psychoneurosis, *J. A. M. A.* 728:633 (June 30) 1945.

<sup>15</sup> The History of the Medical Department of the U. S. Navy in World War II, Vol. 3, The Statistics of Diseases and Injuries, Washington, D. C., U. S. Government Printing Office, 1950.

**TABLE 9**

*World War II Noneffective Rates and Disability Discharges, by Cause*

Cause	Noneffectives per 1,000 strength per day		Disability discharges, in thousands <sup>1</sup>	
	Army	Navy	Army <sup>2</sup>	Navy <sup>2</sup>
Nonbattle injury.....	7.0	3.2	0	12
Battle wound.....	7.9	2.5	0	15
Psychoneurosis.....	3.8	1.5	260	52
Other disease.....	24.7	24.6	0	254
<b>Total.....</b>	<b>43.4</b>	<b>31.8</b>	<b>960</b>	<b>333</b>

<sup>1</sup> Exclusive of separations for undesirable traits, inaptness, etc., which in the Army amounted to another 350,000.

<sup>2</sup> Approximate figures for enlisted men only.

<sup>3</sup> Including Marine Corps.

**TABLE 10**

*Age at Entry Into Service for Men With Psychoneurosis and Controls*

Age at last birthday	Psychoneurosis, clinical + record cases		Army controls	
	Army + Navy	Army only	1944	Project 89 <sup>1</sup>
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Under 20.....	23.7	18.8	20.9	26.9
20-29.....	54.5	58.9	66.0	53.1
30-39.....	20.7	21.8	13.1	17.3
40 and over.....	1.1	.5	0	2.7
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Number of men.....	1,473	983	397	3,102

<sup>1</sup> A control group of about 3,000 enlisted men, white and Negro, who entered the Army after July 1, 1942, and before January 1, 1946, and who remained in the Army for at least 3 months; they were selected for another study on the basis of ASN.

**Residence**

The coded information on residence actually pertains to residence at separation, but is here taken to indicate probable residence at induction. The only available control data on residence which are not hopelessly biased by race pertain to the 1944 Army control sample which is compared with Army cases in the study sample (tables 11 and 12). No significant

differences were found between the men with psychoneurosis and the control group with regard to region of residence or size of city.

### AGCT Score

Unfortunately the extensive Army tests of intelligence were not well recorded in the individual records. Such information was obtained for only 28 percent of the Army sample of psychoneurotics and 30 percent of the 1944 Army control sample. The comparison permitted by these incomplete observations, as may be seen from table 13, provides no statistical basis for believing that intelligence was an important factor in the development of psychoneurosis during World War II. An increased rate of breakdown might have been expected in the groups of lower intelligence and it may be that individualization of assignment, geared to a man's capacity, exerted a counter influence. Also included in table 13 is a distribution for those who entered the Army in 1943; it includes both whites and Negroes and is based on 2.6 million men. The sample of psychoneurotics also does not differ significantly from the 1943 Army sample.

### Civilian Occupation

The only basis of comparison was provided by the 1944 Army control sample, which differs from the Army sample of psychoneurotics by no more than chance would often produce (table 14). Within the major socio-economic groupings used by the census the proportions of men who broke down and of controls are very similar.

**TABLE 11**

*Region of Residence at Time of Separation for Men With Psychoneurosis and Controls, Army Personnel Only*

Region <sup>1</sup>	Psychoneurosis, clinical + record cases	1944 con- trols
	<i>Percent</i>	<i>Percent</i>
Outside U. S. ....	0.2	0.0
New England. ....	7.3	5.1
Middle Atlantic. ....	28.5	26.2
South Atlantic. ....	12.8	10.3
East North Central. ....	20.5	21.1
East South Central. ....	8.5	7.7
West North Central. ....	7.5	10.3
West South Central. ....	6.7	11.1
Mountain. ....	1.8	2.6
Pacific. ....	6.2	5.6
Total. ....	100.0	100.0
Number of men. ....	982	389

<sup>1</sup> 1940 census divisions.

**TABLE 12**

*Size of City of Residence at Time of Separation for Men With Psychoneurosis and Controls, Army Personnel Only*

Size of city <sup>1</sup>	Psychoneurosis, clinical + record cases	1944 con- trols
	<i>Percent</i>	<i>Percent</i>
Outside U. S. ....	0.2	0.0
Under 2,500 .....	20.7	27.1
2,500 & under 10,000 .....	15.0	14.1
10,000 & under 50,000 .....	19.7	19.0
50,000 & under 100,000 .....	6.6	6.9
100,000 & under 1,000,000 .....	20.1	17.2
1,000,000 or more .....	17.7	15.7
<b>Total</b> .....	<b>100.0</b>	<b>100.0</b>
<b>Number of men</b> .....	<b>980</b>	<b>389</b>
<b>In one of 13 largest metropolitan areas</b> .....	<b>33.3</b>	<b>27.8</b>

<sup>1</sup> According to 1940 census.

**TABLE 13**

*AGCT Scores for Men With Psychoneurosis and Controls, Army Personnel Only*

AGCT score	Equivalent IQ	Psychoneu- rosis, clinical + record cases	Controls	
			1944	1943 en- listees <sup>1</sup>
		<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
I. ....	130 & above .....	7.3	9.2	6.4
II. ....	110-129 .....	29.6	33.3	28.6
III. ....	90-109 .....	31.0	34.2	31.2
IV. ....	60-89 .....	28.8	20.8	27.6
V. ....	59 & under .....	3.3	2.5	6.2
<b>Total</b> .....		<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
<b>Number of men</b> .....		<b>274</b>	<b>120</b>	<b>2.6</b>

<sup>1</sup> Source: The Army Almanac, Washington, D. C., U. S. Government Printing Office, 1950, p. 657.

<sup>2</sup> Millions.

## Education

The educational level achieved prior to entry is one of the few sociological factors which seems reliably to distinguish the psychoneurotics from the general military population. Clearly the psychoneurotic group has an excess of those with no more than elementary school education (table 15). Available Army population data for the period of interest make no distinction between whites and Negroes and hence the 1944 control sample was employed in making the educational comparison.

Since the role of education is a highly significant one, in the statistical sense, an estimate<sup>16</sup> of the magnitude of its effect is given in table 16. Estimated admission rates for psychoneurosis in 1944 among white enlisted men in the Army range from 20 to 80 and are lowest (but not necessarily significantly so) among men with some college training, and highest among those with less than 5 completed years of schooling. Intermediate values are quite in accord with these extremes. The high rate for men with more than college training has a large sampling error, and there are too few cases here to settle the question of its relation to an otherwise fairly uniformly negative correlation between education and likelihood of breakdown. The interpretation of these rather large differences is another matter; doubtless both stress and predisposition are involved and it would be a mistake to assume from these data alone that education *per se* was an important factor in reducing the chance of breakdown. It is quite likely that men with a superior educational background to some extent gravitate toward more technical and administrative jobs and thus fail to be exposed to the degree of stress characteristic of the assignments of those with less educational qualifications for technical and administrative work.

## Marital Status at Entry

Differences are also found in the marital status of the Army controls and the Army sample of psychoneurotics. The latter had an excess of married men. Table 17 gives the statistical basis of the comparison and includes information from the Selective Service System on all male inductees prior to 1945. The differences are not large but have a chance probability of about .02; however, they reflect no more than an age difference between married and unmarried men and are of no intrinsic importance in themselves.

## Religion

Because of the sociological ramifications the Armed Forces do not customarily tabulate information on religion, and the only available control data of consequence are those provided by the 1944 Army sample. As may be seen from table 18 the distributions for controls and psychoneurotics are quite close.

<sup>16</sup> The basis for estimation is the algebraic fact that, for any given subgroup of the population over a fixed period, the ratio of its proportion among men who broke down to its proportion in the total population at risk equals the ratio of the admission rate for the subgroup to the admission rate for the population.

**TABLE 14**

*Civilian Occupation Before Entry Into Service for Men With Psychoneurosis and Controls, Army Personnel Only*

Occupation <sup>1</sup>	Psychoneurosis, clinical + record cases	1944 controls
	<i>Percent</i>	<i>Percent</i>
Professional, semiprofessional.....	2.8	4.6
Proprietors, managers, officials.....	3.8	2.8
Clerical and sales.....	13.8	17.5
Craftsmen and foremen.....	16.1	14.7
Operatives.....	33.8	30.5
Service, except protective.....	2.8	2.1
Protective service.....	.9	0
Student.....	6.7	10.3
Laborer, except farm.....	8.3	6.7
Farmers.....	11.0	10.8
Total.....	100.0	100.0
Number of men.....	979	388

<sup>1</sup> Or socioeconomic scale.

**TABLE 15**

*Highest Educational Grade Completed Prior to Entry Into Service, for Men With Psychoneurosis and Controls, Army Personnel Only*

Highest grade completed	Psychoneurosis, record + clinical cases	1944 controls
	<i>Percent</i>	<i>Percent</i>
4 or lower.....	3.4	1.3
5-7.....	14.8	11.6
8.....	17.7	13.4
9-11.....	31.5	29.4
12 or high school graduate.....	23.2	29.6
13-15.....	6.7	11.6
16.....	1.4	2.3
More than 16.....	1.3	.8
Total.....	100.0	100.0
Number of men.....	984	388

**TABLE 16**

*Estimated Admissions per 1,000 Men per Year for Psychoneurosis, by Education Prior to Entry, White Army Enlisted Men*

Completed grades	Rate
<5.....	79.5
5-7.....	39.1
8.....	40.4
9-11.....	32.7
12.....	23.9
13-15.....	17.7
16.....	18.7
>16.....	52.3
<b>Total.....</b>	<b>30.6</b>

**Race**

In 1944, enlisted men in the Army had about 215,500 admissions for psychoneuroses, 9 percent in nonwhite and 91 percent in white troops. These percentages correspond sufficiently closely to the overall Negro-white distribution in the Army in 1944 to warrant the inference that race played no important role in the incidence of psychoneurosis. The survey sample, of course, is entirely white.

**TABLE 17**

*Marital Status at Entry Into Service for Men With Psychoneurosis and Controls, Army Personnel Only*

Marital status	Psychoneurosis, clinical + record cases	Controls	
		1944	Inductees 1940-1944 <sup>1</sup>
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Never married.....	64.8	71.7	69.6
Married.....	31.9	26.5	25.0
Divorced }.....	3.3	1.8	2.4
Widowed }			
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Number of men.....	979	389	

<sup>1</sup> Source: Selective Service System data.

**TABLE 18**

*Religion of Men With Psychoneurosis and Controls, Army Personnel Only*

Religion	Psychoneurosis, clinical + record cases	1944 controls
	<i>Percent</i>	<i>Percent</i>
None.....	1.7	0.3
Protestant.....	55.8	62.0
Catholic.....	35.5	30.7
Jewish.....	6.8	6.5
Other.....	0.2	0.5
Total.....	100.0	100.0
Number of men.....	967	371

**CHARACTERISTICS ARISING OUT OF SERVICE**

**Length of Service**

For purposes of analysis, length of service is considered from (1) time of entry into service to breakdown, (2) period of service after breakdown, and (3) total period of service. Length of service at breakdown has been tabulated from the basic 1944 Army punchcards which underlie the roster selected for follow-up study, and in table 19 is compared with parallel data on a control sample of men discharged for all causes. The high admission rate following induction reflects the rescreening effect of the varied stresses of basic training and early military life, which reveal latent or even overt neuroses which were either not detected at induction or were thought to be nondisabling. The men who remain in the second year have to some degree demonstrated greater resistance to the early forms of stress and may not yet have been subjected to the full measure of stress associated with combat and overseas service; their admission rate is lower. With longer service, the proportion exposed to the severe stress of combat has increased, and produced a corresponding increase in admission rate. To what extent this explanation may account for the very high rate in men with more than 4 years service is not known. These men are probably somewhat older and necessarily represent men with military experience prior to World War II. But age itself cannot be the explanation, for when the sample is subdivided into age groups approximately the same changes with length of service are seen within each age group. It may also be of interest that about 3 percent of the cases of psychoneurosis were on the part of men with but 1 month of service, and 5 percent with 2 or less in 1944. In contrast, the Army population of enlisted men was increased at an average rate of about 1.4 percent per month. This means that in their first month of service men broke down at twice the rate that was observed for all enlisted



men of all lengths of service. If these observations are used to estimate actual admission rates in 1944 one finds that they lead to 63 admissions per 1,000 men per year for the first month of service, and 42 in the second month.

**TABLE 19**

*Length of Service and the Chance of Breakdown, Personnel in the Army During 1944*

Years of service	Percentage distribution		Estimated admissions for psychoneurosis per 1,000 men per year
	Psychoneurosis, original Army roster	Roster 184 <sup>1</sup>	
Under one.....	22.5	19.0	36
One and under two.....	33.0	42.5	24
Two and under three.....	25.9	24.2	33
Three and under four.....	13.2	11.6	35
Four or more.....	5.4	2.7	61
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>	<b>31</b>
<b>Number of men.....</b>	<b>6,973</b>	<b><sup>2</sup> 5,816</b>	

<sup>1</sup> A representative sample of white enlisted men entering the Army in 1940-1944, separated prior to 1947, and with service in 1944; tabulation was done for each calendar month in 1944 and averaged to represent the year as a whole.

<sup>2</sup> Man-years of service in 1944.

Table 20 shows length of service after first breakdown for men who broke down (not necessarily for the first time) in 1944. Roughly one-half of all of the men were discharged from the service in less than 10 months after admission and part of this time (1-2 months) was spent in the hospital. Demobilization starting in 1945 automatically terminated service for some who would have served longer. Men in the 1944 control sample (table 21) served on the average 4 months longer than men who broke down. The mean values for total length of service are 36 months for controls and 32 months for men with psychoneurosis (20.3 months prior to breakdown and 11.3 thereafter). The heterogeneity of the psychoneurotic group from the standpoint of etiology and military effectiveness is suggested by the fact that it includes men who broke down after long and often hazardous service as well as those who were hospitalized and discharged after very brief service, and by the fact that 43 percent of the men with psychoneurosis lasted less than 30 months in contrast to a corresponding figure of 23 percent for the controls, while the percentages with at least 40 months of service are more nearly similar (27 vs. 35).

Total service overseas was also tabulated separately for the 1944 Army control sample and the men with psychoneurosis drawn from the Army roster. Table 22 makes this comparison and shows that the contribution of the controls is much greater.

Year of separation is a related characteristic which distinguishes the two Army groups. Table 23 shows that over a third of the controls were not separated until after 1945, in contrast to 15 percent of the psychoneurotics and that nearly a third of the psychoneurotics were discharged in 1944, while only 5 percent of the controls left the service during that year.

**TABLE 20**

*Months of Service Following First Admission for Psychoneurosis, Army Clinical + Record Cases Only*

Months of service	Percent
0-9 .....	41.7
10-19 .....	44.4
20-29 .....	11.9
30-39 .....	1.2
40-49 .....	.7
50-59 .....	.1
Total .....	100.0
Number of men .....	985

**TABLE 21**

*Total Months of Service for Men With Psychoneurosis and Controls, Army Personnel Only*

Months of service	Psychoneurosis, clinical + record cases	1944 controls
	Percent	Percent
0-9 .....	9.9	1.3
10-19 .....	12.0	4.0
20-29 .....	20.8	17.4
30-39 .....	29.9	42.4
40-49 .....	17.1	24.7
50-59 .....	7.8	8.6
60-69 .....	1.7	1.0
70-79 .....	.4	.2
80-89 .....	0	.2
90-99 .....	.4	.2
Total .....	100.0	100.0
Number of men .....	985	397

**TABLE 22**

*Months of Overseas Service for Men With Psychoneurosis and Controls, Army Personnel Only*

Months of overseas service	Psychoneurosis, clinical + record cases	1944 controls
	<i>Percent</i>	<i>Percent</i>
None.....	31.9	11.7
1-9.....	12.7	18.0
10-19.....	22.3	33.4
20-29.....	20.2	27.9
30-39.....	7.0	7.4
40-49.....	.9	1.1
50-59.....	.1	0
60-69.....	.1	0
Duration unknown.....	4.8	.5
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>
<b>Number of men.....</b>	<b>985</b>	<b>377</b>

**TABLE 23**

*Year of Separation for Men With Psychoneurosis and Controls, Army Personnel Only*

Year of separation	Psychoneurosis, clinical + record cases	1944 controls
	<i>Percent</i>	<i>Percent</i>
1944.....	30.4	4.8
1945.....	54.7	59.2
1946.....	14.6	34.5
1947.....	.2	1.3
1948.....	0	.2
<b>Total.....</b>	<b>99.9</b>	<b>100.0</b>
<b>Number of men.....</b>	<b>985</b>	<b>397</b>

**Component**

The Army samples were divided into Regular Army and voluntary enlistments, National Guard, and inductee components, both for controls and psychoneurotics. Table 24 presents the resulting percentage distributions which differ significantly (P about .02) in the statistical sense. The psychoneurotics include some excess of inductees and a deficit of Regular Army and voluntary enlistments. If the two distributions are converted into ad-

mission rates one finds that the admission rates were about 22 for Regular Army and voluntary enlistments, 30 for the National Guard, and 33 for inductees. It is not known if these differences reflect variation in predisposition, conceivably related to motivation, or differences in stress.

### Age at Breakdown

Here the concern is with the chance of breakdown as a function of age at the time of exposure, as distinguished from age at entry, already discussed. A special study<sup>17</sup> made of this important factor shows that admission rates for psychoneurotic breakdown are strongly correlated with age, being roughly two times as high for men who were 34 as they were for 18-year-olds. Figure 1 has two panels, the first containing the basic age distributions for the psychoneurotics and for the entire population from which they came, and the second which exhibits the rise in the chance of breakdown as age advances. After about age 38 or 40 the rate curve again declines, a phenomenon which is also observed in Navy data, but the numbers of cases are so small in the Army series used here that the rates are subject to excessive chance variation and hence have been omitted from the chart.

### Grade at Separation

The coding of grade was confined to grade at separation from service, and thus reflects changes, or lack thereof, which may have followed breakdown. The psychoneurotics were at a marked disadvantage (table 25); 62 percent were in the grade of private at the time of discharge in contrast to 31 percent of the Army control series. Since only 12 percent of the psychoneurotics had been reduced in grade it is plain that the difference reflects either an association of lower grades with greater stress or the diminished opportunity

**TABLE 24**

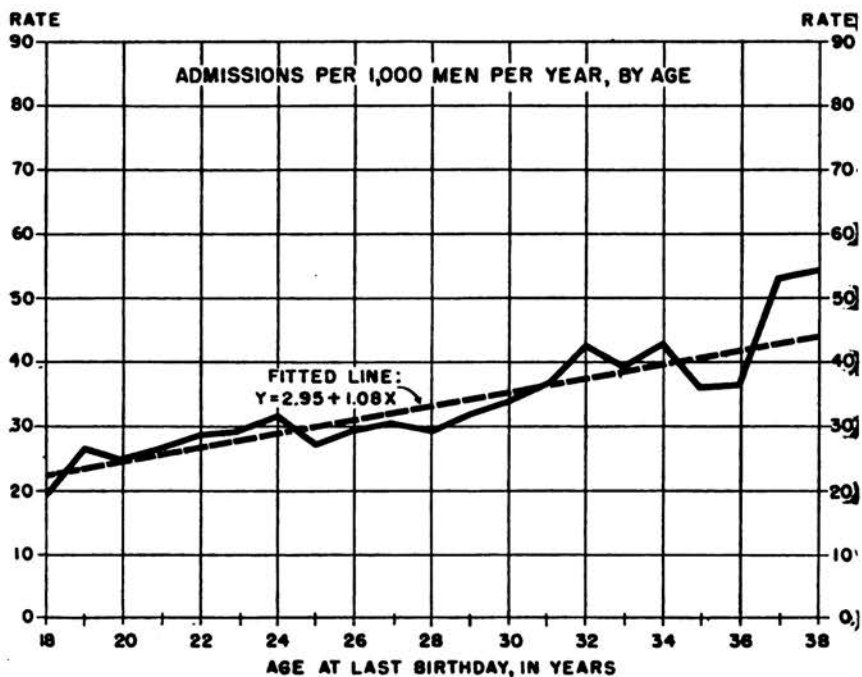
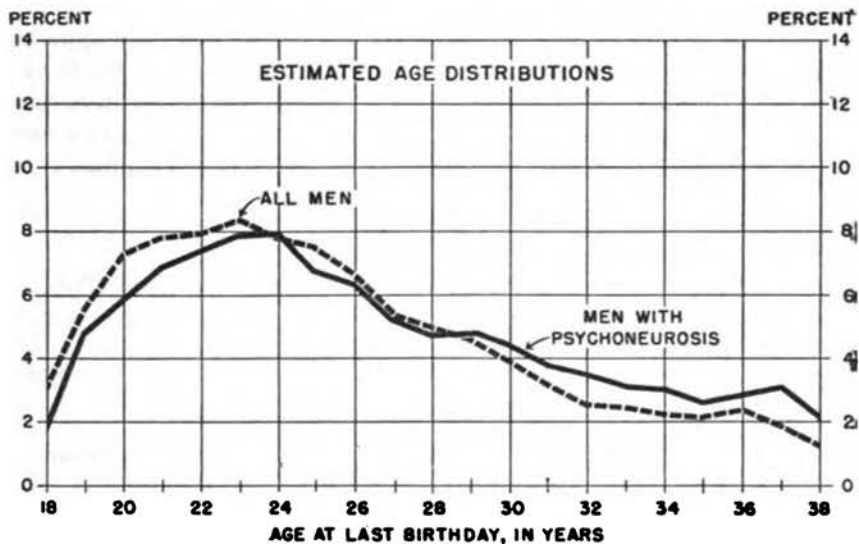
*Component of the Army of the United States, for Men With Psychoneurosis and Controls*

Component of the A. U. S.	Psychoneurosis, clinical + record cases	1944 controls
	<i>Percent</i>	<i>Percent</i>
RA + voluntary enlistments . . . . .	15.7	22.2
National Guard . . . . .	3.2	3.3
Inductees . . . . .	81.1	74.5
<b>Total</b> . . . . .	<b>100.0</b>	<b>100.0</b>
Number of men . . . . .	985	397

<sup>17</sup> Brill, N. Q., et al.: Age and Resistance to Military Stress. *Armed Forces Med. J.* 4: 1247-1266, Sept. 1953.

**FIGURE 1**

*Incidence of Psychoneurosis by Age, White Enlisted Males, U. S. Army, 1944*



or justification for promotion on the part of men with a history of breakdown. Grade at breakdown was not studied.

### Awards and Decorations

As noted below in connection with combat credit, there are opposing tendencies at work producing differences between psychoneurotics and controls. To the extent that predisposition exists, the psychoneurotics have short service, little chance of combat, low grade, and little chance of reward in the form of decorations. But to the extent that a psychoneurosis is re-

**TABLE 25**

*Grade at Separation for Men With Psychoneurosis and Controls, Army Personnel Only*

Grade at separation	Psychoneurosis, clinical + record cases	1944 controls
	<i>Percent</i>	<i>Percent</i>
Master sergeant.....	0.4	1.6
Tech. sergeant.....	3.7	4.9
T-3.....	8.9	13.4
T-4.....	10.4	22.2
Corporal T-5.....	15.1	26.6
Pfc.....	29.2	24.1
Private.....	32.3	7.2
<b>Total</b> .....	<b>100.0</b>	<b>100.0</b>
<b>Number of men</b> .....	<b>983</b>	<b>387</b>
Percentage not in their highest grade at separation..	12.3	5.9

lated to external stress the exact opposite is true. Table 26 compares the two groups as to the highest award or decoration received by an individual throughout the period of World War II military service. The controls have a quite significantly better record. The two groups do not, however, differ significantly as to the proportion with Purple Heart or other acceptable evidence that a wound was received as the result of enemy action.

### Courts-Martial

A fairly significant difference (P about .02) also exists between Army controls and psychoneurotics in frequency of courts-martial, although these are relatively infrequent in both groups. About 15 percent of the psychoneurotics had one or more courts-martial in contrast to 9 percent of the controls. Table 27 permits a more detailed comparison. If, in addition,

**TABLE 26**

*Highest Decoration or Award, for Men With Psychoneurosis and Controls, Army Personnel Only*

Highest decoration or award	Psychoneurosis, clinical+record cases	1944 controls
	<i>Percent</i>	<i>Percent</i>
None.....	93.8	89.4
Congressional Medal of Honor.....	0	0
Distinguished Service Cross.....	.2	0
Distinguished Service Medal.....		.3
Silver Star.....	.3	1.8
Legion of Merit.....	.1	0
Distinguished Flying Cross.....	1.8	1.1
Soldier's Medal.....	0	.3
Bronze Star Medal.....	2.2	5.0
Air Medal.....	1.6	2.1
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>
Number of men.....	973	380
Purple Heart.....	11.9	16.1

account is taken of total length of service it is possible to calculate a rate of incidence for offenses leading to courts-martial, which is 93 per 1,000 men per year for the psychoneurotics and 59 for the controls. If courts-martial for AWOL offenses are singled out a parallel computation provides rates of 61 for psychoneurotics and 35 for controls and leaves rates of 32 and 24 for offenses other than AWOL; plainly the AWOL offenses provide the major part of the difference. The pattern of offense is further indicated in table 28 (for first offenses only).

In abstracting data from military records note was made of the total days lost under Article of War 107 (unauthorized absence), and for the lost time attributed to AWOL and to confinement. These data are summarized in table 29 in the form of average days lost and average non-effective rates. The psychoneurotics lost more time for each group of causes.

### **Arm or Service**

The extent to which combat contributed to breakdown in the Army is reflected in the variation between psychoneurotics and controls as to arm or service (table 30). For example, 33 percent of the psychoneurotics were in the infantry in comparison with 22 percent of the controls.

**TABLE 27**

*Number of Courts-Martial, for Men With Psychoneurosis and Controls, Army Personnel Only*

Number of courts-martial	Psychoneurosis, clinical + record cases	1944 controls
	<i>Percent</i>	<i>Percent</i>
None.....	85.2	90.8
1.....	10.2	6.3
2.....	2.1	1.0
3.....	1.2	.5
4.....	.5	.3
5.....	.6	.3
6.....	.1	0
7.....	.1	.8
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>
Number of men.....	985	397

**Theater**

Geographical variation in the admission rate for 1944 is best exemplified by reference to preliminary data <sup>18</sup> for the entire Army, regardless of race, sex, and rank. These are as follows:

<i>Theater or command</i>	<i>Admissions for psychoneurosis per 1,000 men per year</i>
Total Army.....	31
Z/I.....	29
Total overseas.....	33
European Theater of Operations (ETO).....	39
Mediterranean Theater of Operations (MTO).....	38
Southwest Pacific Area (SWPA).....	27
Other overseas theaters.....	23

Although many factors, some purely administrative, combined to vary the rates for individual theaters, it is generally true that the fairly high Z/I rate reflects the presence of a disproportionate number of men of greater-than-average predisposition and the effect of the rescreening early in the military career, and that rates for overseas theaters tended to be high or low depending on intensity of combat. An exception was SWPA, where the admission rate did not reflect the ebb and flow of combat. However, the fact that one finds in rates for overseas theaters a range of 23 (or even less) to 39 underscores the importance of stress in producing admissions.

<sup>18</sup> SGO unpublished tables dated Feb. and Mar. 1947.



**TABLE 28**

*Type of First Court-Martial Offense for Men With Psychoneurosis and Controls, Army Personnel Only*

Offense	Psychoneurosis, clinical + record cases	1944 controls
	<i>Percent</i>	<i>Percent</i>
None.....	85.2	90.8
War offenses (AW 75-82, including misbehavior before the enemy).....	.3	0
Desertion and AWOL.....	9.8	5.0
Disrespect, insubordination, mutiny.....	1.1	1.5
Arrest and confinement.....	.4	0
Other serious offenses.....	.3	0
Inattention to duty.....	.3	.3
Drunk or disorderly conduct.....	1.6	.8
Off limits or out of bounds.....	.3	.3
Other minor offenses.....	.7	1.3
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>
Number of men.....	985	397

**TABLE 29**

*Unauthorized Loss of Time for Men With Psychoneurosis and Controls, by Reason for Losing Time, Army Personnel Only*

Reason for losing time	Days lost per man				Days lost per 1,000 served	
	All men		Men losing time for stated reason			
	Psycho-neurosis, clinical + record cases	1944 controls	Psycho-neurosis, clinical + record cases	1944 controls	Psycho-neurosis, clinical + record cases	1944 controls
AWOL.....	4.0	1.2	20.4	15.1	4.2	1.1
Confined or incapacitated.....	5.7	2.6	54.1	58.3	5.9	2.4
All reasons.....	9.7	3.9	43.7	40.3	10.1	3.6

**Echelon of Assignment**

One of the most revealing military characteristics is the echelon of assignment, because of its close association with stress. For infantry regiments in combat during 1944 it was estimated, in the report on age and resistance to stress, that admissions for psychoneurosis occurred at the rate of about

**TABLE 30**

*Arm or Service at Separation, for Men With Psychoneurosis and Controls, Army Personnel Only*

Arm or service	Psychoneurosis, clinical + record cases	1944 controls
	Percent	Percent
Air Corps . . . . .	12.4	15.3
Army Air Forces unspecified . . . . .	6.9	10.8
Infantry . . . . .	32.6	21.9
Armored . . . . .	3.4	4.0
Field Artillery . . . . .	4.2	7.4
Army Ground Forces unspecified . . . . .	1.0	0
Other arms . . . . .	5.0	4.7
Engineers . . . . .	7.7	9.0
Medical Department . . . . .	8.1	8.4
Other services . . . . .	18.7	18.5
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>
Number of men . . . . .	944	379

**TABLE 31**

*Mission of Unit at Time of Breakdown for Men With Psychoneurosis and During 1944 for Controls, With Estimated Admission Rates for Psychoneurosis, Army Personnel Only*

Mission of unit	Percentage distribution		Admissions for psychoneurosis per 1,000 men per year
	Psychoneurosis, clinical + record cases	1944 controls	
Combat (C) . . . . .	60.2	38.3	48
Combat support (CS) . . . . .	8.9	23.2	12
CS available for CSS and SS (CSX) . . . . .	0	0	( <sup>1</sup> )
Combat service support (CSS) . . . . .	5.2	8.7	18
CSS available for CS and SS (CSSX) . . . . .	.8	1.2	( <sup>1</sup> )
Service support (SS) . . . . .	21.1	24.7	26
SS available for CS and CSS (SSX) . . . . .	.4	.6	( <sup>1</sup> )
Training (T) . . . . .	3.2	3.3	30
Miscellaneous . . . . .	.2	0	( <sup>1</sup> )
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>31</b>
Number of men . . . . .	845	332	.....

<sup>1</sup> Too few cases to support an estimate.

285 per 1,000 men per year, which is 12 times the average rate of 23 for the quieter theaters. Infantry divisions in ETO experienced an average rate of about 140 and field armies a rate of about 70 per 1,000 men per year.

### **Mission of Unit at Time of Breakdown**

During World War II the War Department made use of a classification<sup>19</sup> of units according to their intended utilization for combat, logistic support, and training. This classification was applied to Army personnel in both the sample of psychoneurotics and the 1944 controls. The differences between the two samples are quite marked, as may be seen from table 31, which contains the classification scheme, the percentage distributions, and the estimated admission rates. It should be remarked that the admission rate for combat units in which many men broke down before they left the Z/I is not the same as that for units *in* combat. Typical units in these classifications are the following:

- C Rifle company
- CS Combat engineers
- CSX Chemical smoke generating company
- CSS Medical battalion
- CSSX Quartermaster truck company
- SS Adjutant General V-mail detachment; field hospital
- SSX Engineers dump truck company
- T Replacement depot

### **Military Occupation (MOS)**

Like arm or service MOS is also intimately associated with stress, and it is not surprising that large differences are found between the Army cases and their controls (table 32). Since the differences in MOS-groupings are rather pronounced there has been added to the table a set of estimated admission rates for psychoneurosis in 1944. Some of these rates are rather unstable, being based on fairly small numbers of cases, but it seems plain that the most stressful occupations (rifeman, gunnery) are associated with high rates. Why the rate should also be high for administrative and miscellaneous assignments is not clear; possibly these assignments reflect some selection of individuals with greater than average predisposition.

### **Combat Experience**

Because the type, intensity, and duration of combat varied so much, several scales were established. One of these is based on official recognition of participation in battles or campaigns. Army personnel were coded with reference to the List of Battles and Campaigns, World War II, contained in War Department General Orders, No. 24. Table 33 compares the data

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<sup>19</sup> Set forth in WD Circular 356, Sec. V, dated 2 Sept. 1944.

**TABLE 32**

*MOS at Time of Breakdown for Men With Psychoneurosis and During 1944 for Controls, With Estimated Admission Rate for Psychoneurosis, Army Personnel Only*

MOS	Percentage distribution		Admissions for psychoneurosis per 1,000 men per year
	Psychoneurosis, clinical + record cases	1944 controls	
Rifleman .....	23.5	8.8	82
Gunnery .....	20.5	11.1	57
Intelligence, reconnaissance, security .....	2.9	3.5	25
Communications .....	4.9	6.5	23
Transportation .....	9.8	7.6	39
Supply .....	8.3	7.3	35
Maintenance .....	7.2	9.8	22
Medical .....	4.8	4.3	34
Construction and engineering .....	1.5	1.3	35
Technical .....	.7	2.0	11
Administrative, miscellaneous .....	15.9	8.6	57
Unknown or none .....	14.9	29.2	16
<b>Total</b> .....	<b>100.0</b>	<b>100.0</b>	<b>31</b>
<b>Number of men</b> .....	<b>857</b>	<b>397</b>	

**TABLE 33**

*Number of Battles and Campaigns During Entire Period of Service, for Men With Psychoneurosis and Controls, Army Personnel Only*

Number of battles or campaigns	Psychoneurosis, clinical + record cases	1944 controls
	Percent	Percent
0 .....	42.4	24.4
1 .....	15.3	17.7
2 .....	14.9	16.0
3 .....	14.2	17.1
4 .....	7.0	11.7
5 .....	4.5	8.5
6 .....	.8	2.0
7 .....	.3	1.7
8 .....	.3	.3
9 .....	.3	.6
<b>Total</b> .....	<b>100.0</b>	<b>100.0</b>
<b>Number of men</b> .....	<b>954</b>	<b>351</b>

obtained for the two Army samples, which of course differ quite significantly in the statistical sense. In this instance, contrary to most, the controls have had the more stressful experience; in 76 percent of the controls the personnel record contains evidence of combat, in the broad sense of its use here, in contrast to 58 percent of the psychoneurotics. The mean number of battles or campaigns is 2.2 for controls and 1.51 for psychoneurotics. These data summarize the *entire* World War II military service of the two groups, and in general, the controls, because they did not break down, were better able to continue on to participate in other battles and campaigns.

### Correlation of NP and WIA Rates

Another strong indication of the role played by stress in precipitating admissions among combat troops is found in the correlation between NP and WIA admission rates. Hanson et al.<sup>20</sup> and Beebe and DeBakey<sup>21</sup> have published charts for individual divisions in combat showing the concomitant movement of admission rates for the wounded and for all neuropsychiatric admissions (largely psychoneuroses). Correlation coefficients have been calculated for a considerable body of such experience at various echelons, always with the same general result (table 34). Coefficients below +.60 are comparatively rare; the bulk lie between +.70 and +.90, a range within which its dependence upon the WIA rate explains about 50 to 80 percent of the observed variation in the NP rate. None of the other major factors causing variation in the NP admission rate is subject to such direct measurement.

**TABLE 34**

*Correlation Coefficients Between Number of WIA and Number of NP Admissions Weekly in Individual Combat Divisions, ETO, 1944-1945*

Correlation coefficient	Number of divisions
+ .21 to .30 . . . . .	1
+ .31 to .40 . . . . .	0
+ .41 to .50 . . . . .	1
+ .51 to .60 . . . . .	4
+ .61 to .70 . . . . .	5
+ .71 to .80 . . . . .	14
+ .81 to .90 . . . . .	22
+ .91 to 1.00 . . . . .	8
Total . . . . .	55

<sup>20</sup> Hanson, F. R. (ed.): *Combat Psychiatry*, Bull. U. S. Army Med. Dept., Vol. 9, Supplemental Number, Nov. 1949.

<sup>21</sup> Beebe, G. W., and DeBakey, M. E.: *Battle Casualties*, Charles C. Thomas, 1952.

## Admissions Prior to Breakdown

Even before breakdown the admission rate <sup>22</sup> for the psychoneurotics was much higher than that for the controls, 903 in comparison with 521 (table 35). In most of the diagnostic categories the controls have a relative deficit of admissions and in some it is quite large.

**TABLE 35**

*Admissions per 1,000 Men per Year, by Cause, for Men With Psychoneurosis and Controls, Army Personnel Only, for Period Prior to Breakdown*

Cause	Psychoneurosis, clinical + record cases	1944 controls <sup>1</sup>
All causes.....	903	521
Psychiatric other than psychoneurosis.....	18	26
Conditions of psychosomatic interest.....	18	2
Infectious and parasitic diseases.....	115	104
Accidental injury.....	76	52
Wounds.....	30	27
Diseases of digestive system.....	83	34
Other diagnoses.....	561	303

<sup>1</sup> For controls the rates pertain to the entire period of service.

## Admissions After Breakdown and for Entire Period of Military Service

Although control comparisons are meaningless in this context it may be of interest to give the admission rates for the psychoneurotics after breakdown and for the entire period of service (table 36). The former is 975 and the latter 1,308 admissions per 1,000 men per year. The breakdown itself is excluded from the rate before and the rate after, but appears in the rate for the entire period of service. For the entire war period through August 1945 the admission rate for all causes for the Army as a whole was about 700, of which about 25 was for wounding.

## Multiple Admissions

A matter of some interest is the tendency, on the part of a few men, to multiple admissions for psychoneurosis. When the 1944 Army punch-cards were first received and collated it was noted that, even within the file for that single year, individual men were represented by many distinct admissions. Accordingly, an effort has been made to estimate the extent to which multiple admissions occurred, partly as a matter of intrinsic interest and partly in order to produce a factor suitable for converting

<sup>22</sup> All admission rates in this report are so-called "hospital and quarters" rates, i. e., are based on all men who lost time from duty for the specified cause, whether hospitalized or not.

**TABLE 36**

*Admissions per 1,000 Men per Year, by Cause, in Interval After Breakdown and in Entire Period of Military Service, for Army Clinical and Record Cases of Psychoneurosis*

Cause of admission	After break-down	Total period of service
All causes.....	975	1, 308
Psychoneurosis.....	385	504
Psychiatric other than psychoneurosis.....	33	24
Conditions of psychosomatic interest.....	11	16
Infectious and parasitic diseases.....	101	111
Accidental injury.....	51	67
Wounds.....	30	34
Diseases of digestive system.....	66	77
Other diagnoses.....	298	472

admissions into men. From the Army punchcards which lie behind the Army clinical and record sample, an estimate was made for the single year 1944 as shown in table 37. That is, 13 percent of the men with admissions in 1944 had more than one admission in that year and 25 percent of the admissions were contributed by these 13 percent. To reduce a sample of 1944 admissions to men one would divide by 1.157; for example, 1,000 admissions represent 864 men.

**Associated Diagnoses**

The types and frequencies of other disorders which were associated (as secondary conditions) with Army psychoneurotic admissions in 1944 are shown in table 38. No particular diagnosis seemed outstanding and the table lists diagnostic groups rather than specific diseases. Rather common diagnoses were: malaria, psychopathic personality, disorders of intelligence, and flat feet.

**TABLE 37**

*Multiplicity of Army Admissions for Psychoneurosis in 1944*

Number of admissions in 1944	Percentage of men with admissions	Percentage of aggregate admissions
One.....	86. 8	75. 0
Two.....	11. 1	19. 2
Three.....	1. 7	4. 3
Four.....	. 4	1. 5
Total.....	100. 0	100. 0

**TABLE 38**

*Percentage of Cases With Specified Second and Third Diagnoses, 1944 Army Roster of Admissions for Psychoneurosis*

Diagnostic group	Second Diagnosis	Third Diagnosis
No additional diagnosis made . . . . .	80.92	94.92
Traumatism . . . . .	0.66	0
Infectious and parasitic diseases . . . . .	1.87	0.51
Cancer and other malignant tumors . . . . .	0.23	0
Diseases of metabolism, nutrition, endocrine glands, hematopoietic system and reticuloendothelial system . . . . .	0.19	0.13
Neurological diseases . . . . .	0.54	0.16
Psychoses . . . . .	0.01	0.01
Nonpsychotic conditions of psychiatric nature . . . . .	2.13	0.20
Diseases of organs of vision . . . . .	1.87	0.80
Diseases of circulatory and lymphatic system . . . . .	1.11	0.24
Diseases of respiratory system . . . . .	2.30	0.70
Diseases of digestive system . . . . .	2.10	0.83
Diseases of genito-urinary system . . . . .	0.86	0.26
Diseases of skin, musculo-skeletal system, allergy and drug reactions, etc. . . . .	5.22	1.24
Total . . . . .	100.01	100.00
Number of admissions . . . . .	7,008	7,008

**Duration of Illness**

Although military and civilian data on duration of illness are notoriously incomparable, it is of great importance in understanding the logistic significance of a particular diagnosis to have the full picture on duration of illness and disposition. Figure 2 gives this for the basic Army roster of admissions and in table 39 a comparison is made between these data and comparable data on admissions for disease and for wounds. The average period of hospitalization for psychoneuroses is not as long as it is for wounds, but approximately 50 percent were still in the hospital four weeks after admission. Differences in this respect exist between Z/I and overseas cases, as may be seen in table 40. Appreciable numbers of the overseas admissions were still hospitalized after 90 and 120 days. Men with prolonged hospitalization were usually evacuated to the Z/I, which involved not only the delays incident to evacuation but sick leave on return to the States and a period of rehabilitation and treatment.

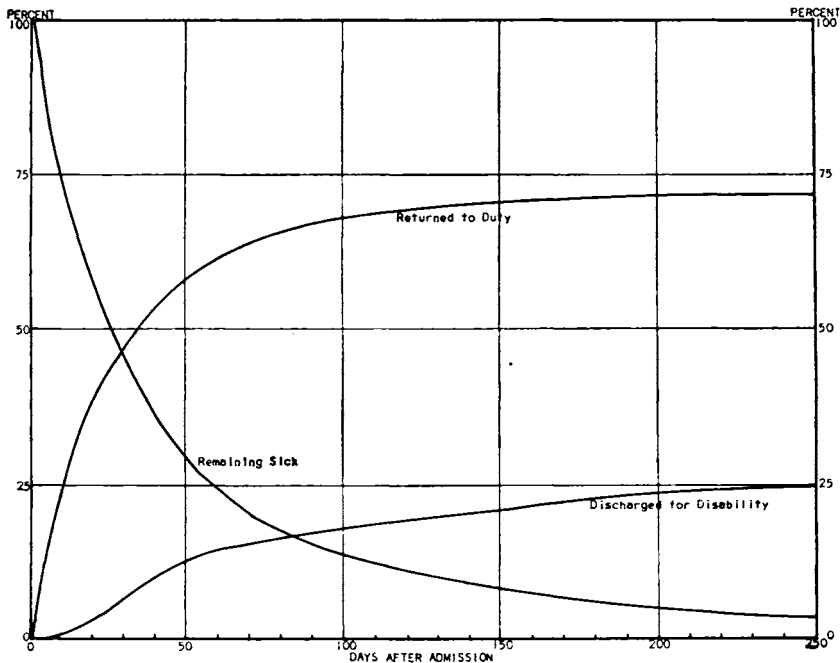
**Place of Final Treatment**

For the Army roster from which the study sample was drawn a tabulation was made of place of final treatment, with the result shown in table 41.



**FIGURE 2**

*Patients Remaining, Returned to Duty, and Discharged for Disability, by Number of Days After Admission—1944 Army Admissions for Psychoneurosis, White Enlisted Men Only*



The Z/I and overseas patterns are, of course, very different. Other data<sup>23</sup> yield the following approximate distribution of new admissions for psychoneurosis in 1944 by theater as shown in table 42. For the Z/I admissions, a similar distribution follows:

	<i>Percent</i>
Forward of station hospital (quarters only, numbered units under Army Ground Forces control).....	1.4
Station hospital.....	59.8
Regional hospital.....	13.5
Named general hospital.....	25.3
Total.....	100.0

**SUMMARY**

On the whole the analysis of characteristics present at entry is unrewarding. The men with admissions for psychoneurosis are a little older at entry, possibly a little more often from the 13 largest metropolitan districts in 1940, and a little more often married because they are older, but they do not differ as to intelligence, civilian occupation, religion, or race.

<sup>23</sup> SGO, Unpublished 1944 Tabulations, Medical Statistics Division, Office of the Surgeon General, U. S. Army.

**TABLE 39**

*Percentage of Cases Remaining and Percentage Returned to Duty at Selected Intervals After Admission, by Diagnosis, Army Data*

Number of days after admission	All diseases 1943, MTO	Psychoneurosis 1944	WIA 1943, MTO
<b>A. Remaining in Hospital on Stated Day</b>			
15.....	33.5	66.0	77.7
30.....	16.4	42.7	64.5
60.....	9.2	21.0	47.0
90.....	6.3	13.9	35.4
120.....	3.7	9.6	26.6
<b>B. Returned to Duty On or Before Stated Day</b>			
15.....	68.2	32.3	21.9
30.....	83.7	49.2	34.5
60.....	90.3	63.3	51.4
90.....	92.4	67.9	62.3
120.....	93.4	70.1	70.2

**TABLE 40**

*Percentage of Men With Psychoneurosis Remaining in Hospital Over Time*

Day after admission	Z/I admissions	Overseas ad- missions
15.....	75.1	61.5
30.....	52.0	47.1
60.....	21.6	29.1
90.....	9.5	21.9
120.....	5.9	18.2

Education is the one important exception to this generally negative picture; men with a lower educational attainment have a greater chance of breakdown. In terms of the educational classification used here the estimated admission rates for psychoneurosis range from a low of 20 to a high of 80 admissions per 1,000 per year.

It is in the study of characteristics growing out of military experience that most of the large and important differences are found. In contrast to the preservice sociological characteristics just reviewed, characteristics related to military experience are often so intimately associated with stress as to provide a powerful basis for predicting breakdown. In *length of service* are seen the effects of both predisposition and stress; for the first month of

**TABLE 41**

*Percentage Distribution of Cases of Psychoneurosis as to Place of Final Treatment, 1944 Army Roster*

Place of final treatment	Percentage of cases
Non-Army medical installation .....	0.2
Aid station .....	1.7
Clearing station .....	5.1
Quarters or dispensary .....	1.5
Portable surgical, evacuation, or convalescent hospital .....	6.5
Field or regional hospital .....	8.1
Station hospital .....	41.2
General hospital .....	27.0
Convalescent facility or camp .....	8.7
Hospital ship or transport .....	.1
<b>Total</b> .....	<b>100.1</b>
Number of admissions .....	7,008

**TABLE 42**

*Echelon of Final Treatment, 1944 U. S. Army Admissions for Psychoneuroses in Three Overseas Theaters*

Echelon of final treatment	Percentage distribution by theater		
	SWPA	ETO	MTO
<i>Not evacuated home</i> .....	65.2	80.1	88.1
Field Army installations <sup>1</sup> .....	19.5	36.8	26.3
Station hospital .....	28.1	11.5	29.9
General hospital .....	17.6	31.8	31.9
<i>Evacuated home</i> .....	34.7	19.8	11.9
<b>Total</b> .....	<b>99.9</b>	<b>99.9</b>	<b>100.0</b>

<sup>1</sup> Evacuation hospital, field hospital, convalescent hospital, clearing station, etc. It is possible that some cases coded as convalescent hospital were last seen, not in the mobile convalescent hospital attached to the field Army, but in convalescent facilities attached to general hospitals. The various convalescent groups are not distinguished in the original tables.

service the admission rate is double the average, and thereafter it falls, reaching a low point in the second year and rising thereafter to above average. For men with 4 or more years of service the average rate reaches a level quite like that of the first month. The early movement reflects a weeding-out process, the later movement a response to stress. However,

the high rate for men with 4 or more years of service in 1944 is not completely explained; we know only that age plays no great role in it. Associated with length of service is the fact that fewer psychoneurotics served overseas.

The *component* designation bears some relation to the chance of breakdown, but not a remarkable one: the inductees and National Guard troops have a somewhat higher rate (about 50 percent higher) than the Regular Army and voluntary enlistments, but this may be no more than a reflection of differences in *age at exposure* which is quite intimately associated with chance of breakdown. There are also large differences in *military grade* of psychoneurotics and controls at separation, but grade at time of breakdown was not abstracted. The psychoneurotics have fewer *awards and decorations* generally but insignificantly fewer *Purple Hearts* than the controls. Two men with psychoneurosis had received the Distinguished Service Cross, three the Silver Star, and 12 percent the Purple Heart. *Court-martial*, on the other hand, was a much more frequent experience for the psychoneurotics than for the controls, but whether because of greater emotional instability or greater stress can hardly be determined. The relative frequency of courts-martial is about 60 percent higher for psychoneurotics. Similarly, the psychoneurotics *lost time for disciplinary reasons* to a much greater extent; about 1 percent of the time they were AWOL, confined, or incapacitated.

Among the factors more intimately associated with stress than the foregoing perhaps the poorest is *arm or service*. The highest rate is 46 for Infantry, but none is remarkably low. *Theater* or geographical command is somewhat more strongly associated with stress; the quieter theaters had a rate of 23 and ETO a rate of 39 throughout the year 1944; after D-day the rate for ETO was much higher. *Echelon of assignment* is the best predictor of psychiatric admissions; unfortunately it was not selected for the coding pattern of the follow-up study, but other data suggest that the rate for a regiment in combat in ETO was about 11 times the rate for a quiet theater. *Mission of unit* at time of breakdown is about like arm or service in its usefulness in distinguishing controls and psychoneurotics; the highest rate, which was for combat units (which included units destined for combat as well as those that had actually been in combat) was estimated at 48 and the lowest at 12, in comparison with the average of 31 for the entire Army. *Military occupation* (MOS) is quite reliably associated with the chance of breakdown; men who were riflemen had a rate of 82 in comparison with 11 for men in technical assignments; 24 percent of the psychoneurotics were riflemen and 44 percent riflemen or gunners by occupation. Combat experience was approached on the basis of battle- and campaign-credits, which are only grossly associated with the actual risk of becoming a battle casualty. According to this index it is the controls who experienced more combat, but actually all this means is that more of the controls were overseas, in combat theaters. Finally, the *correlation of the rate of wounding and the NP admission rate* is rather high (usually between  $+ .7$  and  $+ .9$ )

for combat units, whatever their size, and leaves no doubt about the dynamic effect of combat stress on the NP admission rate, the major portion of which is for psychoneurosis.

Prior to the first breakdown the psychoneurotics had a much higher *admission rate* for all causes than the controls (903 vs. 521). After breakdown the rate was also high, 975 admissions per 1,000 men per year. If the breakdown itself is included the admission rate for the entire World War II period is found to be 1,308 for the psychoneurotics in comparison with 521 for the 1944 Army controls. *Multiple admissions for psychoneurosis* were common. Data obtained from the Army roster used in the follow-up study suggests that 864 men generated 1,000 1944 admissions for psychoneurosis. A sample of 1944 admissions was studied for *associated diagnoses* but without finding anything remarkable. Curves of *patients remaining* and returned to duty show that the duration of illness for psychoneurotics greatly exceeds that of admissions for disease generally, and lies about midway between admissions for disease and for wounding. *Place of final treatment* was usually a station or general hospital; in ETO only 37 percent of the admissions received definitive treatment in forward hospitals, that is, hospitals assigned to the field army as contrasted with those in the rear.

## CHAPTER II

### PSYCHIATRIC ASPECTS OF THE PRESERVICE HISTORY

Specifically psychiatric data from the military and preservice history were studied to determine the historical characteristics of those who broke down in service and the extent to which such information could be used in predicting breakdown. For the latter purpose control data were necessary but were lacking at the time this study was undertaken. It is for this reason, as has been previously described (p. 7) that the Army was asked, in the spring of 1951, to undertake the psychiatric examination of a representative sample of men entering the Army during the Korean conflict. The resulting sample is used here as the best available control. Its four most obvious shortcomings are:

1. The men were much younger than World War II personnel;
2. Informed opinion is that psychiatric screening standards during the Korean period were less rigorous than during World War II;
3. The time difference creates opportunities for other differences, especially since the sociological processes of mobilization were quite dissimilar in the two periods; and
4. Only 6 psychiatrists participated in interviewing the control sample in contrast to more than 200 who examined men for the follow-up study.

To meet the first deficiency, in the comparisons which follow the clinical sample of psychoneurotics has been limited to the age range covered by the 1951 sample of Army accessions of enlisted men. It will be shown below (p. 59), that the second source of error is relatively unimportant and that an estimate of its magnitude can be developed. The third major source of error is too variable to cope with, but cannot be dismissed as negligible. The fourth factor is a shortcoming in that there may be quite large variations among examiners in their assessments of men and their backgrounds. Men in the clinical sample were studied by so many psychiatrists, no one of whom examined more than 10 men, that the peculiarities of no one or few examiners could affect the resulting observations, which is in marked contrast to the situation with respect to the 1951 control sample which involved only 6 psychiatrists. Accordingly, all statistical tests were done in two different ways: (1) with no explicit account of variation among examiners beyond that expected from the inherent variability of different samples of men; and (2) with explicit account of variation among examiners as estimated from the 1951 Army control sample. In the analysis which follows a discrepancy is termed significant only when *both* tests yielded small probabilities ( $P < .05$ ).

The psychiatric information obtained on men with psychoneurosis in the World War II clinical sample rests upon the clinical records prepared by psychiatrists in the Armed Forces at the time of breakdown and upon the follow-up examinations made by psychiatrists who participated in the present study, supplemented in some instances by Red Cross social histories, questionnaires, and VA claims folders. The examiners were asked to utilize the information contained in the service medical records, and to integrate it with the facts elicited by their own examinations. Nevertheless, in an occasional case there remained an unresolved conflict between the service medical record and the historical material elicited by the examiner at follow-up. Such disagreement may derive in part from a difference in the motivation of the subject at the two different times; in the service he might very well exaggerate the pathology in his background in the hope of facilitating his discharge; at follow-up he might minimize it and, in the interests of secondary gain of one type or another, associate all present difficulties with his military service. In the event of such disagreement the testimony of the examiner's report was usually taken. In exceptional cases the coded pattern of personality and behavior was, however, based on a combination of data from both sources.

Appendix V contains brief summaries of a small sample of the case histories.

## **INDIVIDUAL PSYCHIATRIC ASSESSMENTS**

Each psychiatric observation or interpretation was first studied individually and will be discussed in turn. Under each topic consideration is first given to the problems of definition and classification, next to a presentation of the facts for the study sample, and finally to the importance of the factor in the likelihood of breakdown. The study sample, it must be borne in mind, covers Navy and Army personnel, but in assessing the value of each psychiatric factor as a predictor of breakdown controlled comparisons were possible only for Army personnel aged 25 or less at entry into service.

### **Psychiatric History of Parents and Siblings**

The examiner was asked to determine the personality of parents and siblings and whether there was evidence of maladjustment or psychiatric illness. The interview form (appendix IV) also required that he indicate specifically whether he found a positive history of psychiatric illness in parents or siblings, or a clear-cut personality disorder. In a large number of instances the information satisfied neither category, and yet it seemed equally erroneous to label such cases as negative. For this reason there was added a category of suggestive evidence, into which about one-fourth to one-third of the cases fell (table 43). For about 200 cases, largely among those not examined, it was felt that insufficient evidence existed upon which to make the classification, and these are omitted from the table.

**TABLE 43**

*Psychiatric History of Parents and Siblings of Men in Clinical Sample*

Psychiatric history	Mother	Father	Siblings <sup>1</sup>
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Negative.....	52.3	55.5	60.5
Positive evidence, psychosis or overt neurosis.	7.9	4.9	8.0
Clear-cut emotional or personality disorder.	8.1	16.0	6.0
Suggestive evidence of emotional or personality disorder.....	31.7	23.6	25.5
Total.....	100.0	100.0	100.0
Number of men.....	761	758	650

<sup>1</sup> Entries in this column apply to only those who had siblings.

Men who had no siblings were omitted from the distribution as to siblings. The criteria used for overt neurosis here were the same as elsewhere in the study.<sup>24</sup> Although half of the cases have a history of pathology in either parent or among siblings, only about 20 percent have a negative history on all three counts taken in combination. Positive evidence of psychosis or overt neurosis was seen in 7.9 percent of the mothers, 4.9 percent of the fathers, and 8.0 percent of the siblings. Fathers more often exhibited evidence of a clear-cut emotional or personality disorder; alcoholism and brutality were common manifestations.

In tables 44 and 45 the 1951 Army control sample is compared with men in the clinical sample aged 18 to 25 at entry into the Army. Although the two samples do differ for both parents and in the expected direction, the observed variation does not meet the criterion of statistical significance when account is taken of the inherent variability among examiners, as estimated from the control sample.

The association between a positive psychiatric history in any siblings and the chance of breakdown is a quite significant one ( $P < .01$ ). Table 46 provides the distributions underlying this comparison and the estimated

<sup>24</sup> Overt neurosis denotes incapacity from neurotic traits or symptoms which may be mild, moderate, or severe. In addition, the organization of symptoms and resultant incapacity must fit into one or more of the following categories:

- a. Anxiety reaction.
- b. Dissociative reaction.
- c. Phobic reaction.
- d. Conversion reaction.
- e. Somatization reaction (e. g., G. I., C. V., G. U., asthenia).
- f. Hypochondriacal reaction.
- g. Obsessive compulsive reaction.
- h. Neurotic depressive reaction.



admission rates. The mere fact that a man had siblings is of no evident importance: the admission rate is the same for men with and without siblings. But the estimated rates are 22 and 43 for men whose siblings presented, respectively, negative and nonnegative psychiatric histories.

One may well ask how different the conclusion would be if one were to allow for the fact that the 1951 control sample shows somewhat more psychopathology than a cross section of the Army in World War II because of lowering of the induction standards after the war. An adjustment for this difference may be made on the basis of the correlation between pre-service personality and any characteristic under study, supplemented by the WW II estimate of preservice personality previously developed<sup>25</sup> on the basis of psychiatric opinion. The general effect of any such adjustment, it should be noted, would be to widen the discrepancies between the

**TABLE 44**

*Psychiatric History of the Mother, Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry*

Psychiatric history of mother	1951 controls	Psychoneurosis, clinical cases
	<i>Percent</i>	<i>Percent</i>
Negative.....	61.8	52.5
Positive history, neurosis or psychosis.....	7.1	7.8
Clear-cut emotional or personality disorder.....	7.5	8.1
Suggestive evidence, emotional or personality disorder.....	23.6	31.6
Total.....	100.0	100.0
Number of men.....	505	332

**TABLE 45**

*Psychiatric History of the Father, Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry*

Psychiatric history of father	1951 controls	Psychoneurosis, clinical cases
	<i>Percent</i>	<i>Percent</i>
Negative.....	67.7	56.7
Positive.....	3.4	4.9
Clear-cut disorder.....	9.8	14.3
Suggestive evidence.....	19.2	24.1
Total.....	100.1	100.0

<sup>25</sup> Brill, N. Q., and Beebe, G. W.: Psychoneuroses, Military Applications of a Follow-up Study. *Armed Forces Med. Bull.* 2:15-33 (Jan.) 1952.

**TABLE 46**

*Psychiatric History of the Siblings and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Psychiatric history of siblings	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psycho- neurosis, clinical cases		
Negative.....	66.9	54.0	.81	22
Positive.....	3.0	7.6	1.58	43
Clear-cut.....	6.5	5.3		
Suggestive.....	12.9	22.5		
No siblings.....	10.7	10.6	.99	27
Total.....	100.0	100.0	1.00	27

population sample and the men who broke down. In this instance the rates of 22 and 43 which appear in table 46 as a measure of the influence of the psychiatric history of siblings would be replaced by 20 and 53 if the 1951 control sample were standardized<sup>26</sup> against the WW II estimate of preservice personality. In general, adjusted data will not be presented here except as they may make a great difference in the estimate of the effect of a characteristic upon the chance of breakdown.

**Withdrawal of Parents Before End of Adolescence (Age 18)**

The objective facts of death, divorce, desertion, and the like were obtained with little difficulty. An attempt was made at a summary classification, which appears in table 47, with an age-span through adolescence. That is, after adolescence the death or other withdrawal of a parent was dis-

<sup>26</sup> Such standardization makes the following change in the distribution of the control sample by psychiatric history of siblings:

History	Observed	Standardized
	Percent	Percent
Negative.....	66.9	71.7
Positive.....	3.0	2.5
Clear-cut.....	6.5	4.6
Suggestive.....	12.9	11.0
No siblings.....	10.7	10.2
Total.....	100.0	100.0

regarded. About 22 percent of the men had lost at least one parent by the end of adolescence, and divorce, separation, or desertion figured in the lives of another 10 percent. Chronic, incapacitating illness in parents was a factor in the lives of 4 percent, and employment of the mother in 5 percent.

**TABLE 47**

*Parental Withdrawal in the Clinical Sample*

Type of withdrawal	Percentage <sup>1</sup>
None involving either parent . . . . .	59.1
Death, mother . . . . .	8.1
Death, father . . . . .	11.4
Death, both . . . . .	2.8
Divorce, separation; deserted by mother . . . . .	1.2
Divorce, separation; deserted by father . . . . .	7.4
Divorce, separation; deserted by both . . . . .	1.0
Chronic incapacitating illness, mother . . . . .	2.3
Chronic incapacitating illness, father . . . . .	1.6
Chronic incapacitating illness, both . . . . .	.1
Partial withdrawal of mother, e. g., full-time employment or other activity . . . . .	5.0
<b>Total . . . . .</b>	<b>100.0</b>
<b>Number of men . . . . .</b>	<b>883</b>

<sup>1</sup> For many men there was more than one type of withdrawal on the part of the parents, but only the most serious one was coded.

Table 48 presents the percentage distributions of men in the Army clinical sample and of the 1951 Army control sample, which do not differ significantly (*P* about .08). That is, withdrawal of a parent does not seem to add significantly to the chance of breakdown. It is possible that withdrawal may actually exert an effect which this material fails to demonstrate, but it seems unlikely that any such effect could be large. Any suggestion of an effect is confined to those who lost parents by death.

**Parental Affection and Rejection**

No specific provision was made in the history form for collecting information about parental rejection and overprotection. In the course of reviewing the early cases in order to build the code, however, it became plain that many examiners had made a point of describing the emotional relationships of the subject and his parents in terms of affection, discipline, and independence. Accordingly, these elements were added to the code. The categories used in assessing affection and rejection are given in table 49 together with a percentage distribution of the clinical sample as a whole.

The criteria employed in classifying men according to this scale are as follows:

By extreme affection is meant a slavish devotion to the child and his welfare. (It was recognized that this did not necessarily imply affection.) Statements to the effect that parent and veteran were "very close" or that veteran was parent's "favorite" will be coded as more than average rather than extreme. The rejecting parent is one who has little to do with the child, or does not want to be bothered by him, or is deficient in love. Overt hostility will always be coded as extreme rejection, as will the parent's abandoning of child and family.

Only one-third of the cases contained adequate information of this type, as it turned out, and in the subsequent analysis its usefulness was quite limited. Men were rarely classified at the extremes of the scale from the standpoint of the mother, but rather frequently from the standpoint of the father. Extreme rejection was reported for fathers with about three times the frequency reported for mothers. It is difficult to know whether this discrepancy is a psychological fact of importance or a failure, in the coding, to recognize sufficiently the cultural differences in parental roles. Had the sample consisted of female patients, the findings might have been just the opposite.

**TABLE 48**

*Parental Withdrawal in Preservice Histories of Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry*

Withdrawal	1951 controls	Psychoneurosis, clinical cases
	Percent	Percent
None.....	63.7	59.2
Death.....	16.3	20.9
Divorce.....	7.1	9.9
Chronic illness or other partial withdrawal.....	12.9	9.9
Total.....	100.0	99.9
Number of men.....	504	373

When the 1951 control sample is compared with the Army clinical sample (tables 50 and 51), it is found that they differ quite significantly as to affection and rejection by each parent. For both mother and father "average" relationships were seen much less frequently and rejection much more commonly in the men with psychoneurosis. The variation is such as to produce estimated rates which differ by more than 10 to 1; in both instances the admission rate for men in the category of *extreme* rejection is more than 10 times the average, but extreme maternal rejection was so rare that no reliable rate determination could be made.

**TABLE 49**

*Degree of Parental Affection and Rejection Experienced by Men in Clinical Sample*

Degree of affection or rejection	Parent	
	Mother	Father
	<i>Percent</i>	<i>Percent</i>
Extreme affection.....	2.7	0.3
More than average affection.....	33.4	10.1
Average.....	39.6	35.5
Some rejection, not extreme.....	13.3	25.3
Extreme rejection.....	9.5	27.8
Ambivalent.....	1.5	1.0
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>
Number of men.....	338	288

**Parental Discipline and Indulgence**

Evidence of excessive discipline, on the one hand, or indulgence, on the other, was also sought in the examiners' reports. Most of the examination reports contained adequate references to discipline. The code that was evolved for paternal discipline and indulgence parallels that for affection and rejection, as may be seen from table 52. The coding criteria included the following specific instructions:

The fact that one parent administers the discipline does not of itself justify conclusion that other parent is indulgent. Discipline is not to be narrowly construed as physical punishment. It is an insistence upon conformity with prescribed patterns of thought and behavior, and its enforcement may not be by physical means. By *extreme overdiscipline* is meant a chronic situation of very frequent physical punishment or use of other devices to insure rigid adherence to all patterns prescribed by the parent. There is also the implication that the prescribed patterns are numerous, pervading most areas of thought and behavior.

Extreme attitudes were rarely attributed to mothers but less rarely to fathers.

The 1951 controls also differ quite sharply and significantly ( $P < .01$ ) from the Army clinical sample when they are compared as to parental discipline or indulgence. Whereas in the data on affection and rejection there was evidence that deviations in both directions from the average might be important, such is not the case here. As may be seen from tables 53 and 54, a history of extreme discipline seems to be rather damaging, whereas a history of some indulgence is not so. The estimated admission rates range from 17 to 67 when men are classified on the basis of the mother and 8 to 58 on the basis of the father.

**TABLE 50**

*Degree of Maternal Affection or Rejection and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Degree of maternal affection or rejection	Percentage distribution		Ratio of two distributions—psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psychoneurosis, clinical cases		
Extreme affection.....	3.2	2.7	1.20	32
More than average affection.	27.1	33.6		
Average.....	62.4	38.2	.61	16
Some rejection, not extreme.	4.8	12.1	4.03	109
Extreme rejection.....	1.2	12.1		
Ambivalent.....	1.4	1.3	( <sup>1</sup> )	( <sup>1</sup> )
Total.....	100.1	100.0	1.00	27
Number of men.....	505	149	.....	.....

<sup>1</sup> Not calculated because of small frequencies.

**TABLE 51**

*Degree of Paternal Affection or Rejection and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Degree of paternal affection or rejection	Percentage distribution		Ratio of two distributions—psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psychoneurosis, clinical cases		
Extreme affection.....	0.6	0.8	1.23	33
More than average affection.	9.0	11.0		
Average.....	69.7	40.9	.59	16
Some rejection, not extreme.	15.5	19.7	1.27	34
Extreme rejection.....	3.4	26.8	7.86	212
Ambivalent.....	1.8	0.8	( <sup>1</sup> )	( <sup>1</sup> )
Total.....	100.0	100.0	1.00	27
Number of men.....	498	127	.....	.....

<sup>1</sup> Not calculated because of small frequencies.

TABLE 52

*Extent of Parental Discipline and Indulgence Experienced by Men in Clinical Sample*

Extent of discipline or indulgence	Parent	
	Mother	Father
	<i>Percent</i>	<i>Percent</i>
Extreme discipline.....	5.7	14.7
More than average discipline.....	16.2	25.2
Average.....	61.0	52.0
Some indulgence, not extreme.....	13.0	6.7
Extreme indulgence.....	3.0	.7
Mixed.....	1.1	.7
Total.....	100.0	100.0
Number of men.....	629	613

### Parental Protection and Independence

An effort was made to distinguish protection from affection, as may be seen from the following criteria employed in coding:

Extreme affection or extreme discipline do not of themselves alone justify a judgment of overprotection. *Extreme overprotection* will be coded when a parent throws about the child a stifling net of devices to insulate him from physical harm, dirt, errors in judgment, contact with other children, and the like.

Again the great majority of the examination reports contained adequate information for coding these attitudes. The code categories and observed frequencies may be seen in table 55. For both parents the extremes were seldom observed, but maternal overprotection was more frequent than paternal. On the whole overprotection was more characteristic of the group than a more-than-average grant of independence.

When the 1951 controls and the Army clinical sample are compared on the basis of the percentage distributions exhibited in tables 56 and 57, they are found to differ quite significantly ( $P < .01$ ) for both parents, despite the small number of psychoneurotics. Although the tables also contain estimates of the variation in admission rates associated with this particular axis of classification, some of these are unreliable because of small size of the sample. For example, the rate of 80 for men with extreme maternal overprotection is based on 14 controls and 24 psychoneurotics. The rate of 6 for men with more-than-average independence from the father, although based on 92 controls, has only 10 psychoneurotics behind it. It cannot be asserted with any confidence, therefore, that the true rates, if known, would be in the ratio of 13 or 14 to 1. It is worth noting, however, that a rate

**TABLE 53**

*Extent of Maternal Discipline or Indulgence and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Extent of maternal discipline or indulgence	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psychoneurosis, clinical cases		
Extreme discipline . . . . .	0.6	4.6	} 2.48	67
More than average discipline . . . . .	8.5	18.0		
Average . . . . .	65.0	61.6	.95	26
Some indulgence, not extreme . . . . .	23.0	13.7	} .63	17
Extreme indulgence . . . . .	1.0	1.4		
Mixed . . . . .	2.0	.7	( <sup>1</sup> )	( <sup>1</sup> )
Total . . . . .	100.1	100.0	1.00	27
Number of men . . . . .	505	284	.....	.....

<sup>1</sup> Not calculated because of small frequencies.

**TABLE 54**

*Extent of Paternal Discipline or Indulgence and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Extent of paternal discipline or indulgence	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psychoneurosis, clinical cases		
Extreme discipline . . . . .	1.4	13.1	} 2.15	58
More than average discipline . . . . .	16.2	24.8		
Average . . . . .	61.2	52.6	.86	23
Some indulgence, not extreme . . . . .	15.8	8.4	.53	14
Extreme indulgence . . . . .	2.4	.7	.29	8
Mixed . . . . .	3.0	.4	( <sup>1</sup> )	( <sup>1</sup> )
Total . . . . .	100.0	100.0	1.00	27
Number of men . . . . .	500	274	.....	.....

<sup>1</sup> Not calculated because of small frequencies.



**TABLE 55**

*Extent of Parental Protection or Grant of Independence Experienced by Men in Clinical Sample*

Extent of parental protection or grant of independence	Parent	
	Mother	Father
	<i>Percent</i>	<i>Percent</i>
Extreme overprotection . . . . .	8. 8	1. 8
Moderate overprotection . . . . .	22. 3	6. 8
Average . . . . .	65. 7	86. 6
More than average independence . . . . .	2. 4	4. 3
Extreme independence . . . . .	. 8	. 5
Total . . . . .	100. 0	100. 0
Number of men . . . . .	623	559

**TABLE 56**

*Extent of Maternal Protection or Grant of Independence and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Extent of maternal protection or grant of independence	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneuro- sis, 1944
	1951 controls	Psycho- neurosis, clinical cases		
Extreme overprotection . . . . .	2. 8	8. 8	3. 18	86
Moderate overprotection . . . . .	25. 0	23. 7	. 95	26
Average . . . . .	59. 6	65. 7	. 96	26
More than average inde- pendence . . . . .	9. 3	. 7		
Extreme independence . . . . .	1. 8	1. 1	( <sup>1</sup> )	( <sup>1</sup> )
Mixed . . . . .	1. 6	0	( <sup>1</sup> )	( <sup>1</sup> )
Total . . . . .	100. 1	100. 0	1. 00	27
Number of men . . . . .	505	274		

<sup>1</sup> Not calculated because of small frequencies.

calculated for men given a more-than-average (or extreme) grant of independence by the mother (not given in table 56) would be of the same order as the rate of 6 for men given such independence by the father. It is probable that this factor is productive of not only significant but large variation in the chance of breakdown.

**TABLE 57**

*Extent of Paternal Protection or Grant of Independence and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Extent of paternal protection or grant of independence	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psychoneurosis, clinical cases		
Extreme overprotection . . . . .	0.8	2.4	1.19	32
Moderate overprotection . . . . .	8.6	8.8		
Average . . . . .	70.4	84.8	1.20	32
More than average independence . . . . .	14.6	3.2	.22	6
Extreme independence . . . . .	3.8	.8		
Mixed . . . . .	1.8	0	( <sup>1</sup> )	( <sup>1</sup> )
Total . . . . .	100.0	100.0	1.00	27
Number of men . . . . .	500	251		

<sup>1</sup> Not calculated because of small frequencies.

**Attitude Toward Parents**

As part of the effort to define the relationship between the subject and his parents, each psychiatric history was scrutinized for evidence of positive or negative attitudes toward each parent. The examiner was not, however, specifically asked to formulate the relationship, and in consequence only about half of the examined cases, and 40 percent of the entire series, could be rated in this fashion. The coding criteria employed in analyzing the histories specified the following:

In the absence of an explicit statement even an adequate history will be coded unknown. Positive will be reserved for a degree of dependence and attachment which seriously limits the veteran in the exercise of his own judgment, and where the dependence is not accompanied by evident hostility.

The code and observed frequencies are given in table 58. On this basis about one-fifth of the men appear to have had very strong attachments to their mothers, and about one-fourth to have quite negative attitudes toward their fathers. If mixed feelings were taken into account the discrepancy would be even greater.

The relative warmth of the attitude of the patient toward each parent is also a source of quite significant and very large differences between the 1951 control sample and Army clinical sample. Tables 59 and 60 give the distributions and the corresponding admission rates measuring the magnitude of the association. For both parents the pattern is about the same: except for mixed feelings any deviation from the average tends to

increase the admission rate. The suggestion is that negative feelings are more significant than abnormally positive.

### Economic Status of Parental Family

Information concerning the economic history of the parental family is of the usual sort found in psychiatric histories. If, however, poverty appeared to the examiner to have been present he was asked to check a specific entry on the history form. Table 61 shows that evidence of real deprivation was found in only 22 percent, and a marginal status in an additional 19 percent.

**TABLE 58**

*Evident Attitude of Men in Clinical Sample Toward Their Parents*

Attitude of men	Parent	
	Mother	Father
	<i>Percent</i>	<i>Percent</i>
Positive (very strong).....	20.2	4.8
Neutral (normal).....	64.8	58.0
Negative.....	10.4	26.5
Mixed.....	4.6	10.7
Total.....	100.0	100.0
Number of men.....	395	400

**TABLE 59**

*Evident Attitude Toward Mother and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Evident attitude toward mother	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psycho- neurosis, clinical cases		
Positive (very strong).....	9.3	21.5	2.31	62
Neutral (normal).....	79.6	63.9	.80	22
Negative.....	2.2	11.4	5.23	141
Mixed.....	8.9	3.2	(1)	(1)
Total.....	100.0	100.0	1.00	27
Number of men.....	505	158		

<sup>1</sup> Not calculated because of small frequencies.

**TABLE 60**

*Evident Attitude Toward Father and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Evident attitude toward father	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psycho-neurosis, clinical cases		
Positive (very strong).....	3.2	5.9	1.84	50
Neutral (normal).....	75.8	60.6	.80	22
Negative.....	7.8	24.7	3.17	86
Mixed.....	13.2	8.8	.67	18
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>	<b>1.00</b>	<b>27</b>
Number of men.....	500	170	.....	.....

**TABLE 61**

*Economic Status of Parental Families of Men in Clinical Sample*

Economic status	Percent
Average or better, not marginal or poor for extended period (2 years or more); no comment in an adequate history.....	58.6
Marginal for extended period, but not relief status or real deprivation.	19.3
Relief status or poor in sense of real deprivation, extended period . . .	22.1
<b>Total.....</b>	<b>100.0</b>
Number of men.....	787

Because of variations in the business cycle the 1951 control group probably provides no real basis for comparison of the effect of economic status. It is clear that the two samples differ quite significantly. There is a lower incidence of poverty in the control sample but it can hardly be argued from this fact that economic deprivation is associated with an increased risk of psychiatric breakdown in the service. Table 62 gives the distributions available for study; no attempt has been made to estimate admission rates.

**Religion and Family Life**

Religious influences were handled in much the same fashion as the economic, the history form containing a specific place for the examiner to enter an opinion that the family background was "excessively religious."

**TABLE 62**

*Economic Status of Parental Families of Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry*

Economic status	1951 controls	Psychoneurosis, clinical cases
	<i>Percent</i>	<i>Percent</i>
Average or better.....	55.6	60.0
Marginal.....	31.1	18.5
Relief status or poor.....	13.3	21.5
Total.....	100.0	100.0
Number of men.....	504	340

**TABLE 63**

*Role of Religion in Family Life of Men in Clinical Sample*

Religious influence	Percent
No great influence in the home; no comment re religion in an adequate history.....	41.3
Positive force without evidence of excessive restriction or guilt-production.....	51.9
Evidence of excessive restriction, or guilt-production on religious basis or overreaction to it.....	6.8
Total.....	100.0
Number of men.....	543
Examiner regards family as "excessively religious".....	14.7

It proved difficult to achieve a high degree of reliability in the coding process, perhaps because of real differences among the coders as to the meaning of religion in their own value-systems. The coding criteria follow:

If there is supporting comment which fails to show evidence of excessive restriction as to thought or behavior, or guilt-production, the proper choice will be no great influence or positive force. If examiner considers family overly religious, this additional fact will be recorded.

The examiners reported excessively religious family influences in 14.7 percent of the cases, but in addition the coders undertook to make an independent judgment as to the quality and strength of religious influences, using for this purpose the set of categories which appears in table 63. The

coders found evidence of an excessively religious atmosphere in the sense of guilt-production and restriction upon behavior much less often than the examiners. Because of the great difference in this respect between the examined cases, which reflect the findings and judgment of the examiners, and the nonexamined, in which the coders used whatever pertinent information was provided by other sources, only the material on the examined men is presented in table 63.

The 1951 Army controls and the examined men in the clinical sample (table 64) differ quite significantly. If the discrepancy is a valid one it suggests that those considered by examiners to have come from an excessively religious home had a chance of breakdown about three times the average, 80 in comparison with 27 admissions per 1,000 men per year. It

**TABLE 64**

*Role of Religion in Family Life and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Role of religion.	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated ad- missions per 1,000 men per year for psy- choneurosis, 1944
	1951 con- trols	Psychoneu- rosis, examined clinical cases		
Positive force.....	55.6	45.5	0.82	22
No great influence.....	39.1	38.5	.98	26
Excessively religious.....	5.4	16.0	2.96	80
Total.....	100.1	100.0	1.00	27
Number of men.....	504	244		

should be borne in mind, of course, that these are rates of breakdown among military personnel during wartime, and that in young men from intensely religious families greater conflicts may arise over the military objective of destroying the enemy than occur in men from less religious families. Also, the integration of religion as a positive force in family life may constitute something of a protection against breakdown, but in this material the advantage seems slight; the rates of 22 and 26 differ only insignificantly.

**Overt Sibling Rivalry**

The examiner was asked to enter on the standard history form his judgment as to the existence of an overt sibling rivalry situation. *Overt* sibling rivalry implied clear-cut evidence, such as fighting, or the feeling (in the absence of realistic basis) of having received less attention than other siblings, or of being the family “black sheep.” In addition his narrative summary of the family history usually contained a characterization of the emotional relationship of the subject to each member of his parental family.

Table 65 gives the observed frequencies in the clinical sample as a whole. About 10 percent had no siblings, and about 80 percent of those with siblings had adequate information on sibling rivalry. Overt sibling rivalry was observed in 15 percent of the clinical sample; in 6.2 percent it was rated as marked and in 8.6 percent as mild or moderate in degree.

Clear evidence of a marked sibling rivalry situation is significantly more characteristic of the psychoneurotics than of the controls (table 66). The rate of 62 is a little more than twice the rate calculated for men with no such evidence in their background.

**TABLE 65**

*Overt Sibling Rivalry Experienced by Men in Clinical Sample*

Evidence of overt sibling rivalry	All men	Men with siblings
	<i>Percent</i>	<i>Percent</i>
None noted, adequate history . . . . .	63.5	70.4
Suggestive evidence . . . . .	11.9	13.2
Clear evidence of overt rivalry, mild or moderate . . . . .	8.6	9.5
Clear evidence of overt rivalry, marked . . . . .	6.2	6.9
No siblings . . . . .	9.8	.....
<b>Total</b> . . . . .	100.0	100.0
Number of men . . . . .	756	682

**TABLE 66**

*Overt Sibling Rivalry and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Evidence of overt sibling rivalry	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psychoneurosis, clinical cases		
None noted . . . . .	64.4	64.4	1.00	27
Suggestive evidence . . . . .	11.9	9.8	.82	22
Clear evidence, not marked in degree . . . . .	10.1	8.0	.79	21
Clear evidence, marked in degree . . . . .	3.4	7.7	2.28	62
No siblings . . . . .	10.3	10.1	.98	26
<b>Total</b> . . . . .	100.1	100.0	1.00	27
Number of men . . . . .	505	326	.....	.....

## Parental Conflict

Virtually all examiners provided information adequate for assessing the home of dominant influence from the standpoint of parental conflict. Evidence of conflict was found in 26 percent of the cases, and in 16.4 percent it was rated as marked (table 67).

The 1951 Army controls and the men in the Army clinical sample have the same relative frequency of parental conflict, but they differ quite significantly as to the degree of any reported conflict (table 68). The discrepancy has the direction, but not the magnitude, which clinical experience suggests. Possibly the data are faulty, in that the examiners of the clinical sample were not specifically asked to record their findings, but usually did so as part of the family history, whereas the six examiners of the control group were asked to scale each subject in this fashion.

## Cultural Origin of Family

In reviewing early cases in the process of constructing the code, it was noted that examiners had called attention to cultural problems as a source of difficulty in the early development of several of the subjects. Accordingly, although no specific mention had been made of this item of information in the standard history, it was decided to classify all the men on this basis. The examiners' reports were quite complete in this respect, but in only 2.3 percent of the series was there mention of a problem resulting from or associated with the foreign birth of the veteran or his parents. An additional 1.3 percent were described as having a cultural problem in the community, but the parents were not foreign born. About 6 percent of the men in the clinical sample and 16 percent of their parents were foreign born.

The 1951 Army sample and the Army clinical sample do not differ significantly as to cultural origin, but they do differ quite significantly ( $P < .01$ ) as to the frequency of a problem in cultural assimilation (table 69). The findings suggest that men with difficulties in assimilation had

**TABLE 67**

*Parental Conflict Experienced by Men in Clinical Sample*

Parental conflict	Percent
None noted, adequate history.....	56.2
Harmonious relationship described.....	17.6
Slight or moderate conflict.....	9.8
Marked conflict.....	16.4
Total.....	100.0
Number of men.....	706



only a small fraction of the expected chance of breakdown. Offhand, an opposite result would have been expected, but it is conceivable that motivation could have been better in those with cultural problems, especially where differences were dissipated by identical dress, mode of living, danger and goal in the service. It is also possible that the difference is not a valid one and that the follow-up examiners were not sufficiently thorough in their interrogation on this point.

**TABLE 68**

*Parental Conflict and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Extent of parental conflict	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psycho- neurosis, clinical cases		
Conflict absent . . . . .	75.0	74.2	.99	27
Slight or moderate conflict . . .	16.3	10.7	.66	18
Marked conflict . . . . .	8.7	15.1	1.73	47
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>1.00</b>	<b>27</b>
Number of men . . . . .	504	298	.....	.....

**TABLE 69**

*Cultural Assimilation and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Effect of cultural origin	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psycho- neurosis, clinical cases		
Assimilation or other cultural problem . . . . .	15.64	2.28	.15	4
No problem . . . . .	84.36	97.72	1.16	31
<b>Total . . . . .</b>	<b>100.00</b>	<b>100.00</b>	<b>1.00</b>	<b>27</b>
Number of men . . . . .	505	351	.....	.....

## Parental Figures Before End of Adolescence

Eighty-four percent of the men were raised by their biological parents exclusively, the remainder by 1 or 2 substitute parents. Table 70 presents the classification employed in analyzing the histories and the various frequencies which resulted. The most common parental substitutes were, of course, stepfathers and stepmothers. In 3 percent of the cases the subjects had 2 substitute parents who were not close relatives; foster homes and orphanages were included in this category.

The 1951 Army control sample was compared with the entire Army clinical sample, regardless of age at entry, from the standpoint of parental figures before the end of adolescence. Surprisingly there is no essential difference between them, as may be seen from the distributions presented in table 71. A formal test was made of the proportions with only biological parents and the observed discrepancy found to have a chance probability of about .25, well within the chance range.

**TABLE 70**

*Parental Figures Before End of Adolescence of Men in Clinical Sample*

Parental figures	Percent
Biological parents only . . . . .	84.0
Substitute mother, from close relatives (sibling, grandparent, aunt) . . . . .	1.9
Stepmother . . . . .	2.4
Substitute mother, other . . . . .	.7
Substitute father, from close relatives . . . . .	1.2
Stepfather . . . . .	4.1
Substitute father, other . . . . .	.3
Two substitute parents, from close relatives . . . . .	2.4
Two substitute parents, other, including foster home or orphanage . . . . .	3.0
<b>Total . . . . .</b>	<b>100.0</b>
Number of men . . . . .	888

## Summary of Psychiatrically Significant Data in the Family History

In anticipation of the needs of the later analysis, procedures were developed for summarizing the psychiatrically significant data in the family history. Each element of the family history was scaled into the categories "strongly positive," "positive," and "suggestive," and these categories in turn were combined into a single summary according to the criteria which form an integral part of the code in table 72. Positive evidence of either a psychosis or an overt neurosis in either parent was regarded as a "strongly positive" sign, as was a clear-cut emotional or personality disorder, whereas suggestive evidence of an emotional or personality disorder was regarded as

**TABLE 71**

*Parental Figures Before End of Adolescence of Men With Psychoneurosis and Controls, Army Personnel Only*

Parental figures	1951 controls	Psychoneurosis, clinical cases
	<i>Percent</i>	<i>Percent</i>
Biological parents only . . . . .	81.19	83.7
Substitute mother, from close relatives . . . . .	3.17	2.1
Stepmother . . . . .	2.18	2.4
Other substitute mother . . . . .	.40	.5
Substitute father, from close relatives . . . . .	3.96	1.3
Stepfather . . . . .	3.96	4.4
Substitute father, other . . . . .	.79	.2
Two substitute parents, close relatives . . . . .	3.76	2.4
Two substitute parents, other . . . . .	.59	2.9
<b>Total . . . . .</b>	<b>100.00</b>	<b>99.9</b>
<b>Number of men . . . . .</b>	<b>505</b>	<b>615</b>

“positive.” Death or chronic, incapacitating illness on the part of either or both parents was regarded as “positive,” and divorce, desertion, or separation was regarded as “strongly positive.” There were no other “strongly positive” signs. A complete list of “suggestive” and “positive” signs appears in table 72. Any such summary is a rather arbitrary matter, and it is evident from the frequencies in the table that its effect is to lump the great bulk of the cases into the “positive” and “strongly positive” categories. Had the criteria for the “positive” group required more pathology, and those for the “suggestive” been compatible with more, the cases could have been more widely distributed among groups of the sort established here. No such rearrangement, however, would have had any effect on the frequency of negative cases and those with a good family history, which include only 12 percent of the sample.

The 1951 Army control sample and the Army clinical sample of comparable age were compared as to prevalence of psychiatric signs in the family history and were found to differ quite significantly. This difference is, of course, based on those elements in the family history which have already been presented. Table 73 provides the two distributions which were compared and the calculated admission rates which reflect the magnitude of the variation associated with this summary of the family history. Those with “good” or “negative” histories were lumped together because the numbers were so small, and their estimated rate of breakdown is about 43 percent of that calculated for men with a strongly positive family history.

**TABLE 72**

*Summary of Psychiatric Signs in Family Histories of Men in Clinical Sample*

Summary of psychiatric signs	Percent
Good or better . . . . .	2.8
Negative for psychiatric signs . . . . .	9.4
One or more <i>suggestive</i> signs (partial withdrawal of parent, extreme rejection, extreme discipline or indulgence, extreme overprotection, mild or moderate overt sibling rivalry); no positive or strongly positive signs . . . . .	3.6
One to three <i>positive</i> signs (suggestive evidence of emotional or personality disorder in parent or sibling, chronic incapacitating illness in parent, poverty, religious fanaticism, marked overt sibling rivalry, death of parent or marked parental conflict); no strongly positive signs . . . . .	42.2
Four or more positive signs, or one or more <i>strongly positive</i> (positive history of psychosis or neurosis in parent or sibling; clear-cut emotional or personality disorder in parent or sibling, divorce or other separation of parents) . . . . .	42.0
Total . . . . .	100.0
Number of men . . . . .	858

**TABLE 73**

*Summary of Psychiatric Signs in Family History and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Summary of psychiatric signs	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psycho- neurosis, clinical cases		
Good or better . . . . .	0.20	2.7	} 0.52	14
Negative . . . . .	22.77	9.3		
Suggestive . . . . .	2.77	4.4	} 1.09	29
Positive . . . . .	40.20	42.5		
Strongly positive . . . . .	34.06	41.1	1.21	33
Total . . . . .	100.00	100.0	1.00	27
Number of men . . . . .	505	367		

It is of considerable interest to note that the disparity between these rates does not approach that associated with several of the individual factors; however, its merit is that it applies to fairly large groups, 23 percent at the low end of the scale and 34 percent at the high. Several individual factors which may in some sense be better predictors are: presence of a cultural assimilation problem, discipline vs. indulgence on the part of the father, and discipline vs. indulgence on the part of the mother. These may be compared with the summary of the family history in terms of the range of variation, as shown in table 74.

**TABLE 74**

*The Chance of Breakdown in Relation to Various Elements in Psychiatric History of Family, Army Personnel Aged 18-25 at Entry*

Element in psychiatric history of family	Percentage of cases so classified	Calculated admission rate
<b>Cultural assimilation:</b>		
Problem described.....	16	4
No problem described.....	84	31
<b>Maternal discipline or indulgence:</b>		
More than average discipline.....	9	67
Indulgence, any degree.....	24	17
<b>Paternal discipline or indulgence:</b>		
More than average discipline.....	18	58
Indulgence, any degree.....	18	14
<b>Summary of family history:</b>		
Negative or better.....	23	14
Strongly positive.....	34	33

In general it is possible to obtain increasingly divergent rates by confining one's attention to increasingly small portions of the sample. In the 2 instances in which the rates vary by a factor of 13 or 14 to 1 they rest upon groups consisting of only 1 to 4 percent of the sample. In the 3 instances in which the smaller group is 30 percent or more, the rates are in the ratio of only about 2 to 1.

### **Position in Family Constellation**

Virtually all examiners specified this characteristic of the examinees, and in other instances the information was usually found in available records or Red Cross social histories. For the purposes of classification foster siblings dwelling in the same household were regarded as integral parts of the family constellation. Categories were established to isolate any effect of being an only child (or boy), the eldest child (or boy), and the youngest. The designation "only child" was also applied to the individual whose

siblings appeared only after the age of 10. On this basis 11 percent were classified as the only child of the family, and 21 percent as the youngest (table 75). The 1951 Army control sample was compared, with no age restriction, with the Army clinical sample without finding any significant difference. It suggests that position in the family constellation has no effect on the probability of breakdown. Table 76 gives the percentage distributions involved in the comparison.

**TABLE 75**

*Position in Family Constellation, Men in Clinical Sample*

Position in family constellation	Percent
Only child or only child for 10 or more years . . . . .	11.3
Only boy, not only child . . . . .	11.7
Not only boy but eldest child with 2 or more boys . . . . .	17.3
Not only boy or eldest child, but eldest boy among 2 or more boys . . . . .	7.2
Youngest child . . . . .	20.7
Other (middle) positions . . . . .	31.8
<b>Total . . . . .</b>	<b>100.0</b>
Number of men . . . . .	776

**Preservice Personality**

The preservice personality was classified according to the categories which appear in table 77 which presents the frequencies obtained for the clinical sample as a whole. Criteria employed in classifying case histories include the following:

*Well integrated and adjusted* requires a positive statement to this effect, or that the inference is clearly valid. It is not inconsistent with overt sibling rivalry or some overattachment to a parent.

*Neurotic personality* will be used to designate the individual with mild or moderate neurotic traits or immaturity reactions. The individual may be anxious or tense, and develop somatic symptoms of a temporary nature under stress. He may be obsessive or compulsive or phobic but these traits are not marked enough to constitute a clinical neurosis. The individual is not disabled or incapacitated by the symptoms which if more pronounced would give him the classification overt neurosis.

*Suggestive neurosis* will be used for possible psychogenic somatization but also for chronic, longstanding neurotic traits or symptoms which are not sufficiently organized to justify the conclusions that a neurosis is present. There is no clear-cut incapacity or illness. Marked incapacity is not compatible with suggestive neurosis.

*Overt neurosis* will be used where incapacity results from neurotic traits or symptoms which may be mild, moderate, or severe. In addition, the organization of symptoms and resultant incapacity must fit into one or more of the following categories:

- a. Anxiety reaction.
- b. Dissociative reaction.
- c. Phobic reaction.
- d. Conversion reaction.
- e. Somatization reaction (e. g., G. I., C. V., G. U., asthenia).
- f. Obsessive compulsive reaction.
- g. Hypochondriacal reaction.
- h. Neurotic depressive reaction.

*Pathological personality* will be used where there is clear-cut pathology in interpersonal relations, but where none of the above neurotic reaction patterns is present as the predominant clinical feature. For our purposes shyness, seclusiveness, antisocial behavior, sexual deviations, will be considered personality defects and not symptoms. See War Dept. TB Med 203, 19 Oct. 1945, pages 14-15.

*Psychosis* will be used to describe flight from reality.

*Posttraumatic syndrome, organic basis* describes a set of signs and symptoms including particularly headache, personality change, dizziness, visual disturbances, etc., which the examiner explicitly attributes to antecedent head injury.

*Behavior disorder* is characterized by external aggressive behavior involving individual in difficulties with family, friends, or community.

**TABLE 76**

*Position in Family Constellation for Men with Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry*

Position in family	1951 controls	Psychoneurosis, clinical cases
	<i>Percent</i>	<i>Percent</i>
Only child.....	11.68	10.7
Only boy.....	14.26	10.8
Eldest child.....	14.06	18.3
Eldest boy.....	5.54	7.5
Youngest child.....	19.60	18.3
Middle positions.....	34.85	34.4
Total.....	99.99	100.0
Number of men.....	505	535

**TABLE 77**

*Predominant Pattern of Preservice Personality of Men in Clinical Sample*

Predominant pattern of preservice personality	Percent
Well integrated and adjusted.....	12.7
Neurotic personality, neurotic traits, or immaturity reactions.....	34.0
Suggestive neurosis, including possibly psychogenic somatization.....	16.3
Overt neurosis.....	14.6
Pathological personality type (schizoid, cyclothymic, overt homosexual, paranoid, inadequate personality, antisocial, asocial, alcoholic or other addict).....	20.0
Latent or overt psychosis, flight from reality.....	.3
Posttraumatic syndrome, organic basis.....	.5
Somatic complaints, not suggestive of neurosis.....	1.5
Total.....	99.9
Number of men.....	858

About 47 percent of the men exhibited no more than neurotic traits or immaturity reactions. Only 15 percent were regarded as having an overt neurosis and 20 percent one of the pathological personality types.

In studying preservice personality as a source of variation in the chance of breakdown one finds that it makes a considerable difference whether the comparison rests on the 1951 Army control sample or on the World War II Army estimate previously developed.<sup>27</sup> Whichever is used there is no doubt about the significance of the differences between them and the psychoneurotics. The difference between the two estimates for the Army population, however, is such that use of the 1951 controls leads to some underestimation of the effect of personality on the chance of breakdown. Table 78 provides the data used in these comparisons and the corresponding admission rates calculated on the two assumptions. Regardless of which method of estimation is used the calculated rate for the well-integrated is below 10, and for all other groups about 40 or more. The evidence is that the chance of breakdown for men with overt neurosis is probably at least 7 or 8 times that for the well integrated. The two methods do, however, differ considerably as to the relative position of the group with pathological personality. If the World War II estimate is used the rate for men with a pathological personality is roughly equivalent to that for suggestive neurosis, but when the 1951 Army sample is used it is equivalent to the rate for those with an overt neurosis. These data, of course, will support no more than the assertion that the chance of breakdown for those with pathological personality is probably at least on the order of that for men with suggestive neurosis.

<sup>27</sup> Brill, N. Q., and Beebe, G. W.: *Psychoneuroses, Military Applications of a Follow-up Study*, U. S. Armed Forces Med. Bull. 2:15-33 (Jan.) 1952.



**TABLE 78**

*Predominant Pattern of Preservice Personality and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Preservice personality	Percentage distributions			Estimated psychoneurosis admissions per 1,000 men per year, 1944	
	Army population		Psycho-neurosis, clinical cases	Based on WW II estimate	Based on 1951 sample
	WW II estimate <sup>1</sup>	1951 sample			
Well integrated.....	65.0	54.1	18.3	8	9
Neurotic traits.....	23.0	25.9	36.0	42	38
Suggestive neurosis.....	3.0	7.5	14.9	134	54
Overt neurosis.....	1.0	4.4	10.7	289	66
Pathological personality....	4.0	7.5	19.7	133	71
Other.....	4.0	.6	.6	( <sup>2</sup> )	( <sup>2</sup> )
Total.....	100.0	100.0	100.2	27	27
Number of men.....		505	356		

<sup>1</sup> See footnote 27, p. 82 for source.

<sup>2</sup> Not calculated because of small frequencies.

**Degree of Psychiatric Impairment**

Since few men exhibited any marked impairment at the time they entered military service, it was considered essential to categorize them rather carefully as to degree of impairment. The criteria used in classifying cases are as follows:

*Relative disability* means impairment of capacity to function, not presence of symptoms. If a man loses time from work, or cannot carry out his role as student, or father, etc., his capacity to function is impaired. Give major emphasis to the area of work, but include sex, family, recreation, and other areas. There must be some physical limitation going beyond the sphere of attitudes. Do not confuse adjustment with disability. Disability in one or more minor areas, without disability in the work area, is *at most* mild disability. A moderate disability is usually one which cuts appreciably into working time or efficiency. No disability may be chosen in the presence of symptoms. Do not confuse symptoms with disability.

In addition, certain specific rules were established for coding impairment in relation to preservice personality:

Well integrated and adjusted personality is consistent only with no impairment; neurotic personality could have no more than mild impairment; suggestive neurosis could have no more than mild impairment; overt neurosis must have at least mild impairment.

In these terms, about half of the men in the sample had no impairment, and 12 percent had moderate or marked impairment (table 79).

**TABLE 79**

*Degree of Psychiatric Impairment of Men in Clinical Sample*

Degree of impairment	Percent
None.....	51.1
Questionable.....	15.3
Mild.....	21.8
Moderate.....	10.5
Marked.....	1.3
<b>Total.....</b>	<b>100.0</b>
<b>Number of men.....</b>	<b>773</b>

**TABLE 80**

*Preservice Psychiatric Impairment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Preservice impairment	Percentage distributions			Estimated psychoneurosis admissions per 1,000 men per year, based on 1951 controls	
	1951 controls		Psycho-neurosis, clinical cases	As observed	Standardized
	As observed	Standardized <sup>1</sup>			
None.....	88.12	93.79	60.4	19	17
Questionable.....	6.93	3.47	14.6	57	114
Mild.....	3.56	2.30	15.9	121	187
Moderate.....	.99 } 4.95	.35 } 2.74	7.5		
Marked.....	.40	.09	1.6		
<b>Total.....</b>	<b>100.00</b>	<b>100.00</b>	<b>100.0</b>	<b>27</b>	<b>27</b>
<b>Number of men...</b>	<b>505</b>	<b>505</b>	<b>321</b>		

<sup>1</sup> See pp. 59-60 for method.

Comparison of the 1951 Army control sample and the Army clinical sample shows that preservice impairment is very intimately associated with the chance of breakdown. The degree of association is affected by any assumption one makes as to bias in the 1951 control sample. Thus, if the 1951 control data are standardized against the World War II estimate of preservice personality, as has been done in table 80, the estimated variation in the chance of breakdown is greatly enhanced. Since this marks the

*direction*, if not the *magnitude*, of any correction for bias in the 1951 sample, it follows that use of the latter, as observed, tends to underestimate the importance of preservice impairment in producing disability. Also, the numbers of men in these samples who fall into the categories of moderate and marked impairment are so small that no really reliable estimate can be made for these groups, although it seems virtually certain that the corresponding chance of their breaking down is quite high. The rate for men with only mild impairment, it will be noted, is at least six times that for men with no impairment. Plainly, this factor is quite effective in singling out a few men with a quite high risk of breakdown, but not very effective in isolating either any large group of such men or a group with an especially *low* chance of breakdown.

### **Intelligence**

AGCT scores were obtained for about 30 percent of the sample and have already been discussed on page 29. In addition, most examiners recorded their clinical impressions of the intelligence of the examinees. Seven percent were considered definitely superior, 73 percent average or above but not definitely superior, 19 percent below average, and 1 percent definitely deficient (moron or below).

When the 1951 Army control sample was compared with the Army clinical sample no difference of any significance was found with respect to estimated intelligence.

### **Adjustment to Family**

The veteran's preservice adjustment was considered from the standpoint of these areas: family, sex, school, work, social and recreational, community, and marital. In each area his adjustment was rated as adequate or better, questionable, or impaired. Specific criteria were evolved to guide these ratings. As in the case of the psychiatrically significant data in the family history, the various adjustment ratings were then combined into a summary rating which amounts to a summation of the individual ratings of impaired and questionable. In reviewing the early cases preparatory to the construction of the code it was observed that occasionally a man would express some inner dissatisfaction with his adjustment in a certain area, but that the objective evidence was that he was acceptably fulfilling his obligations in that area. Accordingly, the following general criteria were evolved:

The key to determining adjustment is whether or not the individual is overtly satisfactorily fulfilling the accepted role as worker, husband, father, etc. The individual may feel that the situation of work or family or marriage is not what he would like it to be but the criterion of satisfactory adjustment is whether or not he is fulfilling the obligations of this role.

The examiners' reports were quite generally adequate in their appraisal of the subject's relationship to his family. An effort was made to avoid restating, in the family adjustment classification, such facts as a broken

home, which were regarded as outer circumstances to which he must adjust rather than indicative of his adjustment *per se*. Both his attitudes and his behavior in this area were considered. An impairment in adjustment may be exemplified by the following situations:

1. Veteran ran away from home before end of adolescence;
2. Veteran quarreled incessantly with parents or siblings;
3. Veteran refused to cooperate within family in normal fashion, e. g., in contributing to its support; and
4. Veteran was too dependent upon family, unable to make independent decisions or to engage in normal activities outside the family.

Within this framework it was found that 16 percent of the subjects had an impaired family adjustment before entering military service and 15 percent a questionable adjustment.

When the 1951 Army control sample is compared with the Army clinical sample of comparable age at entry, it is found that they differ quite significantly as to their adjustment to the parental family. Table 81 gives the relevant distributions and the estimated admission rates which correspond; the rates vary from 23 to 74, or in an approximately 1:3 ratio.

**TABLE 81**

*Preservice Adjustment to Parental Family and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Family adjustment	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psy- choneurosis, 1944
	1951 con- trols	Psychoneu- rosis, clinical cases		
Satisfactory . . . . .	82.97	70.8	0.85	23
Questionable . . . . .	11.68	14.6	1.25	34
Impaired . . . . .	5.35	14.6	2.73	74
Total . . . . .	100.00	100.0	1.00	27
Number of men . . . . .	505	342	.....	.....

### Sexual Adjustment

Examiners' reports and available records on men who could not be brought in for examination were less complete with respect to this area than any other, but 82 percent of the examiners' reports and 44 percent of the records on unexamined cases contained enough information to permit a rating to be made. The criteria for rating are as follows:

Both attitudes and behavior are involved here. Adequate is interpreted in terms of the average cultural patterns, which include: exhibition of

sex curiosity, masturbation, premarital intercourse or abstention therefrom, and resort to prostitutes in the realm of behavior; and some embarrassment and guilt over such sex acts as masturbation or intercourse, attitude that masturbation is debilitating, unwillingness to engage in premarital intercourse on ethical grounds, and attitudes of avoidance toward homosexuality. Evidence of an *impaired sexual* adjustment includes:

- a. Repressed sexual drive, manifested by absence of curiosity, by marked, continuous avoidance of opposite sex, by lack of any sexual activity, by attitudes of disgust, by overly moral attitudes, in general, by persistence of childhood sexual attitude; or
- b. Preoccupation with sex (whether auto or hetero) over extended period;
- c. Overt homosexual drives or activity (latent homosexual is not enough).

On this basis 13 percent of the subjects were regarded as having had, prior to service, an impaired sexual adjustment, and 17 percent a questionable adjustment.

Table 82 provides a comparison of the 1951 Army control sample and men in the clinical sample aged 18 to 25 at entry into the Army. The variation lies in the expected direction, but when account is taken of the inherent variability in the control data the discrepancy between the two samples fails to meet the criterion of statistical significance used here.

**TABLE 82**

*Preservice Sexual Adjustment of Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry*

Sexual adjustment	1951 controls	Psychoneurosis, clinical cases
	<i>Percent</i>	<i>Percent</i>
Satisfactory . . . . .	75.45	68.8
Questionable . . . . .	17.03	17.9
Impaired . . . . .	7.52	13.3
Total . . . . .	100.00	100.0
Number of men . . . . .	505	279

**School Adjustment**

The criteria for rating are as follows:

Educational adjustment covers both scholastic achievement in relation to apparent capacity and opportunity, and interpersonal relations with

teachers and students. Stress will be placed upon the interpersonal aspect, however. An educational adjustment will be considered *impaired* if:

- a. There is a consistent pattern of failure to apply himself to his academic task, not merely one episode of being left back or possibly error in judgment in connection with age at leaving school. Chronic truancy.
- b. Marked failure to associate with fellow students in school activities.
- c. Serious disciplinary difficulties with teachers. Markedly aggressive behavior toward fellow students (asocial attitudes).

Application of these criteria resulted in the classification of 19 percent as impaired, and 26 percent as questionable, in their school adjustment.

When the 1951 Army controls are compared with the Army clinical sample of comparable age (table 83), it is found that they differ quite significantly in this respect also. The calculated rates range from 21 to 54.

**TABLE 83**

*Preservice School Adjustment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

School adjustment	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psycho- neurosis, clinical cases		
Satisfactory.....	69.90	54.6	0.78	21
Questionable.....	19.60	24.4	1.24	33
Impaired.....	10.50	21.0	2.00	54
Total.....	100.00	100.0	1.00	27
Number of men.....	505	353	.....	.....

### Work Adjustment

Information in this area was notably complete, information being available in 92 percent of the examiners' reports and 82 percent of the records of men who were not examined. The criteria developed for rating are as follows:

*Work adjustment.* There are two major components:

- a. Ability to handle the job, including skill factors, avoidance of interpersonal difficulties, and reflected in tenure and evident satisfaction on the part of the employer.
- b. Attitudes of the veteran toward his work, including security, pay, working conditions, etc.

A work adjustment will be regarded as *impaired* if:

- a. The veteran floats from job to job, or
- b. The veteran is greatly disturbed over the inadequacies of his job situation, or
- c. The veteran is repeatedly discharged from jobs, whether for lack of motivation or skill, or for interpersonal reasons (insubordination, etc.), or
- d. The veteran is continually in trouble with fellow employees or with superiors, even without change of job, or
- e. The veteran has an irregular employment record, and there is no indication that job opportunities were lacking.

Of those with a work history (there were 9 percent with none) 16 percent were classified as impaired, and 17 percent as questionable, in their pre-service work history.

The comparison of 1951 Army controls and the Army clinical sample of comparable age, from the standpoint of preservice work adjustment, is shown in table 84. The percentage distributions differ quite significantly, and the variation is such as to produce rates which are in the ratio of 1:5.

**TABLE 84**

*Preservice Work Adjustment<sup>1</sup> and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Work adjustment	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psycho- neurosis, clinical cases		
Satisfactory.....	84.56	68.7	.81	22
Questionable.....	11.09	14.6	1.32	36
Impaired.....	4.35	16.7	3.84	104
Total.....	100.00	100.0	1.00	27
Number of men.....	460	307	.....	.....

<sup>1</sup> Excluding students.

### Social and Recreational

This area was defined as essentially that of association with individuals outside the family, apart from that involved in sex, school, and work or in behavior which brought the subject in conflict with the mores. The specific criteria followed in the rating are:

An impaired adjustment will be indicated by:

- a. Seclusive, withdrawn behavior, inability to make friends with own age groups; or

- b. Overly aggressive or hostile behavior toward others; or
- c. Absence of any recreational life.

About 15 percent of the veterans were rated as having an impaired social and recreational adjustment, and another 22 percent as having a questionable adjustment.

The 1951 Army controls and Army clinical sample of comparable age differ quite significantly. The estimated admission rate for men with satisfactory adjustment is about one-fourth of that for men with an impaired adjustment (table 85).

**TABLE 85**

*Preservice Social and Recreational Adjustment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Social and recreational adjustment	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psycho-neurosis, clinical cases		
Satisfactory.....	84.36	63.3	.75	20
Questionable.....	10.69	21.8	2.04	55
Impaired.....	4.95	14.9	3.01	81
<b>Total.....</b>	100.00	100.0	1.00	27
Number of men.....	505	316	.....	.....

**Community Adjustment**

As indicated above, behavior which brought the individual into conflict with the mores was excluded from the area of social and recreational adjustment. This was done in the interests of specifying troublesome and criminal behavior apart from such impairment in functioning as was seen in seclusiveness or other pathological behavior not likely to bring the individual in conflict with the law or public opinion. An impaired community adjustment may be exemplified by an overt crime of any type or by troublemaking short of criminal behavior, e. g., public brawling and obnoxious behavior when drunk. Nine percent of the clinical sample exhibited impaired community adjustment in this sense, and an additional 5 percent questionable adjustment. The reporting was reasonably complete.

When the 1951 Army controls are compared with the Army clinical sample as to preservice community adjustment they are found to differ to an extent which has a chance probability of .03 (table 86). The rates



range from 26 to 65, but the latter rate pertains to a very small group of cases (2.8 percent of the controls).

### Marital Adjustment

This area was distinguished from that of family adjustment which involved the parental family or its equivalent, and from the specifically sexual adjustment except as it applied to the marriage situation, e. g., in producing conflict with the wife. The criteria employed in rating marital adjustment were:

*Marital adjustment.* Performance in role of husband and father is of interest here. *Adjustment will be termed impaired if:*

- a. The veteran exhibited considerable dissatisfaction with his marriage or marital partner (apart from specifically sexual complaints), including deliberate failure to have children, or
- b. Separation or divorce intervened, or
- c. The veteran is unwilling to have children for long period of time, or neglects children, or
- d. Veteran is chronically or overtly unfaithful to his wife, or she to him, or
- e. There is marked conflict between the veteran and his wife, short of divorce or separation.

About two-thirds of the men were under 35 and unmarried, so that the classification as to marital adjustment pertains to only about one-third of the veterans. Of these, 33 percent were rated as having an impaired adjustment and an additional 16 percent as having a questionable adjustment.

**TABLE 86**

*Preservice Community Adjustment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Community adjustment	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psychoneurosis, clinical cases		
Satisfactory.....	92.87	89.0	0.96	26
Questionable.....	4.36	4.3	.99	27
Impaired.....	2.77	6.7	2.42	65
Total.....	100.00	100.0	1.00	27
Number of men.....	505	329		

Preservice marital adjustment discriminates quite significantly between the 1951 Army controls and the Army clinical sample, but so few men were classified as not having a satisfactory marital adjustment that its usefulness in prediction is quite limited. The estimated admission rates range from 22 to 131 but the latter is quite unreliable, being based on only 9 controls.

### Adjustment Summary

The adjustment summary was made by counting the number of areas in which an impaired adjustment, or failing that, a questionable adjustment, was found. The designation "satisfactory" was employed for those cases (21 percent) in which all individual areas had been rated adequate. The designation "questionable" was applied to those cases (22 percent) in which only 1 or 2 areas were rated as questionable. "Impaired" adjustment as a summary judgment was utilized for those with one or more impairment ratings in the individual areas, or three or more questionable ratings. On this basis 57 percent were given a summary rating of "impaired" as to adjustment.

The adjustment summary is probably the best of the adjustment items, and one of the best of all available items in predicting breakdown if one wishes to choose a relatively large group (table 87). The rates range from 15 to 50.

**TABLE 87**

*Preservice Adjustment Summary and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Adjustment summary	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 controls	Psychoneurosis, clinical cases		
Satisfactory . . . . .	46.34	25.1	0.54	15
Questionable . . . . .	24.95	22.0	.88	24
Impaired . . . . .	28.71	52.9	1.84	50
Total . . . . .	100.00	100.0	1.00	27
Number of men . . . . .	505	355	.....	.....

### Veteran's Evaluation of Health on Entry Into Service

The examination form contained a specific section for reporting the veteran's own estimate of his health at the time he entered the service. Naturally this estimate, obtained at follow-up in the main, would be somewhat less reliable than one obtained at the time of entry into service, but distortion by the examinee was minimized by the context of the interview. In other instances, in which the man was not examined, the information

was obtained in various ways, especially by means of the Red Cross social history, the questionnaire, and the service medical records. The first two obtained the information at the point of follow-up, usually about 5 or 6 years after the fact, the third at the time the medical history was elicited while in service and in connection with an admission for psychoneurosis. The examiner was also asked to draw out the examinee with respect to his specific complaints in the event that he described his preservice health as anything but excellent. In only 4 of the approximately 600 examined cases was information lacking on the veteran's view of his health on entry into the service. For the men who were not examined the information was available in 43 percent. The language of the question put to the examinee determined the categories of response, namely, "excellent," "fair," "a little sick," and "very sick." The percentages giving these responses were, respectively, 69.4, 24.2, 5.9 and 0.5. For the 30 percent who recognized some impairment the examiner endeavored to classify the source of the complaints as organic, organic with some functional overlay, or clearly psychiatric. In about 70 percent of such cases, and 20 percent of the entire clinical sample, the examiners considered that the nature of the disorder had been a psychogenic or frank psychiatric illness. Fifteen percent of those who had some impairment were judged to have had some organic disease.

The 1951 Army controls report a somewhat higher incidence of impairment in health than men in the clinical sample aged 18 to 25 at entry into the Army, but the discrepancy is a statistically insignificant one if account is taken of the variability among examiners as estimated from the control sample.

### **Preservice Psychiatric Treatment**

Some of the examinees had received psychiatric treatment before entering the service, and others had been treated by internists and general practitioners for essentially psychiatric disorders. It seemed useful, therefore, to classify each case accordingly. When this was done it was found that 1.9 percent had clearly received psychiatric treatment and another 1.5 percent had a suggestive history of such treatment. A third group, consisting of 14 percent of the clinical sample, had a clear-cut history of nonpsychiatric treatment for what was presumably a psychiatric or psychosomatic disorder. The last category was not used for brief episodes, such as a short-lived reaction prior to entering service, but only for continuing, fairly chronic, emotional or psychosomatic disorders.

Preservice treatment for a psychiatric or psychosomatic disorder, whether by a psychiatrist or not, is of very different frequency ( $P < .01$ ) in the 1951 Army controls and the Army clinical sample. Table 88 gives the distributions involved and the admission rates calculated as a means of illustrating the nature and extent of the effect. The rates range from 24 to 91, but the latter rate applies to only about 4 percent of the control sample.

## Summary of Preservice History

From the foregoing it is plain that the subjects of the study constitute an extremely heterogeneous group from the psychiatric point of view, but that comparatively few were really very sick at the time they entered service. There is a moderate amount of psychopathology in their backgrounds, but one certainly does not obtain the impression that these men were necessarily so predisposed to psychiatric illness as to make it certain that they would break down. One would thus not regard them, as a group, as failures on the part of examiners appointed to screen out the unfit, although this would certainly be true of a small minority. One must look to the military situation, replete with its emotional stresses, for the key to their breakdown, expecting again to find a highly variable situation.

**TABLE 88**

*Preservice Psychiatric Treatment and the Chance of Breakdown, Army Personnel Aged 18-25 at Entry*

Preservice psychiatric treatment	Percentage distribution		Ratio of two distributions— psychoneurotics: controls	Estimated admissions per 1,000 men per year for psychoneurosis, 1944
	1951 con- trols	Psycho- neurosis, clinical cases		
None.....	96.04	86.7	0.90	24
Clear-cut history.....	.40	2.0		
Suggestive history.....	0	1.3		
Medical treatment for psy- chiatric or psychosomatic disorder.....	3.56	10.0	3.36	91
Total.....	100.00	100.0		
Number of men.....	505	301	.....	.....

## USE OF PSYCHIATRIC DATA IN SELECTION OF PERSONNEL

Although the foregoing analysis places emphasis upon the value of individual items in forecasting the subsequent rate of breakdown, it implicitly contains all the information actually needed for describing the results to be expected from the use of such information in the selection of personnel, either for exclusion from service or for more hazardous service. There are, however, three defects which limit the value of this information as a basis for predicting the results of various screening procedures:

1. The psychiatric evaluation of men who broke down in World War II is *ex post facto*;
2. The control group was obtained in a different context, about 8 years after the World War II group entered service; and

3. The 1951 control group is small and represents the assessments of only 6 psychiatrists.

However, these limitations are not of sufficient gravity to deny the material great usefulness in any study on how screening probably operates. The data apply not to all men who might present themselves as candidates for enlistment or induction but to men aged 18-25 at entry among the approximately 12,000,000 who served in the Army during World War II, i. e., an already screened population, which includes about 600,000<sup>28</sup> who were admitted for psychoneurosis during the war. Other psychiatric admissions are not considered here.

Although by the criteria employed here the estimates presented in the preceding section are based on statistically significant discrepancies between the 1951 control sample and the Army clinical sample, some of the estimated admission rates shown there have quite large sampling errors. In an effort to obviate the effects of extremely large sampling errors in calculating the costs of various selection procedures, therefore, only those characteristics have been used for which both control and clinical samples have at least 20 men each in every category of classification. The stability of such estimates may be illustrated with reference to the data of table 80, where interest centers on the rate of 136 for men with some psychiatric impairment at entry into service. This rate rests ultimately upon the fact that 4.95 percent of the 505 controls and 25.0 percent of the 321 men with psychoneurosis fall into this category of impairment. The stability of this particular estimate may be described in terms of a 95 percent confidence interval, here calculated at 78 to 194; that is, based on the experience of this sample one would expect 95 percent of the rates calculated from samples of the same size to lie in the interval 78 to 194 which, by that token, probably bounds the "true" value of the rate.

How psychiatric screening based on any single characterization might actually work is best illustrated by an example, say the scale of maternal affection and rejection (table 50). Any such scale, which seems reliably to segregate men of low from men of high predisposition, may be used for either purpose. If interest lies in "screening out the unfit," i. e., in reducing the expected attrition rate from psychoneurosis, then it is the men of high predisposition who will be selected, in this instance men who suffered from maternal rejection. If such men were routinely excluded from service, the total loss would be 6.0 percent, or about 720,000 men of whom only 145,000 would be expected to break down. The latter figure represents 24.2 percent of the 600,000 with breakdown among the 12,000,000 who served. The admission rate for the remaining 94 percent of total strength would be reduced from 27 to 21, but there would have been excluded 5 men for every 1 expected to break down. In the latter sense the "screening cost" may be described as about 5 to 1. Whether a major reduction in

<sup>28</sup> Accurate estimation of this number is beset with difficulties. The estimate given here is based on an earlier estimate of Army admissions about 10 percent in excess of that cited in table 8 (after Menninger).

the admission rate will seem worth while at this cost will depend, of course, upon supply and demand factors in the manpower situation; what might seem an acceptable cost in peacetime would be excessive in an all-out mobilization.

All of the psychiatric factors reviewed in the preceding section have been examined in the fashion just described and the results are summarized in tables 89 and 90, oriented respectively toward weeding out and toward selecting men of high resistance. The suggestion of table 89 is that perhaps half of the men expected to break down might be screened out but at a cost of 20 to 30 percent of the total strength of 12,000,000 available to the

**TABLE 89**

*Relative Screening Efficiency of Individual Preservice Characteristics, Army Personnel Aged 18-25 at Entry*

Characteristic	Percentage having stated characteristic		Admissions per 1,000 men per year for psychosis, 1944	Strength lost per excluded case of psychosis <sup>1</sup>
	In WW II strength	In WW II psychosis cases		
Psychiatric history				
Siblings, not negative.....	22.4	35.4	43	12.7
Rejection, any degree, by mother....	6.0	24.2	109	5.0
Rejection, any degree, by father.....	18.9	46.5	66	8.1
Overdiscipline by mother.....	9.1	22.6	67	8.1
Overdiscipline by father.....	17.6	37.9	58	9.3
Overprotection, any, by father.....	9.4	11.2	32	16.8
Negative attitude toward father.....	7.8	24.7	86	6.3
Excessively religious.....	5.4	16.0	80	6.7
Marked parental conflict.....	8.7	15.1	47	11.5
Strongly positive family history.....	34.1	41.1	33	16.5
Preservice personality				
Pathological personality type....	7.5	19.7	71	7.6
Pathological personality and overt neurosis.....	11.9	30.4	69	7.8
Pathological personality and overt and suggestive neurosis.....	19.4	45.3	63	8.5
Preservice impairment at least mild....	5.0	25.0	136	4.0
Family adjustment impaired.....	5.3	14.6	74	7.3
School adjustment impaired.....	10.5	21.0	54	10.0
Work adjustment impaired.....	4.3	16.7	104	5.2
Social and recreational adjustment impaired.....	5.0	14.9	81	6.6
Adjustment as a whole impaired.....	28.7	52.9	50	10.9
Preservice treatment, any.....	4.0	13.3	91	6.0

<sup>1</sup> Defined as ratio of number of men this characteristic would exclude from total strength per excluded case destined to break down, were characteristic used in screening.

**TABLE 90**

*Relative Efficiency of Individual Preservice Characteristics in Selecting Men of High Resistance to Stress, Army Personnel Aged 18-25 at Entry*

Characteristic used for selection	Percentage of men having stated characteristic		Admissions per 1,000 men per year for psychoneurosis, 1944	Percentage of selected men destined to break down
	In WW II strength	In WW II psychoneurosis cases		
Psychiatric history				
Siblings, negative.....	66.9	54.0	22	4.0
Affection and rejection				
Average for mother.....	62.4	38.2	16	3.1
Average for father.....	69.7	40.9	16	2.9
Discipline and indulgence				
Indulgent mother.....	24.0	15.1	17	3.1
Indulgent father.....	18.2	9.1	14	2.5
Normal attitude toward mother.....	79.6	63.9	22	4.0
Normal attitude toward father.....	75.8	60.6	22	4.0
Not excessively religious.....	94.7	84.0	24	4.4
Marked parental conflict absent.....	91.3	84.9	25	4.7
Summary of family history negative or good.....	23.0	12.0	14	2.6
Preservice personality normal.....	54.1	18.3	9	1.7
No psychiatric impairment.....	88.1	60.4	19	3.4
Family adjustment satisfactory.....	83.0	70.8	23	4.3
School adjustment satisfactory.....	69.9	54.6	21	3.9
Work adjustment satisfactory.....	84.6	68.7	22	4.1
Social and recreational adjustment satisfactory.....	84.4	63.3	20	3.8
Community adjustment satisfactory...	92.9	89.0	26	4.8
Marital adjustment satisfactory.....	13.9	11.3	22	4.1
Summary adjustment satisfactory.....	46.3	25.1	15	2.7
No preservice treatment.....	96.0	86.7	24	4.5

Army under the conditions prevailing in World War II. It also suggests that the screening cost, as defined above, will be difficult to reduce. So long as attention is confined to those characteristics for which each sample has at least 20 men, the minimum value of the ratio is 4.0. For the screening cost to be reduced to 2 to 1 the percentages of men exhibiting the particular characteristic in the psychoneurotic group on the one hand and the control sample on the other must be in the ratio 10 to 1, and discrepancies of this magnitude are not found in this material. A ratio of 10 to 1, in the model used here, corresponds to an admission rate of 270 per 1,000 strength per year.

Selection of men with minimal predisposition is summarized in table 90. The considerations involved here are entirely parallel to those which control the process of screening men out. One measure of relative efficiency of any such selection is the percentage of men so selected who would otherwise have broken down, and this value is tabled there for each item. The World War II average was about 5 percent, which here arbitrarily corresponds to an admission rate of 27 per 1,000 men per year.

The analysis up to this point has been confined to the study of single characteristics. Since there are several preservice characteristics which reliably distinguish men who broke down in World War II from the 1951 cross section, the question naturally arises as to whether the information contained in the variables might somehow be pooled to produce a more powerful prognostic tool. While there are a variety of solutions to the problem of combining several *quantitative* measurements into a single rating which will best discriminate between two groups, the variables under study here are *qualitative*. It was first necessary, therefore, to quantify the observations.

The method of quantification employed here assigns to each category on every variable a score which (apart from a linear transformation which merely simplifies the final result) is obtained as the logarithm of the ratio of relative frequency for the given category among men who broke down to the relative frequency in the 1951 Army control sample. The process is illustrated in table 91 for preservice adjustment to the parental family. Men of unknown classification on the particular variable are deleted from the percentage distributions. The last two columns merely effect a linear

**TABLE 91**

*Method of Scoring Preservice Adjustment to Parental Family, Army Personnel Aged 18-25 at Entry*

Adjustment to parental family	Psychoneurosis, clinical cases		1951 controls		Ratio (2)/(4)	Log <sub>10</sub> Item (5)	(6) + .06915 × 100	Score
	Number	Percent	Number	Percent				
	(1)	(2)	(3)	(4)				
Satisfactory . . . . .	242	70.76	419	82.97	.8528	-0.06915	0	0
Questionable . . . . .	50	14.62	59	11.68	1.2517	+ .09750	16.665	17
Impaired . . . . .	50	14.62	27	5.35	2.7327	+ .43659	50.574	51
Total . . . . .	342	100.00	505	100.00	.....	.....	.....	.....



transformation and rounding operation designed to produce simple two-digit scores, the lowest of which is zero.<sup>29</sup>

In all, nine variables were quantified according to the same method and an overall rating of psychoneurotic predisposition (R) calculated for each individual according to the formula

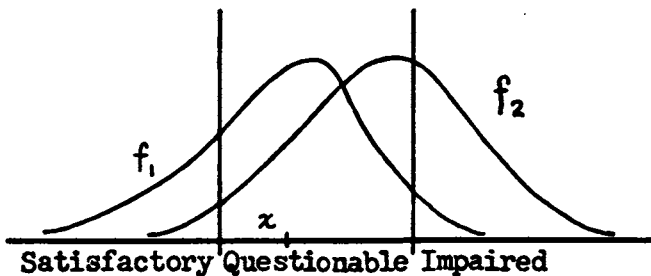
$$R = k_1x_1 + k_2x_2 + \dots + k_px_p$$

wherein the  $x$ 's represent the quantified variables and the  $k$ 's weighting factors. The weighting factor for each variable was calculated as the ratio of the difference in means for the two groups on that variable to the variance of the variable. Thus, for adjustment to parental family, the mean score for men who broke down is 9.94, and for the cross section 4.71, the difference being 5.23. The variance of the whole set of scores is 227.08, so that the weighting factor to be applied to the score for this variable is

$$K = \frac{5.23}{227.08} = .0230$$

The ratings thus obtained were, finally, multiplied by the constant factor 40 in order to produce ratings in the form of whole numbers in the range zero to about 500.

<sup>29</sup> The rationale for this procedure merits description. It is assumed that underlying the qualitative scale is a continuous variable, distributed differently in the two groups of men. The range occupied by the underlying variable has been arbitrarily divided into a number of zones (three in the case of adjustment to parental family) and observations are limited to specification of the zone into which each man falls.



If the two distributions have density functions  $f_1$ ,  $f_2$  which are normal, with common variance unity, and means  $m_1$ ,  $m_2$ , then the densities are given by:

$$f_1 = \frac{1}{\sqrt{2\pi}} e^{-\frac{(x-m_1)^2}{2}}; f_2 = \frac{1}{\sqrt{2\pi}} e^{-\frac{(x-m_2)^2}{2}}.$$

Hence  $\log \frac{f_1}{f_2} = x(m_1 - m_2) - \frac{m_1^2 - m_2^2}{2}$ ,

or more generally, the logarithm of the ratio of densities is a linear function of the underlying variable  $x$ .

The variable  $x$  can always be transformed so that  $f_1$ , at least is of the form specified, that is, normal with unit variance. Under such a transformation  $f_2$  may or may not also reduce to the same form. If it does, then this method of quantification will presumably be the most appropriate; if it does not, then perhaps some other may be superior. If the basic assumption is satisfied approximately (which seems not unlikely), then this particular quantification should be at least near optimum. But in any case, the final test is whether the quantification results in a useful tool.

The particular method of rating here employed is probably less efficient than the method of discriminant analysis developed by Fisher,<sup>30</sup> which was employed in the present study to discriminate, on the basis of information available at the time of separation from service, between men with much and those with little disability at follow-up (pp. 159-165). In that application the slight advantage in efficiency did not repay the very large burden of additional calculation necessitated by the more precise method. The reason for this may be that the intercorrelations of the predictive variables used here are not nearly so large as those in anthropometric measurements. The simpler method used here has been advocated by a number of writers.<sup>31, 32</sup>

The final rating scheme appears in table 92. Men were rated only if they were characterized on all nine variables. The weights have been combined with the scores to obtain the numbers shown under the heading "Contribution to Rating" so that the rating for any individual is obtained by simply summing the 9 contributions made to his score by his classification on the 9 individual variables.

Also shown in table 92 are correlation ratios<sup>33</sup> which measure the degree of association between each of the preservice characteristics and the probability of psychoneurotic breakdown.<sup>34</sup> A correlation ratio of one would signify a perfect relationship in that each category of the classification would be specific either to the psychoneurotic group or to the cross section, while a correlation ratio of zero would signify that in all categories the proportion of psychoneurotics was the same.

<sup>30</sup> Fisher, R. A.: The use of multiple measurements in taxonomic problems. *Ann. Eugenics* 7:179-188 (Sept.) 1936.

<sup>31</sup> Heincke, F.: *Naturgeschichte des Heringa*. Berlin, Salle, 1898 (cited by Penrose, L. S.: Some notes on discrimination. *Ann. Eugenics* 13:228-237, 1946-1947).

<sup>32</sup> Pearson, Karl: On the coefficient of racial likeness. *Biometrika* 18:105-117 (July) 1926.

<sup>33</sup> If  $n_i$ ,  $m_i$  represent the numbers of psychoneurotics and numbers of the cross section, respectively, who are classified into the  $i^{\text{th}}$  category of a given characteristic, and if  $N$ ,  $M$  represent the respective total numbers classified, then the correlation ratio is given by:

$$y = + \sqrt{1 - \left( \frac{N+M}{NM} \right) \sum \frac{n_i m_i}{n_i + m_i}}$$

where the  $\Sigma$  indicates that a sum is to be taken over all categories.

<sup>34</sup> Calculation of the predisposition rating must be limited to cases known on every item entering into it, which here severely limits the number of men whose histories may be used. Moreover, this selection tends to exclude more of the abnormal individuals with the result that all measures of association between variables, e. g., the correlation ratios of table 92, understate somewhat the probable strength of the relationships which characterize the entire set of cases. For example, for preservice personality the correlation ratio is +.36 for all men and +.26 for the smaller set used in calculating the predisposition rating.

**TABLE 92**

*Contributions of Nine Preservice Characteristics to Predisposition Rating, and Correlation Ratio of Each With Chance of Breakdown*

Characteristic and qualitative scaling	Correlation ratio with chance of breakdown	Contribution to rating
Discipline-indulgence, mother . . . . .	0.19	
Extreme or more than average discipline . . . . .		59
Average . . . . .		18
Extreme or more than average indulgence . . . . .		0
Discipline-indulgence, father . . . . .	.17	
Extreme or more than average discipline . . . . .		61
Average . . . . .		22
Extreme or more than average indulgence . . . . .		0
Summary of psychiatric signs of family history . . . . .	.08	
At least 4 positive or 1 strongly positive sign . . . . .		33
At least one suggestive sign . . . . .		29
No psychiatric signs . . . . .		0
Preservice personality . . . . .	.26	
Pathological personality or behavior disorder . . . . .		79
Overt neurosis . . . . .		75
Suggestive neurosis . . . . .		67
Neurotic traits . . . . .		53
Well adjusted . . . . .		0
Degree of psychiatric impairment . . . . .	.23	
Mild to marked . . . . .		84
Questionable . . . . .		45
None . . . . .		0
Adjustment to parental family . . . . .	.16	
Impaired . . . . .		50
Questionable . . . . .		16
Satisfactory . . . . .		0
Work adjustment . . . . .	.19	
Impaired . . . . .		66
Questionable . . . . .		20
Satisfactory . . . . .		0
Social and recreational adjustment . . . . .	.19	
Impaired . . . . .		61
Questionable . . . . .		43
Satisfactory . . . . .		0
Summary of preservice adjustment . . . . .	.19	
Questionable in 3 or more, or impaired in 1 or more areas . . . . .		50
Questionable in 1 or 2 areas . . . . .		19
Adequate in all areas . . . . .		0

Table 93 distributes the two groups as to the predisposition rating. The five intervals on the rating scale were chosen so that approximately the same number of psychoneurotic cases would fall into each interval. The distribution of the cross section is heavily skewed toward the more normal end of the rating scale as compared with the men who broke down. The correlation ratio for this division of the rating scale is .34, which may be compared with .26, the highest correlation ratio of the constituent variables, obtained for preservice personality. Since, in a certain sense, the *square* of the correlation ratio measure the amount of information which knowledge of one variable gives regarding the other variable in the correlation, it follows that the predisposition rating contains very nearly twice as much information about the chance of breakdown as does preservice personality.

**TABLE 93**

*Predisposition Ratings for Men With Psychoneurosis and Controls, Army Personnel Aged 18-25 at Entry*

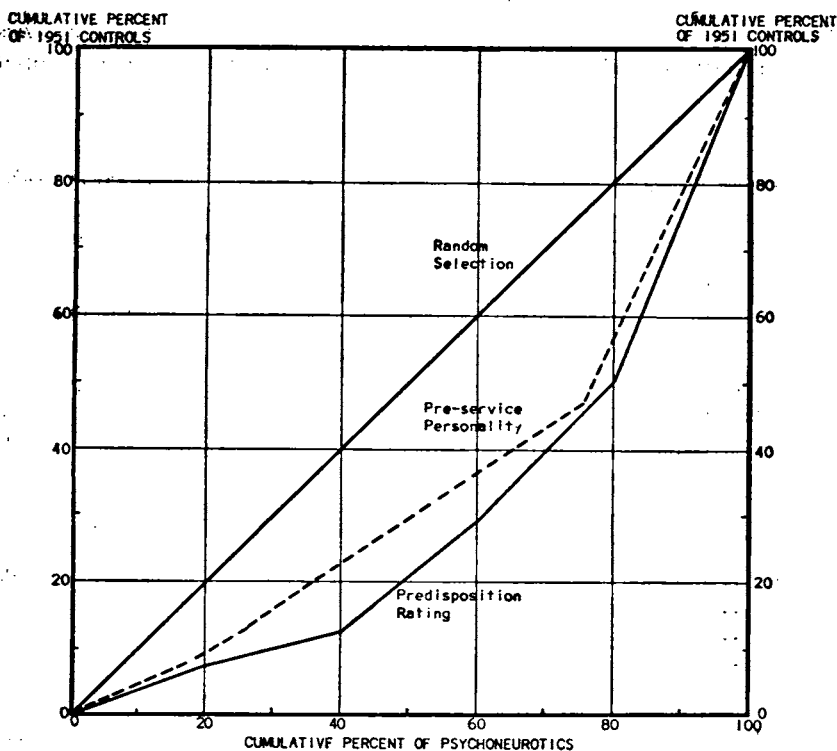
Predisposition rating	Psychoneurosis, clinical cases			1951 controls		
	Number	Percent	Percent rated this high or higher	Number	Percent	Percent rated this high or higher
0-110 . . . . .	32	19.8	100.0	215	49.7	100.0
111-172 . . . . .	33	20.4	80.2	91	21.0	50.3
173-245 . . . . .	33	20.4	59.9	72	16.6	29.3
246-306 . . . . .	32	19.8	39.5	23	5.3	12.7
307-521 . . . . .	32	19.8	19.8	32	7.4	7.4
Total . . . . .	162	100.2	.....	433	100.0	.....

Figure 3 presents the comparison between the rating and preservice personality in a manner better suited to operational requirements. In this figure, the curve for the predisposition rating is obtained by connecting the points where coordinates are the pairs of cumulative percentages shown in the third and sixth columns of table 93. The curve for preservice personality is similarly obtained. From their method of construction it is plain that each curve must begin at the origin and terminate at the upper right corner, but the relative success of any characteristic as a potential screening device depends on how far it is displaced from the straight line (labeled random selection in fig. 3) connecting those two points. For any point on a curve, the abscissa and ordinate of that point provide estimates of the possible gains and manpower costs of operating a screen at that level. Thus, the curve for the predisposition rating passes through the point 39.5 percent and 12.7 percent, meaning that a screen which, based on the predisposition rating, eliminated 39.5 percent of men destined to break down would eliminate

12.7 percent of all men accepted into the Army. If the curve for preservice personality were used as a screening tool, the cost of eliminating 39.5 percent of the psychoneurotic cases would be more than 22 percent of all men. Plainly, the fact that the curve for predisposition rating lies everywhere below the curve for preservice personality means that at any level of screening the rating performs the same job at a lesser manpower cost.

**FIGURE 3**

*Operating Characteristics of Two Possible Screening Devices*



The rating is superior to any of the individual observations as a screening tool, but is nevertheless a poor device. Actually this is true not only of the rating but of any possible method of selecting in advance the men who will break down during wartime service, for so many breakdowns occur only when the stresses to which the individual is subject are potent enough to overwhelm his defenses. Knowledge of the height and strength of a seawall will not enable one to predict its ability to withstand the ocean; one must also know with what force the waves will batter it. Similarly, men little predisposed to psychoneurosis may break down under prolonged battle stress while others, possessed of little inherent resistance, may never happen to be tested by a situation sufficient to overwhelm their relatively feeble defenses. When one considers the range of stress to which different men are

subject in the Army in wartime, it is clear that stress is of too great importance for a predisposition rating to be very useful in forecasting just who will break down.

The above considerations can be illustrated here by dividing the men who broke down into those who did so under conditions of heavy stress (combat) and those for whom apparently even a little stress was enough (Z/I service only), as in table 94. It is obvious that the men who broke down in combat are distributed, on the predisposition rating, much more nearly like the cross section than are those who broke under little stress. Of the 23 men considered here who had the highest ratings (307 or more) 15 or about two-thirds broke in the Z/I; while of the 25 with the lowest ratings (110 or less) 18 or almost three-quarters broke only in combat.

**TABLE 94**

*Predisposition Ratings for Controls and for Men Who Broke Down in the Z/I and in Combat, Army Personnel Aged 18-25 at Entry*

Predisposition rating	Psychoneurosis, clinical cases						1951 controls		
	Combat			Z/I only before any overseas duty					
	Number	Percent	Percent rated this high or higher	Number	Percent	Percent rated this high or higher	Number	Percent	Percent rated this high or higher
0-110.....	18	27.7	100.0	7	13.5	100.0	215	49.7	100.0
111-172....	16	24.6	72.3	7	13.5	86.5	91	21.0	50.3
173-245....	12	18.5	47.7	8	15.4	73.1	72	16.6	29.3
246-306....	11	16.9	29.2	15	28.8	57.7	23	5.3	12.7
307-521....	8	12.3	12.3	15	28.8	28.8	32	7.4	7.4
Total....	65	100.0	.....	52	100.0	.....	433	100.0	.....

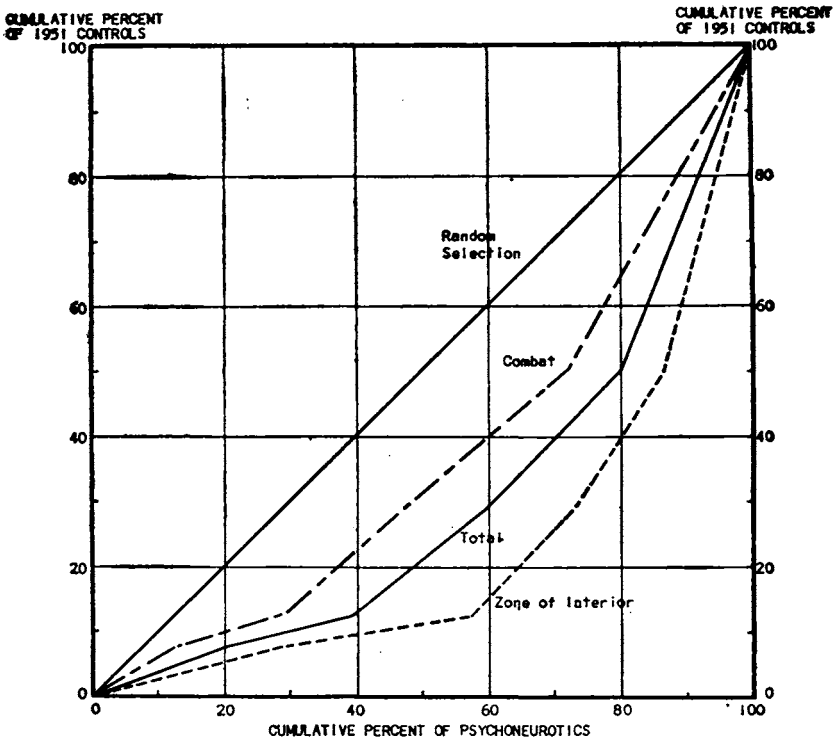
Figure 4 presents the implications of this for a screening procedure: if 12.7 percent of all inductions can be sacrificed, 39.5 percent of all breakdowns might be avoided, 29.2 percent of combat breakdowns would be spared, and 57.7 percent—over half—of the Z/I breakdowns would not occur. This result, incidentally, is approximately the same as that reported by Shipley et al.<sup>86</sup> on the use of a personal inventory form administered to

<sup>86</sup> Shipley, W. C., et al.: The personal inventory—its derivation and validation. *J. Clin. Psychol.* 2:318-322 (1946).

Navy recruits in WW II. Psychoneurotic casualties are inevitable whenever men are committed to combat; but if it is quixotic to aspire to screen out at the induction station all men who will break down there is nevertheless hope of detecting those who will break under little apparent stress, and the curves of figure 4 indicate that while the predisposition rating is not an outstandingly powerful tool for the latter purpose its efficiency is at least sufficient to encourage further work along these lines.

**FIGURE 4**

*Operating Characteristics of Predisposition Rating in Relation to Place of Breakdown*



## CHAPTER III

### PERIOD OF MILITARY SERVICE

The military period breaks naturally into two parts, that prior to or precipitating the first breakdown and that which followed. In the analysis of the individual case histories prior to breakdown, greatest emphasis was of course placed upon identifying the type and intensity of the stresses which appeared to have precipitated the breakdown, and upon assessing the relative importance of predisposition, in relation to them. Since most men, by the criteria used in the study, seemed to have some predisposition, and since virtually all were subjected to some stress, to answer the question of their relative importance requires an analysis of the military period in relation to the elements of the preservice history just reviewed, the task of a later section. The approach here is essentially descriptive and the data pertain to the entire clinical sample except as specifically noted.

Information was also obtained on any treatment given in the service and on the apparent response. Examiners were asked to re-evaluate the military diagnoses by their own criteria. For each man the pattern of disposition from hospital for such psychiatric admissions as occurred, and the type of separation from service, were also obtained. If the man returned to active duty after the first breakdown the quality of his subsequent service was evaluated. Finally, both the subject and the examiner were asked to assess the subject's health at the time of separation from service.

#### PATTERNS OF STRESS

It was not possible to eliminate subjective elements in the accounts of stress that occurred in the histories. The classification of stressful experience was approached empirically, on the basis of an actual listing of the events and circumstances considered stressful by the subject or by the examiner, and these were then grouped into broad classes. For any individual, coding extended to the specification of the experiences considered stressful and to the designation of that class, if any, to which his breakdown might fairly be attributed. The major classes are designated as follows:

- Civilian types of stress.
- Inherent military environmental stress.
- Military frustrations and excessive demands.
- Combat.
- Other environmental stresses.



In addition, various details of combat, e. g., duration and intensity, were scaled, and an overall summary worked out on the basis of a concept of the military career as a process in time and space. The last scale has been named "location at breakdown."

### Civilian Types of Stress

Examples of this type are economic hardship, domestic or sexual difficulties carried over from civilian life, and illness or death in the immediate family. Table 95 exhibits the detail as it was observed in the entire clinical sample. Only about one-third of the men reported stress of this kind. Domestic difficulty was the most common problem.

**TABLE 95**

*Percentage of Men in Clinical Sample Reporting Specific Civilian Forms of Stress*

Specific civilian forms of stress	Percent <sup>1</sup>
None.....	67.1
Economic hardship.....	8.4
Domestic difficulty.....	17.4
Overt sexual conflict.....	2.7
Death of parent, wife, child.....	2.0
Other (specify).....	8.8
Number of men.....	838

<sup>1</sup> If a man sustained more than one form of stress he appears in more than one count. In consequence, the percentages add to more than 100.0.

### Inherent Military Environmental Stress

Table 96 specifies the content of this class. It includes the stresses to which everyone entering the service was exposed but which for some were subjectively more important and upsetting. It involves such things as physical separation from home and family, alteration in mode of living, and fear of future combat. For more than one-half of the men such factors were important enough to be mentioned as stressful, the most common being fear of future combat and homesickness.

### Military Frustrations and Excessive Demands

This category applies primarily to interpersonal stress of the variety men experience in military service. Regimentation is a prime example and was the most frequent one in this area (table 97). Misassignment was alleged by 9 percent of the men. Presumably anyone could look upon assignment as an infantry rifleman as a misassignment since it had no civilian counterpart, and no objective analysis of assignment could be made in retrospect.

**TABLE 96**

*Percentage of Men in Clinical Sample Reporting Specific Forms of Inherent Military Environmental Stress*

Specific forms of inherent military environmental stress	Percent <sup>1</sup>
None.....	43.7
Lack of comfort.....	10.5
Change in diet, food deprivation.....	15.7
Isolation.....	3.9
Homesickness.....	19.5
Lack of sexual outlets.....	3.0
Anxiety about entry into service.....	12.2
Fear of future combat.....	21.6
Stress of impending shipment overseas.....	7.4
Marked scruples about war, conscientious objector, etc.....	.5
Number of men.....	839

<sup>1</sup> If a man sustained more than one form of stress he appears in more than one count. In consequence, the percentages add to more than 100.0.

**TABLE 97**

*Percentage of Men in Clinical Sample Reporting Specific Military Frustrations and Excessive Demands*

Specific military frustrations and excessive demands	Percent <sup>1</sup>
None.....	55.6
Regimentation.....	20.8
Feeling of uselessness, not used by military.....	6.9
Too much responsibility.....	5.1
Misassignment.....	9.0
Poor leadership.....	8.7
Lack of promotion, or demotion.....	7.7
Frequent transfer.....	3.7
Breakup of unit, separation from or transfer out of unit.....	2.2
Other.....	5.5
Number of men.....	831

<sup>1</sup> If a man sustained more than one specific stress he appears in more than one count. In consequence, the percentages add to more than 100.0.

**Combat Stress**

Here objective considerations have somewhat greater weight, for presence in combat can be rather reliably determined even well after the fact, and for any man who was in combat this form of stress was recorded. The

chief difficulty is actually one of defining combat.<sup>26</sup> Some idea of the intensity of the stress can be obtained from the particular aspect of combat which the men emphasized (table 98). Combat was most often described as prolonged. A separate evaluation of the intensity of the combat stress is given below (pp. 111-113). About half of the men who broke down were exposed to enemy fire in one way or another. It was direct exposure to enemy fire in regimental-area ground action in 80 percent of these and rear-area bombing in 20 percent. Combat is the most common stress associated with breakdown.

**TABLE 98**

*Percentage of Men in Clinical Sample Reporting Specific Forms of Combat Stress*

Specific forms of combat stress	Percent <sup>1</sup>
None.....	48.4
Brief combat (less than 10 days).....	7.8
Prolonged combat.....	21.4
Large number of casualties in outfit.....	14.8
Near miss (in combat or rear area).....	14.0
Buddy or close associate killed.....	16.6
Harrowing experiences, alone and cut off, etc. (not large number of casualties in outfit).....	15.8
Wounded, blast injury, or thrown by blast (not near miss).....	13.8
Exposed to danger, as in rear area, but not in combat.....	9.7
Combat, other.....	10.3
Number of men.....	920

<sup>1</sup> If a man sustained more than one form of combat stress he appears in more than one count. In consequence, the percentages add to more than 100.0.

### Other Environmental Stress

Included here are specific environmental stresses (other than combat or those inherent in military life) such as extremes of climate, injury or illness, and excessive physical demands. The latter, with its accompanying exhaustion, usually was connected with some particularly difficult military task and was the most common form of stress encountered in this area (table 99).

<sup>26</sup> Combat was coded at various points in the study with minor variations in counts. This was because no precise temporal pattern was provided for in the coding. Some men had combat after breakdown, some before and after, and others between breakdowns. The inconsistencies in counts however are trivial in their magnitude. The criteria for coding the varieties of combat stress included the following: "Brief combat will not be used if veteran had 10 days or more of active combat. By a 'rear area' is meant, generally, a division rear or a position even more remote from combat."

**TABLE 99**

*Percentage of Men in Clinical Sample Reporting Specific Forms of Environmental Stress<sup>1</sup>*

Specific forms of environmental stress	Percent <sup>2</sup>
None.....	41.9
Climate.....	14.2
Excessive physical demands.....	28.5
Illness.....	19.5
Injury, not in combat (except cold injury).....	8.7
Impending discharge and return to civilian life.....	.6
Prolonged service overseas.....	3.2
Other.....	8.0
Number of men.....	875

<sup>1</sup> Environmental stress other than that inherent in military life or combat.

<sup>2</sup> If a man sustained more than one of these specific stresses he appears in more than one count. In consequence, the percentages add to more than 100.0.

**Major Area of Stress Precipitating Breakdown**

In most instances the examiner was of the opinion that several different forms of stress combined to precipitate the breakdown. Even the man who finally broke down in combat, for example, had often had previous experiences which may have lowered his resistance to the stress of combat. Nevertheless, it was usually possible to designate some one of the foregoing areas as the most important, and the final distribution of the clinical sample in this respect is shown in table 100. Combat stress was the largest single area; no other had half as many cases attributed to it.

**TABLE 100**

*Major Area of Stress Precipitating Breakdown of Men in Clinical Sample*

Major area of stress	Percent
None, illness not psychiatric.....	1.2
Civilian type of stress, not primarily related to military service.....	6.4
Inherent military environmental stress.....	7.6
Military frustrations or excessive demands, not environmental but interpersonal.....	12.3
Combat stress.....	42.0
Environmental stress during military service.....	13.9
No single area appears primary.....	12.0
No stress evident, but illness psychiatric.....	4.6
<b>Total.....</b>	<b>100.0</b>
Number of men.....	886

## Severity of Major Type of Stress

During the period in which decisions were being made as to the form and content of the pattern of analysis for each case, it was thought that any stress might be quite variable in its severity as it affected the lives of different men in the sample. Accordingly, the designation of the major area of stress was accompanied by a judgment as to its severity. The 12 percent for whom no single area appeared to be primary were omitted from this further classification. It was found that 49 percent were classified as "mild," 14 percent as "moderate," and 37 percent as "severe." These terms appeared on the history form used by the examiner and in general the classifications "moderate" and "severe" apply to combat or to situations where there was a clear-cut external stress, such as prolonged service in an extreme climate, and "mild" to those forms of stress which seemed more wholly subjective.

## Location of Veteran in Space and Military Career at First Breakdown

The relatively orderly process by which a man came to enter combat seemed to offer a means of classifying each man with respect to the point in his military career which he had reached at the time of his first breakdown. The classification indicates whether breakdown occurred in training, during overseas or combat service, or after such service; that is, combat may have been selected by the examiner as the stress which caused the breakdown, and yet the breakdown may actually have been postponed until the man arrived back in the Z/I for redeployment. The location as breakdown, then, tells where a man was and where he had been in his military career when he first broke down (table 101). There are two large

TABLE 101

*Location in Space and Military Career at Breakdown, Men in Clinical Sample*

Location at breakdown	Percent
Training center, Z/I, basic or boot.....	8.6
Z/I, after completion of basic or boot training, not just prior to shipment overseas.....	22.6
Z/I, with specific mention of impending shipment overseas.....	4.2
On arrival overseas, or sea duty prior to combat.....	1.4
In combat or combat area.....	28.9
Overseas, not in combat, but following wound or other condition incurred in combat.....	2.4
Overseas, following combat, but without wound or other condition incurred in combat.....	5.5
Overseas, not in combat or combat area.....	13.8
Z/I following overseas combat.....	8.4
Z/I following overseas noncombat.....	4.2
Total.....	100.0
Number of men.....	932

groups, those who completed basic training but broke down before the completion of unit or other further training and before there was any opportunity for going overseas, and those who were in combat or a combat area. A significant number of cases with combat experience (16 percent) broke down only after they had been removed from the combat area for one reason or another, including wounds. Almost 20 percent without combat experience first broke down overseas or after their return to the Z/I.

**Severity of Combat or Combat-Area Danger Preceding Episode**

One-half of the men in the sample did not experience the dangers of combat or even rear-area exposure to bombing. Of those who did, about 13 percent suffered no more than rear-area exposure to danger, 8 percent experienced only mild combat, 23 percent moderate combat, and 55 percent severe combat. The definition of combat employed here is, for ground troops, the regimental area and forward. Thus service with a division headquarters, for example, would come under the category of rear-area exposure.

**Type of Combat Engaged in Prior To Breakdown**

All types of combat are represented in the clinical sample, but the principal type is, of course, ground combat on the part of the Army and Marine Corps troops. Table 102 gives a detailed breakdown for the entire clinical sample. It must be borne in mind that the proportion of Navy cases is artificially high in this sample.

**Duration of Combat Prior To Breakdown**

Duration of combat was recorded for each case, according to the type of combat. Ground combat was measured in days, and it was observed that

**TABLE 102**

*Type of Combat Engaged in Prior to Breakdown, Men in Clinical Sample*

Type of combat	Percent
None, including exposure to rear-area bombing.....	55.8
Ground (Army or Marine Corps).....	33.8
Airborne Infantry.....	.3
Air, fighter (Army or Navy).....	.4
Air, bomber (Army or Navy).....	2.5
Sea, carriers, battleships, cruisers.....	2.5
Sea, destroyers and smaller craft.....	4.0
Sea, other.....	.6
Sea, mixed.....	0
Air, mixed.....	.1
<b>Total.....</b>	<b>100.0</b>
Number of men.....	931

half of the cases of this type had less than 45 days of combat. Air combat was measured in terms of combat missions flown; half of the men in this group were credited with less than 40 missions. Surface naval combat was very roughly measured in terms of the number of battles engaged in, and it was found that half had been in three battles or less. Table 103 provides the full detail for just ground combat, since this is the only group of any appreciable size.

## PREDISPOSITION

In the main information about predisposition will be found in the preceding chapter on the preservice history, but in evaluating the circumstances surrounding breakdown two supplementary judgments were made, one of specific personality factors apparently associated with breakdown, the other an overall evaluation of the relative importance of predisposition and stress.

### Specific Personality Factors Related to Psychoneurotic Episodes

The examiners' reports often indicated that some particular aspect of a man's personality had rendered him especially vulnerable to a given stress, and thus facilitated his breakdown. Examiners were not, however, specifically asked for this information, so that the resulting judgments are in part those explicitly formulated by examiners interested in this aspect of the etiology, and in part the interpretations, by the coders, of the examiner's statements about the interactions of the personality and the stress situation. In about 85 percent of the examined cases it was possible to relate breakdown to one or more pre-existent personality characteristics.

**TABLE 103**

*Days of Combat Prior to Breakdown, Men in Clinical Sample Who Engaged in Ground Combat*

Days of combat	Percent
0-14.....	23.8
15-44.....	27.1
45-74.....	14.1
75-104.....	10.7
105-134.....	4.8
135-164.....	7.0
165-194.....	3.3
195-224.....	.7
225-254.....	1.1
255-284.....	.4
285 or more.....	7.0
Total.....	100.0
Number of men.....	270

An overtly passive dependent personality was identified in 35 percent of the men, individuals who had manifested overdependence on their parents, and an exaggerated need for direction. Twenty-two percent appeared to have latent dependency problems associated with exaggerated resentment of authority. Three percent were narcissistic individuals who tended to be ambitious, unloving, preoccupied with their own needs, and heedless of others. Nine percent had prominent obsessive-compulsive characteristics with exaggerated needs for exactness and with rigid and ritualistic tendencies. Ten percent were described as hysterical personalities with long standing tendencies to over-react and to histrionics. Four percent seemed phobic, 20 percent anxiety-ridden, and 9 percent instinct-ridden. Some men were classified as having more than one such prominent characteristic so that the above groups overlap somewhat.

### Relative Importance of Predisposition and Precipitating Stress

It was believed that an overall clinical evaluation of this type would prove useful in the analysis, but this expectation was not borne out because the criteria of predisposition were too broad. Anyone with a positive family history or with a preservice personality that was not completely normal, or a preservice adjustment that was impaired, or with a history of having received psychiatric treatment before service, was considered to have some predisposition. Table 104 portrays the final result of this attempt at classification. It does little more than repeat the stress classification already given.

**TABLE 104**

*Relative Weight of Predisposition and Precipitating Stress in Breakdown of Men in Clinical Sample*

Predisposition and stress	Percent
No predisposition, mild or no stress . . . . .	1.7
No predisposition, moderate stress . . . . .	0
No predisposition, severe stress . . . . .	2.5
Questionable predisposition, mild or no stress . . . . .	.7
Questionable predisposition, moderate stress . . . . .	.4
Questionable predisposition, severe stress . . . . .	.6
Positive predisposition, mild or no stress . . . . .	54.2
Positive predisposition, moderate stress . . . . .	13.3
Positive predisposition, severe stress . . . . .	26.6
<b>Total . . . . .</b>	<b>100.0</b>
Number of men . . . . .	873

### THE BREAKDOWN AND THEREAFTER

Nonpsychiatric data, obtained chiefly from medical and personnel records, have been presented in chapter I. The psychiatric information presented



here concerns the illness, its management and course, its influence upon the character of subsequent service, and the mode of separation from service.

### Examiner's Evaluation of Service Diagnosis

In 88 percent of the examined cases the examiner agreed that the examinee had been suffering from a psychoneurosis at the time of breakdown in service. In 4.8 percent the examiners considered that the illness was not psychiatric but a manifestation of trauma, exhaustion state, or some organic disease. In 4.0 percent the examiners agreed that the illness was psychiatric but considered that the term psychoneurosis was inappropriate, typically on the ground that the examinee had a long-standing personality or behavior disorder. In 1.2 percent the examiner agreed that the illness was psychiatric but felt that it was more severe than a neurosis or a behavior disorder. In 2.1 percent the examiner was undecided. These findings provide a most interesting and significant confirmation of the diagnoses made in the service. Many observers had been inclined to believe that the great numbers of admissions for neurosis reported during the war could not possibly represent *bona fide* cases, and that an independent review would tend to scale down the problem to a more modest size. There is little confirmation of that view here.

### Severity and Duration of Illness at First Breakdown

In the expectation that the follow-up picture might reflect in large measure the character and depth of the illness at the time of first breakdown, an effort was made to classify its severity and duration. Table 105 details the classification employed and the frequencies obtained. The largest groups were those whose illnesses were not considered transient, and were of more than mild severity (68 percent). In 10 percent of the cases, illness was transient but of varying degrees of severity. In 18 percent illness was not transient but was of relatively mild degree.

**TABLE 105**

*Severity of Illness Upon First Hospitalization for Psychoneurosis, Men in Clinical Sample*

Severity	Percent
<i>Mild:</i> obviously transient . . . . .	7.3
not obviously transient . . . . .	18.2
<i>Moderate:</i> obviously transient . . . . .	1.4
not obviously transient . . . . .	40.9
<i>Not severe</i> (mild or moderate): obviously transient . . . . .	.2
not obviously transient . . . . .	3.4
<i>Severe:</i> obviously transient . . . . .	1.2
not obviously transient . . . . .	27.3
Total . . . . .	99.9
Number of men . . . . .	812

## **Psychiatric Treatment**

Examiners were specifically asked to determine what, if any, psychiatric treatment was given following the breakdown, but very little evidence of treatment was adduced, either on interrogation or from the original service records. The plain fact is, as is so well known by psychiatrists who served in the Armed Forces, that there was comparatively little specifically psychiatric treatment (by civilian standards), especially during the early part of World War II when policy made mandatory the early discharge of men with psychiatric illness. A rough classification of management was, however, developed and the men in the clinical sample were grouped as follows: 35 percent participated in a prescribed hospital routine without psychotherapy, but at times with sedation; another 35 percent, as far as could be told, had no prescribed activities program, but some did have rest and sedation prescribed; about 20 percent received some individual psychotherapy in addition to whatever routine care was provided by the hospital or rest center in which they were treated; 6 percent had one or more treatment interviews under sedation; 3 percent had insulin subshock or electric shock treatment; and 1 percent had group psychotherapy without any individual psychotherapy.

## **Examiner's Evaluation of Treatment**

Examiners were asked to evaluate the adequacy of treatment but they were furnished no orienting criteria as to the capabilities of the Armed Forces; in general their judgments seemed not to reflect an impractical ideal, however. They reported 19 percent as having received no specifically psychiatric treatment, 32 percent as having received "totally inadequate" treatment, and another 26 percent "somewhat inadequate" treatment. Only 23 percent were considered to have received adequate or fairly adequate treatment.

## **Response to Treatment**

In addition to the 19 percent who had no psychiatric treatment 32 percent of the clinical sample apparently did not respond to treatment. Another 24 percent made some favorable response, but it was judged to have been slight or transient. Only 25 percent had some significant, favorable, and maintained response.

## **Pattern of Disposition**

Many men had more than a single psychiatric admission, so that a classification was developed that was applicable to multiple admissions (table 106). Forty percent were returned to duty following any or all admissions, 57 percent were initially or eventually given a medical discharge, and 3 percent were given an administrative separation for a psychiatric condition. On the first admission only, and apart from any nominal return to duty in preparation for administrative discharge for a psychiatric condition, 59 percent were returned to duty, 39 percent given an immediate medical discharge, and 2 percent given an immediate administrative discharge for a

psychiatric condition. Among the 59 percent returned to duty initially, 19 percent or one-third were ultimately given either a medical or an administrative discharge. Thus the man who was returned to duty after a first admission for psychoneurosis had only 2 out of 3 chances of escaping eventual separation on psychiatric grounds.

The pattern of disposition is quite different for Army and Navy cases. As table 106 shows, 9 percent of Navy cases were retained in service in contrast to 53 percent of Army cases.

**TABLE 106**

*Pattern of Disposition for All Psychiatric Admissions of Men in Clinical Sample, by Branch of Service*

Disposition	Percent		
	Total	Army	Navy
Duty only, never reassigned . . . . .	16.1	20.6	5.6
Duty only, reassigned at least once, but not evacuated as psychiatric patient or remained in Z/I . . . . .	19.3	27.1	1.4
Duty only, reassigned at least once, and evacuated as psychiatric patient . . . . .	4.4	5.4	2.1
CDD or IS only, on psychiatric grounds . . . . .	39.1	25.7	69.9
Administrative separation, for psychiatric condition (Navy), only nominal return to duty . . . . .	2.2	1.5	3.8
Duty once or more, finally CDD or IS on psychiatric grounds, never reassigned . . . . .	7.9	8.9	5.6
Duty once or more, finally CDD or IS on psychiatric grounds, reassigned at least once . . . . .	9.9	9.3	11.2
Duty once or more, finally administrative separation for psychiatric condition, never reassigned . . . . .	.5	.8	0
Duty once or more, finally administrative separation for psychiatric condition, reassigned at least once . . . . .	.6	.8	.3
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.1</b>	<b>99.9</b>
Number of men . . . . .	940	654	286

**Veteran's Evaluation of His Health at Separation**

Examiners asked the subjects to compare their health on leaving the service with that on entry. The great majority (81 percent) considered that they were in poorer health, only 3 percent in better health, and 16 percent the same. The 81 percent are composed of two subgroups, 45 percent who considered their health to be much worse, and 36 percent only somewhat worse.

**Psychiatric Evaluation of Health at Separation**

On the basis of the service medical records and material elicited in their own interviews, examiners usually were able to make a specific clinical diagnosis applicable to the subject at the time of separation, although such a

formulation had not been explicitly requested in the standard history form. The bulk of the cases (76 percent) were considered to have a neurosis, 6.6 percent to be in normal emotional health, 7.9 percent to have neurotic symptoms insufficient to warrant the diagnosis of a neurosis, 5.5 percent to have a behavior disorder, and 4 percent miscellaneous psychiatric and non-psychiatric diagnoses. Only 20 percent of the total, or about one-fourth of those with a neurosis, were considered to have a severe neurosis.

### **Somatic and Emotional Components of Illness at Separation (Veteran's View)**

When the examiner asked the subject to compare his health at entry and at separation, he had an opportunity to ascertain the degree to which the subject thought of his illness as emotional or organic. Ten percent of the the examined men considered themselves free from any illness at separation, and the rest split almost evenly into groups with predominantly organic, predominantly emotional, and mixed viewpoints. It may be considered, therefore, that about 60 percent of the men had some insight into the emotional origins of their ill health at the time of separation.

### **Quality of Duty Performed After First Admission for Psychoneurosis**

After the subjects had been examined and while the code was being developed it was realized that the plan of the examination made no explicit provision for an evaluation of performance following any return to duty. Many examiners included such information in the narrative part of the history, and in all cases there were the service medical and personnel records to fall back on. As has been seen above, 41 percent were never returned to duty following the first admission. For 21 percent of those who were, it was possible to find positive evidence of good and continued service thereafter; for approximately 50 percent there was lack of derogatory evidence; and for 30 percent there was evidence of repeated hospitalization, disciplinary problems, or other behavior impairing the subject's military usefulness. It should be emphasized that the information behind the classification was incomplete; with more complete inquiry it probably would have been possible to distribute much of the middle group into the two extremes.

### **SUMMARY**

Duration of service, individual awards, rate of hospitalization, and other routine information presented in chapter I on the period of military service strongly suggest that as a group the men who suffered from psychoneurosis made a significant contribution to the war effort. The historical psychiatric material presented in this chapter constitutes even stronger evidence, although of course the judgment is one which lacks force in the absence of specific criteria for judging military performance. On a more general basis, however, it seems that any group, half of whose members engage in actual combat, is a group whose military contribution cannot be denied.

A review of the military records shows clearly that the group is a quite heterogeneous one from the standpoint of the amount and quality of stress required to precipitate breakdown. On the basis of type of stress and

location at breakdown it is, of course, possible to isolate subgroups which did not pay their way, but whether such subgroups might be detected at induction remains in serious doubt. Although it is combat which dominates the panorama of stress, the examiners agreed to an overwhelming extent that the illnesses were properly classified as psychoneuroses. The role that treatment played is hard to evaluate. About 60 percent of the men were lost to the service immediately or eventually because of psychiatric illness. Those who had another chance at a duty assignment did reasonably well. At separation 90 percent felt they were ill in some degree, and two-thirds had insight into the emotional origin of their illness. The great majority of men felt that their health had deteriorated since entry into service. Obviously, however, with the possible exception of those separated on psychiatric grounds, a majority had very largely recovered from the acute illness equated here with psychiatric breakdown. There remains, then, the question of their subsequent health, to which the follow-up examination was pointed.

## CHAPTER IV

### FOLLOW-UP STATUS

Most of the psychiatric examinations were made in the fifth or sixth year after first admission for psychoneurosis. The actual distribution as to year of examination is as follows: 3.4 percent within the first 3 years, 10.3 in the fourth, 42.6 in the fifth, 34.0 in the sixth, 7.9 in the seventh, and 1.8 in the eighth and ninth. The examination was focused primarily on the man's health and adjustment when seen and much less on the interval between military discharge and examination.

#### MORTALITY AND CIVIL STATUS

In the entire clinical and record sample of 1,475 Army and Navy cases chosen for use in the study, 12 were deceased when the effort was made in 1947 to locate them. These deaths were reviewed and, except for two suicides, seemed to have no particular psychiatric significance. They may be grouped by cause as follows:

Battle casualty . . . . .	2
Disease . . . . .	6
Auto accident . . . . .	2
Suicide . . . . .	2

Among the 955 living men chosen for the clinical sample, 3 further deaths occurred during the period of about a year while the study was being organized or which were unknown at the time the allocation was made up. It may be observed, parenthetically, that white civilian males aged 25-34 normally die at the rate of about 2 per 1,000 per year. One death was a suicide and another was killed in an auto accident while probably intoxicated; the third died of a testicular tumor.

In June 1953, a final mortality check was made on the entire sample of 1,475 clinical and record cases under study and it was found that during the 12,200 man-years of exposure following separation there were 36 deaths in comparison with an expectation of 31. Although the total number of deaths is reasonable enough, study of specific cause of death reveals a fairly high suicide rate in the study group. The numbers of observed and expected deaths are as shown in table 107.

At the time the psychiatrists wished to schedule their examinations they found four men to be in prison. A brief résumé follows of the circumstances in these cases:

1010: “. . . a prisoner in the guard-house awaiting discharge from the Army following five months A. W. O. L.”

1467: “. . . state penitentiary serving time for grand larceny and conversion of trust property.”

1632: “. . . sentenced to Industrial School for an indefinite period following hold-up of a gasoline station.”

5206: “At the present time the veteran is incarcerated in our county jail. He was arrested on a bad check charge.”

Finally, there were 11 men, or 1.2 percent of the clinical sample, who were back in service. This is undoubtedly lower than the average for World War II veterans generally. Except for the men in prison, no major crimes of violence came to our attention during an almost exhaustive search for information about the clinical sample.

**TABLE 107**

*Observed and Expected Deaths Among Entire Clinical and Record Sample, Following Separation*

Cause of death	Number of deaths	
	Observed	Expected
All diseases . . . . .	18	19.2
Suicides . . . . .	6	2.0
Other accidental and violent deaths . . . . .	12	10.0
Total . . . . .	36	31.2

**SYMPTOMS**

**Prevalence**

Examiners were given a checklist of symptoms to guide their recording, and asked to limit their entries to symptoms given by the veteran spontaneously. Only 8.7 percent of examined cases and an estimated 10.1 percent of the entire clinical sample reported no psychiatric symptoms at all. The percentage of men reporting each symptom is given in table 108. Most common, and affecting at least 40 percent of the sample, are irritability, anxiety, gastrointestinal complaints, restlessness, and headache. Comparatively rare, as symptoms, are obsessions and compulsions, hypochondriacal reaction, psychotic symptoms, and overt symptoms of behavior disorder. The term “hypochondriacal reaction” is used only to designate a severe preoccupation with bodily symptoms, bordering on the bizarre.

Combinations of symptoms were quite numerous, but it was not thought important to determine them. It is difficult to estimate what proportion of a cross section of the civilian population would report specific symptoms if questioned in the same way as the men in the clinical sample. It is very doubtful that they would complain as frequently and as seriously as the veterans studied here, and the significance of the symptoms in the veteran group is reflected in the measure of associated disability which is summarized later.

## Origin

Psychiatric symptoms and psychogenic somatic complaints seen at follow-up were traced back to their origin in order to ascertain which were evident before service, which first appeared in service, and which appeared after discharge from the service. In the coding of these a summary was made for an individual subject rather than for each of his symptoms, and a significant number (19 percent) presented different complaints originating both before and during service. In 24 percent of the men all the symptoms originated before service, and in 43 percent during service. In only 4 percent were they considered new. These percentages give some idea of the extent to which the men attributed illness to military service.

**TABLE 108**

*Percentage of Examined Men Having Specified Symptoms at Follow-up*

Symptom	Percent
Anxiety.....	45.3
Depression.....	29.6
Nightmares.....	22.1
Insomnia.....	31.9
Alcoholism.....	9.5
Headache.....	42.8
Hysteria.....	10.1
Phobias.....	9.8
Obsessions or compulsions.....	6.1
Irritability.....	48.6
Difficulty in concentration.....	20.1
Restlessness.....	45.4
Psychogenic somatic complaints	
Gastrointestinal.....	41.7
Cardiovascular.....	21.9
Musculoskeletal.....	34.8
Genitourinary.....	9.2
Hypochondriacal reaction.....	2.8
Psychotic symptoms.....	2.2
Overt symptoms of behavior disorder.....	2.2
Number of men.....	592

## Veteran's Evaluation of Health at Follow-up

The examiner asked the subject to compare his health at follow-up and at entry into service, and obtained a more favorable answer than when the comparison was between entry and military separation. Table 109 contrasts the two periods. The percentage who regarded their health as poorer fell from 81 at separation to 71 at follow-up, and the percentage who regarded their health as the same or better rose from 19 to 29. The greatest change is in the proportion who described their health as "much worse," from 45 to 31 percent. These are clinically significant changes which suggest rather



strongly that the men have continued to improve, in the main, since separation from service. At the same time, they refute any notion that these men considered themselves well at follow-up. After 5 years most of them still felt that their health was not as good as it had been when they entered the service. Since about half are combat cases, one must suspect that the personality disorganization, largely unresolved by specific psychiatric therapy, continues to manifest itself in a significant proportion of men who broke down under the severe stress of combat.

### **Veteran's Emphasis Upon Somatic and Emotional Components of Illness at Follow-up**

As in the case of ill health at separation the examiner was able to ascertain the degree to which the subject thought of his ill health at follow-up in organic and emotional terms. Table 110 compares the responses for these two periods and suggests very little additional development of insight after separation from service. One would prefer, of course, to have had an independent examination at separation, for it is possible that insight developed since separation is erroneously attributed by the subject to the earlier period as well.

**TABLE 109**

*Comparison of Health at Entry With Health at Separation and at Follow-up, Men in Clinical Sample*

Relation to health at entry	Health at separation	Health at follow-up
	<i>Percent</i>	<i>Percent</i>
Better.....	3.3	8.6
Same.....	15.5	20.8
Worse.....	36.1	39.2
Much worse.....	45.1	31.4
Total.....	100.0	100.0
Number of men.....	672	701

## **DISABILITY AND ADJUSTMENT**

### **Occupation at Follow-up**

The Census index of occupations was employed in coding usual occupation<sup>87</sup> according to the classification exhibited in table 111. A comparison is also made there between the clinical sample and the veteran population generally as determined by the Bureau of the Census in 1950. In view of the size of the clinical sample and differences in how the observations were made, no significance can be attributed to the small discrepancies which are seen.

<sup>87</sup> U. S. Bureau of the Census, *Alphabetical Index of Occupations and Industries, 1948.*

**TABLE 110**

*Relative Emphasis Placed Upon Somatic and Emotional Origins of Their Illness at Separation and at Follow-up by Men in Clinical Sample*

Relative emphasis	Period of illness	
	Separation	Follow-up
	<i>Percent</i>	<i>Percent</i>
No illness or complaint . . . . .	9.0	12.3
Predominantly organic . . . . .	30.9	30.6
Predominantly emotional . . . . .	34.9	38.5
Mixed . . . . .	25.2	18.6
<b>Total</b> . . . . .	<b>100.0</b>	<b>100.0</b>
<b>Number of men</b> . . . . .	<b>747</b>	<b>762</b>

**Occupational Adjustment**

The examiner was asked for considerable detail on adjustment, both in narrative form and in summary judgments. The criteria employed in coding are the same as those already given (pp. 85-92) in connection with preservice adjustment. Of those who were not classified as students 67 percent were judged to have a satisfactory adjustment, 7 percent a questionable adjustment, and 26 percent an impaired adjustment, in the work area. The great majority, in other words, exhibited adequate ability to handle their jobs without excessive interpersonal difficulties, frequent changes or irregularity of employment, or resort to work below their level of competence. The structure of civilian occupations and job situations is enormously more varied than the military and it does not follow that these men would necessarily be well adjusted in military occupations. The rigid military situation undoubtedly presents difficulties for men who in civilian life would ordinarily succeed easily in finding a situation appropriate to their individual needs and capacities.

**Economic Adjustment**

In the follow-up examination an individual was considered to have a satisfactory economic adjustment as long as he could support his family and any dissatisfaction with his income was within normal limits or neurotic in origin. On this basis 74 percent were considered to have a satisfactory adjustment, 5 percent questionable, and 21 percent impaired. These percentages closely parallel those for occupational adjustment.

**Employment Status**

At the time of examination 76 percent were employed full time, 9 percent part time, and 15 percent were not employed at all (table 112). III-

**TABLE 111**

*Usual Occupation of Men in Clinical Sample at Time of Follow-up, and of Veterans Generally*

Occupation	Clinical sample	Veteran <sup>1</sup> population
	<i>Percent</i>	<i>Percent</i>
Farmers, farm managers, laborers, and foremen . . . . .	3.3	6.4
Proprietors, managers, officials . . . . .	8.7	9.9
Clerical and sales . . . . .	16.5	15.3
Craftsmen, foremen . . . . .	17.2	19.4
Operatives . . . . .	27.3	24.6
Service, except protective . . . . .	4.1	} 5.2
Protective service . . . . .	4.2	
Student . . . . .	5.4	1.6
Laborers, except farm . . . . .	6.8	8.0
Professional, semiprofessional . . . . .	6.5	9.5
Total . . . . .	100.0	99.9
Number of men . . . . .	836	.....

<sup>1</sup> Based on U. S. Bureau of the Census, Current Population Report, Series P-50, No. 35, "Work Experience of the Population in 1950." To the 96.7 percent who worked in 1950 were added the 1.6 who were in school only, and the total adjusted to 100 percent.

ness was a factor in preventing full-time employment for 14 percent of the sample, or just over half of those not employed full time. On the basis of this sample it may be concluded, with a 95 percent probability, that the true percentage for the population sampled is not over 16. In other words, for not more than 1 in 6 is illness 5 years later sufficient to interfere partially or completely with ability to work.

**Marital Status and Adjustment**

Only 15 percent of the men were still single at follow-up in comparison with 46 percent at separation and 62 percent at entry into service. Changes here are considered to be primarily a function of age. Five percent were divorced, 2 percent separated, and 77 percent married.

Examiners less often found evidence of satisfactory adjustment in this area than in most others. Of those who were married 60 percent were regarded as having a satisfactory adjustment, 22 percent as questionable, and 18 percent as definitely impaired.

**Family Adjustment**

In assessing family adjustment the coding practice was to consider the veteran's own wife and children, if any, otherwise his parental family. The criteria have already been cited in the discussion of preservice family adjustment. Satisfactory adjustment was found in 67 percent, questionable in 21 percent, and unsatisfactory in only 12 percent.

**TABLE 112**

*Employment Status of Men in Clinical Sample at Follow-up*

Employment status	Percent
Employed full time . . . . .	75.9
Employed part time only because of illness . . . . .	6.4
Employed part time only, other reason . . . . .	2.9
Not employed because of illness . . . . .	7.3
Not employed, other reason . . . . .	7.5
Total . . . . .	100.0
Number of men . . . . .	895

**Sexual Adjustment**

Facts concerning sexual adjustment are most difficult both to elicit and to evaluate. Satisfactory sexual adjustment was inferred in 75 percent of the cases. For 7 percent adjustment was rated questionable, and for 18 percent impaired, the criteria being those previously given (p. 86).

**School Adjustment**

About 6 percent of the men were going to school full time and another 4 percent part time. Thirteen percent had quit schooling under the G. I. Bill before completing the course. About 10 percent of those still in school exhibited some maladjustment in the area of schooling. For example, subject #5129 was described as follows: "For the past three months he has been taking up watchmaking because (1) he had to do something; (2) he likes to work with his hands; and (3) it quiets his nerves. No thought as to what he will do when he finishes course. No knowledge of the jobs available for watchmakers. Admits he neglects his studies."

**Community and General Social Adjustment**

The area of community adjustment pertains to the boundaries of socially acceptable behavior and the mores, and is the one in which adjustment was least often satisfactory. Only 56 percent were judged to have a satisfactory adjustment, 25 percent questionable, and 19 percent impaired. Subject #1261 with an impaired adjustment was described as follows: "The veteran's present adjustment is not good. He gets along poorly with people. He gets along poorly in business. He also gets along poorly with his family. He is married, but lives a rather loose and licentious type of life."

**Adjustment Summary**

The foregoing discussion of adjustment in the various areas of activity may be summarized in two ways. First, in table 113 there is a recapitulation of the ratings for each area which permits a comparison of areas.

TABLE 113

*Adjustment Ratings of Men in Clinical Sample at Follow-up, by Area of Activity*

Area of activity	Percentage rated			
	Satisfactory	Questionable	Impaired	Total
Occupational.....	67	7	26	100
Economic.....	74	5	21	100
Employment.....	76	9	15	100
Marital.....	60	22	18	100
Family.....	67	21	12	100
Sexual.....	75	7	18	100
Community.....	56	25	19	100

Second, an overall summary of the individual was made according to the extent to which adjustment in individual areas appeared questionable or was definitely impaired. This shows that 51 percent had a definite impairment in at least one area or a questionable adjustment in three or more areas. Seventeen percent had a questionable adjustment in one or two areas; only 31 percent were considered to be well adjusted in all areas.

An effort was made to relate an individual's adjustment at follow-up to his preservice adjustment, but with essentially negative results (table 114). Over half of the men who were well adjusted at follow-up had at least a questionable maladjustment before entry into service. A significant number who were maladjusted in both periods seemed so in entirely different areas. The most usual situation was one in which the maladjustments at follow-up were only partly present before entry into service.

### Psychiatric Disability

In this study a sharp distinction was made between a psychiatric diagnosis and disability. Disability means impairment of capacity to function and not the mere presence of symptoms. If a man loses time from work, or cannot carry out his role as a student or a father, his capacity to function is impaired. While major emphasis was given to the work area in the determination of degree of disability, consideration was also given to the manner in which an individual functioned in his sexual life, as a member of a family, in recreational pursuits, and as a member of a community. Defective attitudes when accompanied by "acting out" were not considered as evidence of disability. Disability in one or more minor areas of activity without disability in the work area was usually considered at most mild in degree. A moderate degree of disability usually cut appreciably into working time or efficiency.

Less than 30 percent of the entire follow-up sample appeared to be more than slightly disabled according to these criteria, and only 8.1 percent

**TABLE 114**

*Relation of Any Maladjustments at Follow-up to Preservice Maladjustments*

Presence of any maladjustment <sup>1</sup>		Percent
Preservice	At follow-up	
Absent.....	Absent.....	14.0
Do.....	Present.....	10.6
Present.....	Absent.....	18.3
Do.....	Present: same areas.....	4.0
Do.....	Present: only partly same areas.....	41.6
Do.....	Present: entirely different areas.....	11.5
Total.....		100.0
Number of men.....		756

<sup>1</sup> For the purpose of this classification a questionable preservice maladjustment is regarded as a maladjustment.

more than moderately disabled (table 115). The disability rating thus contrasts sharply with the prevalence of symptoms. These men in large degree are not disabled and are able to carry on in civilian life.

**DIAGNOSIS AND PROGNOSIS**

**Change in Psychiatric Condition Since Discharge From Service**

Most men experienced some change in condition after discharge from the service. In the main those who were not ill <sup>38</sup> at discharge either remained the same or improved further. Of those who were ill at discharge

**TABLE 115**

*Relative Psychiatric Disability at Follow-up, Men in Clinical Sample*

Disability	Percent
Essentially none.....	44.9
Symptoms clearly present but not more than slightly disabling.....	26.6
Moderate disability.....	20.4
Severe disability short of hospitalization.....	7.5
Total disability with or without hospitalization.....	.6
Total.....	100.0
Number of men.....	805

<sup>38</sup> Symptoms may have been present, but there was no disability.

60 percent appeared to have improved, 24 percent to have remained the same, and 14 percent to have become worse (table 116). The major movement is in the direction of improvement and, as will be seen later in this report, is quite unrelated to treatment.

### Psychiatric Diagnosis

If the examiner considered a subject ill in the psychiatric sense he was asked to formulate his diagnosis of the illness. In all, 28 percent were found to be not ill. A few (1.8 percent) were considered to have a psychotic reaction, usually schizophrenic in type, 11 percent a personality or behavior disorder, and 58 percent a neurosis. Most of the neuroses (57 percent) were judged to be mild in their severity, and only 10 percent of them, or 5.6 percent of the entire sample, were found to be severe (table 117). The neuroses of moderate or severe intensity, the behavior disorders, and the psychotic reactions may all be lumped together as serious psychiatric disturbances; 38 percent of the entire sample may be thus classified, the remainder having at most mild neuroses. In these terms the examiner's diagnosis gives about the same overall picture as his evaluation of disability.

**TABLE 116**

*Psychiatric Condition at Separation From Service and Change Prior to Follow-up, for Men in Clinical Sample*

Condition at separation and change prior to follow-up	Percent
Ill at separation	
No change.....	18.2
Improved.....	46.4
Worse.....	10.5
Unknown.....	2.1
Not ill at separation	
No change.....	11.4
Improved.....	8.0
Worse.....	2.3
Unknown.....	1.1
Total.....	100.0
Number of men.....	797

### Examiner's Prognosis

A prognosis was made in each case, whether the subject was ill or not, and table 118 summarizes the findings for the entire clinical sample on the assumption that no additional treatment would be received. In 17.4 percent of the entire sample (and 19.4 percent of the examined cases) the prognosis was poor, in contrast to 32 percent rated as good or better. Five years is not a long time in the lives of these men, and examiners were

**TABLE 117**

*Psychiatric Diagnosis at Follow-up, Men in Clinical Sample*

Diagnosis	Percent
Not psychiatrically ill . . . . .	26.8
Uncertain if psychiatrically ill . . . . .	1.5
Psychoneurosis, mild . . . . .	32.8
Psychoneurosis, moderate . . . . .	19.2
Psychoneurosis, severe . . . . .	5.6
Personality or behavior disorder . . . . .	11.4
Psychotic reaction, schizophrenic . . . . .	1.5
Psychotic reaction, alcoholic . . . . .	.1
Psychotic reaction, post-traumatic . . . . .	.1
Other . . . . .	1.0
Total . . . . .	100.0
Number of men . . . . .	842

properly cautious in their prognostication, although the general course for the group as a whole has been toward improvement. Regression and further deterioration has characterized a significant number but the probability is that the majority of men in the sample will experience no serious emotional setback in the absence of any unusual stress.

**Effect of Treatment on Prognosis**

Examiners were asked to take into account, in making their prognosis, the possibility that treatment might modify the expected course of the illness. For 31 percent of the entire group they expressed the opinion that treatment would have a highly beneficial effect. For 39 percent they expected some beneficial effect, but perhaps not great, and for 30 percent no effect at all. The last group includes not only many who were well but some whose illness was thought to be of such a nature that treatment would offer no real hope of amelioration. Treatment was not defined but presumably it implied whatever therapy was indicated. Certainly the future prospect for these men could be brightened if there were some way of providing the necessary treatment and of getting them to seek it or accept it.

**Attitude Toward Psychiatric Diagnosis or Discharge**

In connection with the inquiry into the veteran's recognition of any need for treatment the examiner asked how he felt about having been labeled a psychiatric case in the service. Most of the men, 60 percent, stated that the diagnosis and/or discharge was correct. Twenty-four percent disagreed on the grounds that their difficulties had not been emotional in origin and that a mistake had been made by the doctors. Finally, there was



**TABLE 118**

*Prognosis (Without Treatment) of Men in Clinical Sample at Time of Follow-up*

Prognosis	Percent
Excellent.....	7.5
Excellent to good.....	3.5
Good.....	21.0
Good to guarded.....	17.0
Guarded.....	24.9
Guarded to poor.....	8.7
Poor.....	17.2
Hopeless.....	.2
Total.....	100.0
Number of men.....	804

a middle group of 16 percent who were noncommittal and appeared not to care one way or another. The diagnosis was accepted, then, by from 60 to 76 percent of the sample, depending on the true feelings of the non-committal group. The 24 percent who disagreed with the diagnoses generally felt that a psychiatric diagnosis was a bad thing to have.

**TREATMENT**

**Psychiatric Treatment Since Discharge**

The standard examination form provided for considerable detail about psychiatric treatment since discharge from service, including the variety received, if any, the auspices under which it was given, if not received why not, and the like. Only 15 percent of the entire sample had received specifically psychiatric treatment at the hands of psychiatrists. Most of them (11 percent among the 15) had had brief or superficial psychotherapy, and only 2.1 percent intensive or prolonged psychotherapy. Six cases (0.7 percent) had received drug therapy without psychotherapy, two cases electroshock treatment without psychotherapy, and two cases psychotherapy plus drug or shock therapy. An additional 21 percent received symptomatic treatment at the hands of nonpsychiatrists, and 64 percent had received no treatment of any kind. In all, then, only 36 percent of the men had been sufficiently troubled by their symptoms to have sought relief in psychiatric or other treatment. One-third of those seeking such relief, or 11 percent of the entire sample, had gone to the VA for help. Half of these, just 5 percent of the entire sample, had been hospitalized in the VA system, and the rest (6 percent of the entire sample) had received treatment at a VA regional office clinic, at a VA contract clinic, or from a private physician whose fee was paid by the VA.

## **Veteran's Attitude on Need for Psychiatric Treatment**

At follow-up each subject was asked whether he felt the need for psychiatric treatment, and to what extent. Four percent expressed no opinion and 56 percent felt they did not need it. The 40 percent who did express a need for treatment were, for the most part (24 percent), inclined to describe their need as "little"; only 16 percent described it as great. Who the men were who felt the need for treatment as compared (from the standpoint of severity of illness, compensation, etc.) with those who felt no such need is discussed below.

Roughly one-half of the 40 percent that expressed a need for treatment had previously had some treatment. The other half volunteered a wide variety of reasons in explanation, principally that no facilities were available, that existing facilities were unknown to them, and that they did not think they would be helped.

## **Examiner's Opinion on Need for Treatment**

The veteran's attitude concerning need for treatment was in fairly close agreement with the examiner's opinion. Examiners believed 17 percent were in great need and 23 percent would benefit considerably from treatment. About 30 percent of the men were not considered ill and therefore did not require any treatment. An additional 4 percent were considered ill but not amenable to treatment. They felt that for 25 percent treatment was desirable but not essential to continued good adjustment. About 40 percent, then, would have to be considered seriously in any program of providing psychotherapy on the basis of need. This is, of course, a prohibitive requirement for the existing resources of the VA and the psychiatric profession generally. Even the number in great need, 17 percent, seems large in relation to the actual resources available, for it suggests that about 110,000 World War II veterans out of the 650,000 admitted for psychoneuroses during the war are in great need of treatment.

Men considered by examiners to be in great need of treatment, or ill and unable to benefit considerably from treatment, were restudied in the summer of 1953 to determine how many of them had sought specifically psychiatric treatment from VA facilities since the follow-up examination. For the group as a whole, numbering about 220 men, 27 percent were found to have had at least one visit to a VA mental hygiene clinic or other treatment facility, but for the most part (72 percent) these were men who had reported prior treatment at the time of the examination. Only 14 percent of the men with no treatment before follow-up made any effort to obtain treatment from the VA subsequent to follow-up, in contrast to 45 percent of those who reported some treatment even prior to follow-up. In some instances men made only single visits, but in most instances there were at least several and in others it was plain that the individual had a prolonged period of psychotherapy.

## **Attitudes on Medical Care**

In exploring subjects' attitudes toward medical care examiners inquired into the fairly neutral area of nonpsychiatric help, and found 91 percent sufficiently positive. Six percent were considered slightly negative and 3 percent to have an attitude of definite avoidance of any kind of medical care. To the hypothetical question: Would you seek psychiatric help in the future if you needed it? 48 percent replied in the affirmative, 28 percent had no comment or were undecided, 17 percent were somewhat negative, and 7 percent were markedly negative. Among those who had not already sought help 43 percent were positive, 33 percent neutral, 16 percent somewhat negative, and 8 percent markedly negative. On the assumption that medical care, and especially psychiatric care, might be required in the future, subjects were asked about any preferences they might have for VA care or private care. In these terms 52 percent preferred private care, 42 percent VA care, and 6 percent had no preference. Specific attitudes toward VA medical care as such were largely favorable; 74 percent expressed a positive attitude and 26 percent a negative one. Both positive and negative attitudes were largely based on experience with the VA.

## **COMPENSATION AND RELATED ATTITUDES**

### **VA Compensation Status**

Examiners inquired carefully into VA compensation status and related attitudes; for men who were not examined the necessary information was obtained from VA compensation files. Fifty-three percent were receiving no compensation of any kind. Nine-tenths of those who did receive compensation were carried by the VA on a psychiatric diagnosis of one kind or another; 82 percent had only a psychiatric diagnosis, 12 percent a purely organic diagnosis, and 6 percent diagnoses of both kinds. Table 119 gives the details as to amount. Although about half of the men received compensation, for the most part the amount was small. Less than 10 percent of the entire sample received over \$50 a month. The average (median) award for men receiving compensation was \$27.60 per month at the time of follow-up, or equivalent to \$33 at the rates effective 1 October 1954.

### **Attitudes Toward VA Benefits**

About 13 percent of the entire sample expressed some resentment at not receiving compensation. Others had never asked for any, or, if they had asked, were content with refusal or discontinuance. Virtually none thought he should receive any less compensation, and 17 percent of the entire group (or 32 percent of those already receiving compensation) felt they should have more; 15 percent (28 percent of those receiving compensation) considered the amount adequate, and for a like number no opinion was obtained. A few (3 percent) felt that the compensation they received was not deserved. The general attitude toward VA disability benefits was one of approval; 83 percent of the subjects felt that the recipients deserved them

**TABLE 119**

*Amount of VA Compensation for Disability Received by Men in Clinical Sample at Time of Follow-up*

Monthly payment	Percent	Monthly payment	Percent
None.....	52.9	\$90-99.....	0.9
\$1-9.....	.1	\$130-139.....	.1
\$10-19.....	22.3	\$140-149.....	.1
\$20-29.....	2.6	\$150-159.....	.1
\$30-39.....	1.3	\$180-189.....	.1
\$40-49.....	11.9	Some, amount unknown.....	1.3
\$50-59.....	2.4		
\$60-69.....	2.8	Total.....	100.0
\$70-79.....	.3		
\$80-89.....	.8	Number of men.....	915

and only 2 percent felt that such benefits were not good. Others were either passive or had more complex opinions. A similar distribution of opinion was found to prevail with respect to VA benefits other than those for disability.

**Psychiatric Effect of Compensation**

There is a prevalent belief that compensation tends to perpetuate psychiatric illness. For this reason examiners were specifically requested to determine whether compensation, or its lack, seemed to be having any untoward effect on the subjects under study. They reported that compensation status had a possibly helpful effect in 16 percent of the cases, no effect in 69 percent of the cases, and an ill effect in 16 percent, whether on compensation or not. For cases receiving compensation, psychiatrists felt that compensation was possibly helpful for 18 percent, had no effect on 61 percent, and had an ill effect on 21 percent. Since these 21 percent represent only about 10 percent of all the clinical cases, it would hardly appear that compensation is a major problem impeding the rehabilitation of the group as a whole. In individual cases, however, its harmful effect must be reckoned with. If a harmful effect was not often found, it must be in large part because few men were paid enough to make illness attractive on that account.

**Other Attitudes**

Information on other attitudes was sought in the hope that it might assist in determining prognosis. Its analysis is reserved for a later chapter, only a summary of specific attitudes being given here. In the aggregate the attitudes were fairly uniform toward military superiors, assignments, training, discipline, and time spent in service; about two-thirds (from 61 to 67 percent) expressed favorable attitudes, and from 15 to 23 percent unfavorable attitudes, the rest being indifferent or ambivalent. Most often (69 percent) examiners thought that military service had not changed attitudes toward

the community and the country at large, but more mature or favorable attitudes were reported for 19 percent and in 12 percent negative attitudes were thought either to have developed or deepened.

## SUMMARY

At follow-up, usually in the fifth or sixth year after breakdown, the men in the clinical sample were distributed widely over the spectrum of psychiatric illness, but with no concentration in the region of severe disability.

The mortality experience of the entire clinical plus record sample matched expectation quite closely except for suicide; there were 6 such deaths in comparison with 2 expected. Except possibly for the men in prison at the time of follow-up, no major crimes were uncovered.

Symptoms were volunteered by about 90 percent of the subjects, especially irritability, anxiety, gastrointestinal complaints, restlessness, and headache. For the most part these symptoms originated in service in association with breakdown and to a lesser extent in the preservice period. Most men described their health at follow-up as somewhat poorer than at entry, but their attitudes in this respect reveal a net improvement between separation and follow-up.

In their occupational distribution the men in the clinical sample closely resemble the entire WW II veteran population. In 14 percent full-time employment seemed to be prevented by illness. The percentage of men with specific maladjustments in each area are as follows: occupation 26, economic 21, marital 18, family 12, sex 18, and community and social 19. A definite impairment in at least one area, or questionable adjustments in three or more areas, were found in 51 percent of the sample at follow-up.

The most summary judgment on these men, essentially based on their functional capacity, is the rating as to psychiatric disability. About 20 percent exhibited evidence of moderate disability and 8 percent severe disability.

The examiners considered that about 60 percent of the men who might be called definitely ill at separation had improved by the time they appeared for their follow-up examinations. They regarded 72 percent as not entirely free of psychiatric illness at follow-up, but only 1.8 percent were found to have psychotic reactions, 11 percent behavior or personality disorders, and 6 percent severe neuroses. For the most part, that is, any illness was considered to be mild or moderate in degree, and 61 percent of the men had either no illness or at most a mild neurosis. Prognoses were most often guarded in nature, but in 32 percent were good or excellent; in 17 percent they were poor.

Only 36 percent of the men had sought any treatment for the manifestations of their emotional disorders, 15 percent from psychiatrists. Treatment had been obtained through the VA by 11 percent of the men. There is no evidence that treatment played an important role in the general improvement which occurred between separation and follow-up. About 40 percent

of the subjects themselves considered that they still needed treatment, and the opinions of the examiners are in close agreement for the sample as a whole, but much less so in the individual case.

When seen, about 40 percent of the men were drawing VA compensation for psychiatric disability, with the median award 20 percent, equivalent to \$28 per month at the time of follow-up and \$33 in 1954. VA compensation status (whether compensated or not) was considered by examiners to have no effect on the man's illness in 69 percent of the cases; in only 16 percent was it considered harmful. In only 10 percent of the entire sample was the payment of such compensation thought to have an ill effect. It seems plain that compensation does not usually have a dynamic influence upon the course of the illness, although it may in individual cases.

The psychoneurotic disorder is not static, and for the most part the follow-up period was one of further improvement and consolidation of earlier gains. The group is large enough to cover a wide range of disability at follow-up, and only its distribution over that range will suffice as a precise description of its status, but in the region of severe disability one finds only about 8 percent.

## Part Two

### ANALYSIS OF FOLLOW-UP DATA

Although follow-up status has already been described item by item, even greater interest attaches to the interrelations among various follow-up observations and to their dependence upon antecedent elements of the life history. The major characteristics of the follow-up picture, therefore, have been singled out for further, systematic study here, and for each the analysis consists of (1) interrelations with other follow-up observations, (2) associations with various aspects of the military history, and (3) dependence upon factors already known in the preservice period. One expects the life history to include a fairly intelligible pattern or sequence of events, and in any clinical work one is accustomed to an *ex post facto* patterning of events. Here also the events of the developmental period are known only in retrospect, and the events of the military period partly so, as examiners sought to reconstruct individual life histories up to the time of follow-up. The statistician would prefer that observations on different periods be made independently of one another if they are to serve the purposes of prediction and understanding. To have done so here was manifestly impossible. Surely the only real protection against the biased patterning of past events in the light of the present lies in the skill of the examiner, and the only real guarantee that a life history is seen whole lies in its review by a single examiner, and these precautions have been taken here. The correlations which emerge from the resulting observations are, therefore, set forth with confidence in their reliability and, even more, in the belief that all relationships are probably somewhat dimmed by the multiplicity of observers.

No single observation serves to describe the whole man, but in the analysis of the follow-up observations an attempt was made to develop several summary classifications embodying a relatively large amount of information, and it is these, plus VA compensation status, which have been abstracted for intensive analysis of the follow-up picture. The complete list, and the order of presentation, is: disability, diagnosis, adjustment, treatment since separation, improvement since separation, change in health from entry into service to follow-up, and VA compensation status.

## CHAPTER V

### DISABILITY

In chapter IV disability was defined and distinguished from other specific observations and summary judgments at follow-up, especially the psychiatric diagnosis, symptomatology, and adjustment. Here its meaning is further specified in terms of correlations with other follow-up observations, including VA compensation status. The analysis also extends to the factors which might be considered as the determinants of disability, or its predictors, factors which are taken from the preservice or developmental history and from the military history already detailed in Part One.

#### IN RELATION TO OTHER FOLLOW-UP OBSERVATIONS

##### **Adjustments and Symptoms**

Disability was determined chiefly by evaluating the individual's capacity to function and not by the presence or absence of symptoms. If a man lost appreciable time from work because of illness or was unable to carry out his role as student, or father, he was considered to have an impaired capacity to function and therefore to be disabled. Although major emphasis was given to the work area, adjustment in other areas was also considered. As a rule, without some significant involvement in the work area, disability was considered not more than "mild"; a "moderate" disability usually cut appreciably into working time or efficiency. In order to present a more comprehensive picture of what each level of disability involves, the relationship between disability and adjustment at follow-up is shown in table 120, together with the prevalence of symptoms among men at each level of disability.

Only 10 percent of the entire sample reported no symptoms and virtually all of these had no disability at follow-up. However, it is of interest that 78 percent of those with no disability did report some symptoms. Occupational adjustment is more intimately related to the disability rating than any other criterion of follow-up status, and necessarily so since this item was given the greatest weight in determining disability. Only 4 percent of those with no disability were occupationally maladjusted in contrast to 71 percent of those with moderate, severe, or total disability. Despite the high frequency of some occupational maladjustment among the more severely disabled, only 45 percent of this group were not fully employed for reasons of health. Among men who were at least moderately disabled the prevalence of maladjustments in other areas varied from 35 percent in the family area to 54 percent in the economic. Corresponding percentages for men with no disability vary from 2 to 7. Practically all of the more seriously disabled showed a definite maladjustment in at least one area.



**TABLE 120**

*Prevalence of Symptoms and Maladjustments at Follow-up in Relation to Psychiatric Disability*

Other follow-up characteristics	Percentage of veterans having other follow-up characteristics, by psychiatric disability		
	Essentially no disability	Slight disability	At least moderate disability
	Symptoms		
Some symptom present.....	78	100	99
	Maladjustments		
Occupational maladjustment.....	4	16	71
Not fully employed because of psychiatric or other illness.....	2	3	45
Economic maladjustment.....	5	14	54
Marital maladjustment.....	6	16	38
Sexual maladjustment.....	7	15	41
Family maladjustment.....	2	9	35
Quit GI school course.....	12	9	20
Community maladjustment.....	3	16	48
Maladjustment in any area.....	18	57	97

**VA Compensation for Psychiatric Disability**

In the entire clinical sample 41 percent were receiving disability compensation for purely psychiatric disorders and an additional 3 percent for a combination of psychiatric and organic difficulties.<sup>89</sup> An additional 5 percent were receiving compensation for nonpsychiatric disorders. The relationship between VA compensation status and examiners' estimates of disability is shown in table 121. In general, the more disabled an individual is, the more likely he is to receive compensation but the degree of correlation is not impressive. For example, only 73 percent of those whose psychiatric disability was severe or complete were receiving compensation for it. In part this may be explained by the fact that VA compensation is by law limited to disability resulting from or aggravated by military service.

<sup>89</sup> In the hearings before the Subcommittee of the Committee on Appropriations, House of Representatives, 83d Congress, First Session, part 1, p. 798, it is reported that, as of December 31, 1952, out of a grand total of 1,632,000 on the compensation rolls for World War II, there were 377,000 NP cases (23 percent of the total cases). Forty percent of these (a total of 151,000 cases) were given disability ratings of 10 percent.

The 27 percent with severe or total psychiatric disability who were not being compensated for it constitute a small group of 17 men and a variety of individual factors are probably involved in their failure to receive compensation. A review of their records shows that they were predominantly men with pathological personality types and behavior disorders, far more so than the 46 men of similar disability who were compensated.

On the other hand, 27 percent of the men with no psychiatric disability at follow-up were receiving compensation for psychiatric reasons; these men also exhibited very little psychiatric impairment before service. This group constitutes 28 percent of all the men in the clinical sample who were receiving VA compensation on psychiatric grounds. This discrepancy between VA ratings and the opinions of examiners and coders who participated in the follow-up study seemed worthy of further exploration on the basis of men actually seen by examining psychiatrists and in relation to any later changes in VA compensation status.

Among those of the follow-up group who were examined by psychiatrists, 271 were rated by examiners as having no disability. Eighty-eight (or 32 percent) of these were drawing VA compensation for psychiatric disability. In the summer of 1953 these same cases were resurveyed; the figure had declined to 25 percent. The changes in the other disability groups were very minor. For the entire group of examined men, and between the follow-

**TABLE 121**

*Psychiatric Disability at Follow-up and VA Compensation Status*

VA compensation status	Psychiatric disability at follow-up				
	Essentially none	Slight	Moderate	Severe and complete	Total <sup>1</sup>
	Percent	Percent	Percent	Percent	Percent
Not compensated.....	64.9	45.6	38.0	25.4	51.1
Compensated					
Psychiatric only.....	25.0	46.6	57.6	68.2	40.9
Nonpsychiatric only.....	7.8	4.4	1.3	1.6	5.0
Mixed.....	2.3	3.4	3.1	4.8	3.0
Total.....	100.0	100.0	100.0	100.0	100.0
Number of men.....	348	204	158	63	773

<sup>1</sup> Because they are unknown on one or both characteristics tabulated here, 182 men are omitted from this table. To the extent that such men differ from those for whom both tabulated characteristics are known, the percentages shown differ from those presented for the entire sample in Part One. Thus in table 119 it was reported that 53 percent of all 915 men of known compensation status were drawing compensation on some grounds or other; for the 773 men used in this table, the figure is 51 percent. Small discrepancies of this nature will be found throughout these tables.

up examination and 1953, the overall percentage compensated fell from 44.2 percent to 39.2 percent, and a large change occurred in the ratings. The 1953 ratings are about 60 percent of those at the time of follow-up in 1949-1950. The 25 percent who were considered to have no disability at follow-up, and yet were still receiving compensation in 1953, constitute 8.7 percent of the entire clinical sample. Since the clinical sample represents an estimated 650,000 men who were admitted to medical care for psychoneurotic disorders during the war, it appears that there may be approximately 57,000 men without disability who are drawing compensation. Based on the average amount granted to this study group, approximately 13 million dollars are involved annually.

For those 44 percent who were drawing compensation on psychiatric grounds at the time of the follow-up examination, some relationship was found between the examiner's estimate of the degree of disability and the amount of VA compensation (table 122). Thirty-three percent of the men with no disability (but who were receiving compensation) received \$30 or more per month in contrast to 62.5 percent with severe or total disability who received similar amounts. The lack of strong correlation may reflect recent changes in psychiatric condition or differences in criteria of evaluation but there is a strong suggestion that not only the chance but also the level of compensation is entirely too high for the men at the lower end of the scale of psychiatric disability. It is quite possible that an error in the reverse direction exists for those with the more severe disabilities.

### Treatment and Attitudes Toward Illness

Roughly one-third of all of the men received some treatment between discharge from the service and follow-up. Treatment was defined very liberally. In some instances it consisted of a brief period of hospitalization

**TABLE 122**

*Psychiatric Disability at Follow-up and Amount of VA Compensation, Men Compensated on Psychiatric Grounds Only*

Compensation per month	Psychiatric disability at follow-up				
	Essentially none	Slight	Moderate	Severe and complete	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Under \$30.....	67.1	54.8	42.7	37.5	52.4
\$30 or more.....	32.9	45.2	57.3	62.5	47.6
Total.....	100.0	100.0	100.0	100.0	100.0
Number of men.....	85	93	89	40	307

by the VA, presumably more for evaluation than therapy, but usually it was symptomatic in character and not administered by a psychiatrist. Only 2 percent of all the men received intensive psychotherapy. Only 55 percent of those with the severest disability, 49 percent of those with moderate disability, and 44 percent of those with slight disability had received any treatment in the follow-up interval. Twenty percent of the men with no disability at follow-up had had some medical or psychiatric attention. Those with greater disability were more likely to have sought treatment at a VA facility and had received psychotherapy, usually brief, about twice as frequently (in contrast to medical treatment) as had men with less disability. Although only 11 percent of the entire clinical sample (one-third of all who had any therapy) sought help from the VA, 24 percent of those with at least moderate disability sought such help.

On the whole the amount and type of therapy leave much to be desired, but it is somewhat encouraging to find that the sicker men were more apt to gravitate toward psychotherapy. The effect of such treatment is discussed in chapter VIII.

It is of interest to compare the frequency of treatment with the opinions of the psychiatric examiners regarding the need for treatment. It was unusual for an examiner to state that a man with a manifest disability would not benefit from some treatment. They even considered that a third of those with no disability would benefit from treatment (table 123). Sixty-six percent of those with severe disabilities were considered to be in great need of treatment and an additional 22 percent would have benefited considerably from treatment.

The men themselves underestimated their need for treatment (table 124). For example, 37 percent of those who were severely or completely disabled

**TABLE 123**

*Psychiatric Disability at Follow-up and Examiner's Estimate of Need for Treatment*

Psychiatric disability	Examiner's estimate of need for treatment					Number of men
	Not ill or would not benefit	Desirable but could do without	Would benefit considerably	Great need	Total	
	Percent					
Essentially none.....	65.6	27.3	6.0	1.1	100.0	352
Slight.....	9.0	40.8	38.6	11.6	100.0	189
Moderate.....	6.6	11.2	42.1	40.1	100.0	152
Severe, complete.....	9.4	3.1	21.9	65.6	100.0	64
Total.....	34.9	25.4	22.7	17.0	100.0	757

and 35 percent of those moderately disabled stated they felt no need for treatment. In each group only 35 percent felt in great need of treatment.

There are many reasons why one individual who is severely disabled may feel in great need of treatment and another with similar disability may feel no need for treatment. The type of illness, the attitude of the individual toward his illness, the attitude of his family, the extent of any secondary gain, and the attitudes of physicians from whom help may have been sought, may all be contributing factors in the individual case. The phenomenon is certainly not confined to the military neuroses, and it is not known whether it occurs more frequently in military cases because of the added secondary gain of compensation and socially acceptable explanation for neurotic behavior.

Only half of all the subjects stated they would seek psychiatric help in the future if they needed it, and half of these in turn were among the men who had already sought help. The negative answers occurred twice as often among those with disability as among those with no disability. However, as long as treatment facilities are so inadequate, even for those who do desire help, the problem of educating men with negative attitudes remains relatively academic.

The more severely disabled, whom the examiners almost uniformly considered in "at least considerable need of treatment," were rarely neutral in their attitudes toward treatment; they tended to be either strongly negative or strongly positive.

The poor motivation regarding treatment is not appreciably related to denial of emotional difficulty. Those who were not disabled at follow-up were only slightly more apt than those with some disability to believe that their illness in the service was not of emotional origin and more apt to

**TABLE 124**

*Relation Between Psychiatric Disability at Follow-up and Veteran's Own Estimate of Need for Treatment*

Psychiatric disability	Veteran's estimate of need for treatment				Number of men
	No need	Little need	Great need	Total	
	Percent				
Essentially none.....	80.2	17.2	2.7	100.1	338
Slight.....	45.7	31.1	23.2	100.0	164
Moderate.....	34.7	30.5	34.8	100.0	141
Severe and complete.....	36.8	28.1	35.1	100.0	57
Total.....	59.4	24.0	16.6	100.0	700

assert that the doctors had made a mistake in their diagnosis of psychoneurosis.

Three-fourths of all the men felt that their health at follow-up was worse than at entry into the service, and all of those with severe disabilities insisted that their health had deteriorated (table 125). Even a majority of those with no demonstrable disability reported that they had "slipped" in some degree. They did not, however, always discuss the change in emotional terms. And, while those with no disability more frequently manifested an organic orientation toward their complaints than did those with some disability, an emotional orientation was not found to increase concomitantly with severity of disability (table 126).

### Change in Condition During Follow-up Period

Twenty-three percent of the total clinical sample were judged by examiners not to have been ill at separation from service. The overwhelming majority of these men remained unchanged or improved (symptomatically) after returning to civilian life. About 10 percent grew worse after discharge. Of the 77 percent who were judged to be ill when separated almost two-thirds improved after separation from the service and about one-sixth got worse.

Most of the men who were severely disabled at follow-up had become worse, and those who were no more than slightly disabled were in the main men who had improved after leaving service. Clearly the neurotic disorder was not static following discharge and only further follow-up of this same group of men would reveal the extent to which their condition had stabilized at the time of follow-up, 5 or 6 years after breakdown. There is some suggestion that the maximum change takes place in the first 2 years after breakdown and that from then on it is minimal.

**TABLE 125**

*Psychiatric Disability at Follow-up and Veteran's Opinion of Change in His Condition Since Entering Service*

Psychiatric disability	Change in condition					Number of men
	None	Some-what worse	Much worse	Better	Total	
	Percent					
Essentially none.....	34.5	42.6	9.7	13.2	100.0	319
Slight.....	11.1	48.0	36.8	4.1	100.0	171
Moderate.....	8.0	27.7	58.4	5.8	99.9	137
Severe and complete.....	0	25.5	74.5	0	100.0	51
Total.....	20.6	39.7	31.3	8.4	100.0	678

## Diagnosis and Prognosis

Disability is quite reliably indicated by the examiner's diagnosis. A man with a severe neurosis was uniformly considered severely disabled, and a vast majority of those with moderate neuroses were considered moderately disabled. Those with mild neuroses had either no disability or at most slight disability. Those with personality disorders, however, were distributed throughout the range of disability.

**TABLE 126**

*Psychiatric Disability at Follow-up and Veteran's Emphasis on Emotional or Organic Components of His Illness*

Psychiatric disability	Veteran's emphasis					Number of men
	No complaints	Organic	Emotional	Mixed	Total	
	Percent					
Essentially none.....	25.0	34.6	29.2	11.2	100.0	332
Slight.....	2.6	24.6	45.5	27.2	100.0	191
Moderate.....	2.1	27.4	49.3	21.2	100.0	146
Severe and complete.....	0	27.8	38.9	33.3	100.0	54
<b>Total.....</b>	<b>12.6</b>	<b>30.0</b>	<b>38.3</b>	<b>19.1</b>	<b>100.0</b>	<b>723</b>

Examiners were asked to estimate the prognosis in each case and their judgments indicate that in general "good" prognoses were given to men with no disability and poor prognoses to those with the more pronounced disabilities. It is not clear if they used the probability of complete recovery as a criterion, or whether they felt that those with the more severe disabilities had chronic fixed conditions in which no improvement could be expected without treatment.

## IN RELATION TO MILITARY EXPERIENCE

### Location at Breakdown and Stress

Clinical experience might have suggested that those who broke down early in service under relatively less objective stress were the ones who had more emotional difficulty prior to service and consequently would be the ones who would be most disabled at follow-up. This proved not to be the case. As may be seen from table 127, each of the disability groups contributes about proportionately to the various "location" groups; such differences as do exist are well within the power of chance to produce. In other words, a man who was first hospitalized while in basic training was just as apt to be well at follow-up as one who broke down in combat. If

the entire sample is divided into combat and noncombat cases, it is found that 30 percent of the combat cases and 27 percent of the noncombat cases were at least moderately disabled at follow-up. This does not mean that where a man breaks down in service is of no significance, but by itself it has little value in forecasting psychiatric disability some 5 years later.

If just external stress is considered, there is a high degree of correlation between severity of stress and site of breakdown. To a great extent this is by definition. Combat was by far the most severe stress to which men were exposed in the service, with basic training and service in the U. S. the least severe. Major area of stress and the severity of stress were found to bear no relationship of prognostic significance to disability at follow-up.

**TABLE 127**

*Location at Breakdown and Psychiatric Disability at Follow-up*

Location at breakdown	Psychiatric disability at follow-up					Number of men
	Essentially none	Slight	Moderate	Severe, complete	Total	
	Percent					
Prior to overseas shipment..	45.6	27.6	18.8	8.0	100.0	261
Overseas, not in combat, or following overseas non-combat assignment.....	45.6	26.9	18.8	8.8	100.1	160
In combat.....	48.3	24.8	19.1	7.8	100.0	230
Following combat.....	36.6	27.5	27.5	8.5	100.1	142
Total.....	44.8	26.6	20.4	8.2	100.0	793

Those who had been exposed to combat were studied for any relationship between disability at follow-up and the type, duration, and severity of combat, in the belief that those whose combat was more severe might show more residuals. The findings, however, are no more than slightly suggestive of a relationship. Navy veterans do show somewhat more disability than the Army veterans. For example, 27 percent of those who had ground combat and 27 percent of those with air combat (Army and Navy) were at least moderately disabled at follow-up in contrast to 43 percent of those who had had naval combat. The explanation for this difference is not known, although there is some suggestion that Navy cases had more psychiatric impairment at entry into service. The possibility was explored that Navy cases had to be sicker at breakdown but it was found that this was not the case.

There is a slight suggestion that those with longer combat are somewhat sicker at follow-up than those with briefer combat but the findings are not statistically reliable in that the differences are of a magnitude which chance



alone might often produce in a sample of this size. Among those with ground combat, who make up the largest segment of the combat group, 23 percent with less than 44 combat days, 27 percent with 45 to 104 days, and 34 percent with 105 days or more, were judged to have at least moderate psychiatric disability at follow-up. Sea combat was scaled in terms of the number of battles engaged in. Men with no disability at follow-up had engaged in 2.4 battles, those with slight disability in 2.4 battles, and those with at least moderate disability in 3.4 battles. Here again the findings suggest that the more prolonged the combat, the greater the subsequent disability, but they are not statistically significant. Severity of combat (rated by the examiners on the basis of the man's history of his war experience) bears no relation to disability. On the whole, then, the particular military stress which was associated with breakdown would appear to be of no prognostic significance for disability 5 years later.

It was only when the data were analyzed separately for each preservice personality group than any evidence was uncovered that military stress was reliably associated with psychiatric disability at follow-up. As figure 5 shows, in every group except those with a normal preservice personality the men who broke down in or after combat were somewhat more disabled at follow-up, and on an overall statistical basis the differences are quite significant. Unfortunately, the cases are not numerous enough to permit stable estimates to be made, but the proportion of men with at least moderate disability is higher, in men with combat experience, by the following relative amounts:

	<i>Percent</i>
Normal . . . . .	None
Neurotic traits . . . . .	63
Suggestive neurosis . . . . .	54
Overt neurosis . . . . .	78
Pathological personality . . . . .	8

As measured by the proportion of men with at least moderate disability, then, it appears that the man with neurotic difficulty prior to service is more likely to be adversely affected by combat than the previously normal individual or the one with a pathological personality.

The disability status of the combat and noncombat groups is thus seen to be the product of opposing tendencies: The combat cases are more often drawn from the more favored personality groups, but combat evidently has a special deteriorating effect for those with neurotic tendencies or illness.

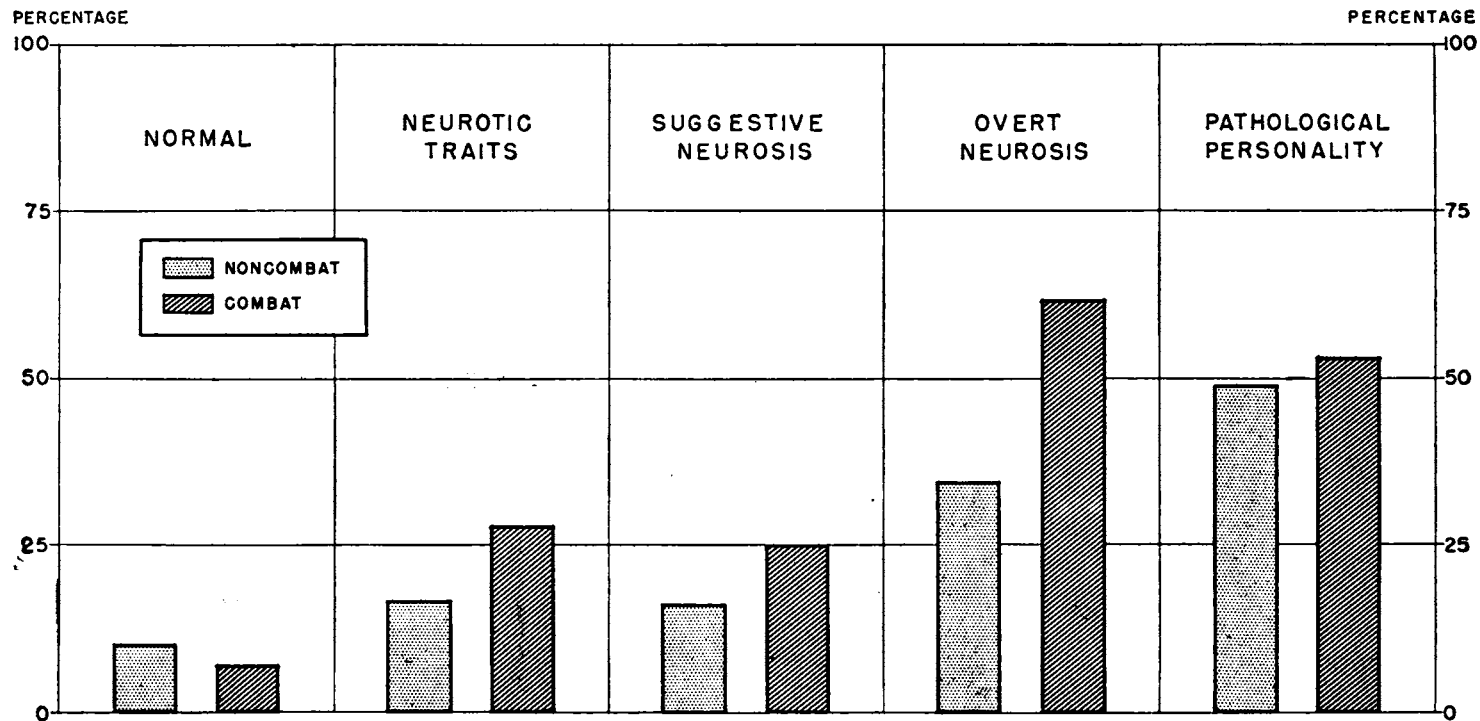
The relationship between disability at follow-up and preservice personality found here is explored further in a later section (pp. 153-157).

### **Severity of Illness and Treatment in the Service**

Disability at follow-up is clearly related to the severity of the psychoneurotic illness in the service. Those whose illness in the service was more severe are more apt to be disabled at follow-up, although from a clinical standpoint the relationship is not as intimate as might be expected. For example, a man whose illness in service was mild has a 50 percent chance

FIGURE 5

*Combat and Noncombat Cases Compared as to Percentage With at Least Moderate Disability at Follow-up by Preservice Personality*



of having no disability and a 20 percent chance of being moderately or severely disabled at follow-up. A man whose illness in the service was severe has a 34 percent chance of having no disability and a 39 percent chance of being moderately or severely disabled now (table 128).

Apparently neither the fact of psychiatric treatment nor its variety is reliably related to follow-up condition. However, those who responded to treatment in the service, whether it consisted of mere hospitalization or of individual psychotherapy, had a distinctly better prognosis. Those who showed no response to treatment have several times the proportion with severe disability at follow-up exhibited by those who responded well (table 129).

### Type of Disposition and Length of Service

Men who received medical discharges were apt to be sicker on follow-up than those who remained in the service and were later discharged administratively. For example, among men who received a disability dis-

**TABLE 128**

*Psychiatric Disability at Follow-up and Severity of Illness in Service*

Severity of illness	Psychiatric disability at follow-up					Number of men
	Essentially none	Slight	Moderate	Severe and complete	Total	
	Percent					
Mild.....	49.0	31.6	15.0	4.4	100.0	206
Moderate.....	42.5	26.0	23.3	8.2	100.0	292
Severe.....	33.7	27.2	26.7	12.4	100.0	202
Total.....	41.9	28.0	21.9	8.3	100.1	700

**TABLE 129**

*Psychiatric Disability at Follow-up and Response to Treatment in Service*

Response to treatment	Psychiatric disability at follow-up					Number of men
	Essentially none	Slight	Moderate	Severe and complete	Total	
	Percent					
None.....	32.4	26.1	29.0	12.4	99.9	241
Slight.....	33.5	35.1	23.2	8.1	99.9	185
More than slight.....	65.8	20.6	11.1	2.5	100.0	199
Total.....	43.4	27.0	21.6	8.0	100.0	625

charge without ever returning to duty, 35 percent were at least moderately disabled on follow-up in contrast to 16 percent of those who were returned to duty without reassignment (table 130). This difference is in line with expectation, for presumably those who were discharged for disability were sicker than those who were returned to duty, and in addition, they probably did not respond as well to treatment. This will be explored further in a later chapter.

**TABLE 130**

*Psychiatric Disability at Follow-up and Pattern of Disposition Following All Psychiatric Admissions in Service*

Pattern of disposition	Psychiatric disability at follow-up					Number of men
	Essentially none	Slight	Moderate	Severe and complete	Total	
	Percent					
Duty only						
Never reassigned . . . . .	61.5	22.1	9.8	6.6	100.0	122
Never evacuated . . . . .	54.7	27.7	15.5	2.0	99.9	148
Evacuated . . . . .	54.5	18.2	18.2	9.1	100.0	33
Duty with later CDD or IS <sup>1</sup> . . . . .	37.5	27.5	25.6	9.4	100.0	160
Immediate CDD or IS <sup>1</sup> . . . . .	37.0	27.8	24.5	10.7	100.0	335
Total . . . . .	44.9	26.4	20.6	8.1	100.0	798

<sup>1</sup> Includes small number of administrative discharges for psychiatric condition. CDD and IS are the respective Army and Navy abbreviations for disability discharge.

Disability at follow-up is not related to total length of service or to length of service prior to breakdown. It does, however, bear some inverse relationship to length of service overseas. Those with no disability had an average of 11.3 months overseas in contrast to 7.4 months for men with severe or total disability. This difference suggests that disability at follow-up is much less the resultant of military stress than of the personality structure and motivation of the individual entering the service.

How sick a man was at the time of discharge from the service is strongly correlated with condition on follow-up. This does not mean, however, that his health tended to remain static. Approximately half of those who had severe neuroses at separation had at least moderate disability when re-examined, whereas none of the small group who were judged to be in normal health at separation were in the significantly disabled group on follow-up (table 131).

**IN RELATION TO PRESERVICE HISTORY**

The preservice history covers not only the individual's personality and adjustment prior to entering the service, but also a variety of sociological

facts about the individual, his family, and their interpersonal relationships. In this section the relationship between disability at follow-up and preservice history will be explored. The analysis is directed toward such questions as: What role does an individual's preservice personality and adjustment play in determining his condition at follow-up? Are those who were previously neurotic apt to be more disabled at follow-up than those who were emotionally well off? Do those with "positive" family histories show more disability at follow-up than those with "negative" family histories? To what extent do economic status, intelligence, education, religion, etc., contribute to the ultimate condition of a man who broke down in service?

**TABLE 131**

*Psychiatric Disability at Follow-up and Psychiatric Status at Separation*

Psychiatric status at separation	Psychiatric disability at follow-up					Number of men
	Essentially none	Slight	Moderate	Severe and complete	Total	
	Percent					
Normal.....	90.6	9.4	0	0	100.0	53
Neurotic symptoms short of neurosis.....	84.6	9.2	6.2	0	100.0	65
Neurosis, not severe.....	40.6	32.3	22.7	4.4	100.0	409
Neurosis, severe.....	20.9	28.1	27.3	23.7	100.0	139
Other.....	40.3	18.1	25.0	16.7	100.1	72
Total.....	44.3	26.4	20.7	8.6	100.0	738

**Family History**

When the psychiatric history of the parents was grouped as in table 132 a quite reliable, though not very strong, association was found between parental history and disability at follow-up. When both parents have a known negative history of psychiatric difficulty, disability at follow-up is least. So many factors enter into the determination of an individual's emotional state by the time he is an adult that it is not surprising that a factor like gross family history is of relatively minor importance. However, in those instances where clear-cut difficulty existed in one parent and some difficulty in the other, the chances were over twice the average that such an individual would be at least moderately disabled at follow-up, entirely apart from all other contributing factors such as his own preservice personality, his experience in the Army, and the treatment he received. Various gradations of involvement in the parents between the two extremes of completely negative and strongly positive seemed to contribute little or nothing in themselves to the man's ultimate condition. Nor did it seem to

matter, probably because of deficiencies in the data, which reflected only obvious and not latent illness, which parent was ill.

The possibility was explored that death, divorce, or other parental withdrawal prior to the end of adolescence might have contributed to the presence of emotional difficulty in an individual and in turn played some role in determining the disability found at follow-up, but no relationship was found. For example, there were about 175 cases who had lost, through death, at least one parent before the end of adolescence. The percentage with significant disability at follow-up was practically the same in this group as in others with no parental loss or withdrawal. The analysis was repeated, with the same results, on the basis of parental withdrawal prior to age eight.

**TABLE 132**

*Psychiatric Disability at Follow-up and Parental Psychiatric History*

Parental psychiatric history	Psychiatric disability at follow-up				Number of men
	Essentially none	Slight	At least moderate	Total	
	Percent				
Both negative.....	54.0	26.8	19.1	99.9	235
Only one negative.....	48.7	23.7	27.6	100.0	228
Both at least suggestive, neither positive.....	35.0	34.2	30.8	100.0	117
Either positive, other not negative...	21.1	18.4	60.5	100.0	38
Total.....	46.4	26.5	27.0	99.9	618

On the other hand, disability at follow-up was found to be somewhat related to *parental conflict* (table 133). Thirty-nine percent of the men whose histories revealed overt parental conflict showed at least moderate disability at follow-up in contrast to 25 percent of those for whom a harmonious relationship, or no conflict, was reported. The man with the "positive" history had more than twice the chance of being severely or completely disabled which was observed for the man with a negative history.

The degree to which *religion* played a role in the individual's family life and the *economic status* of his parental family seemed to bear no relationship to his ultimate disability.

For each man the family history was summarized and then characterized as either good, negative, suggestive, positive, or strongly positive. A significant, positive relationship was found with disability at follow-up (table 134). The degree of relationship approximates that for parental conflict.

### Individual Preservice Characteristics

When the *intelligence* of each subject was correlated with disability it was found that a greater proportion of those below average in intelligence were more seriously disabled than of those who were of at least average intelligence (36 percent vs. 25 percent). Although the liability of low intelligence is by no means negligible it is still much less than that associated with a strongly positive history of psychiatric difficulty in the parents.

The most important single characteristic from the standpoint of ultimate disability is the *preservice personality* (table 135). Men who had overt neuroses prior to entering the service were about 5 times as apt to be significantly disabled, and those with personality disorders over 6 times as apt to be significantly disabled, as those who were previously well-inte-

**TABLE 133**

*Psychiatric Disability at Follow-up and History of Parental Conflict*

Parental conflict	Psychiatric disability at follow-up					Number of men
	Essentially none	Slight	Moderate	Severe and complete	Total	
	Percent					
Absent.....	50.8	23.9	19.1	6.2	100.0	486
Present.....	33.9	27.0	25.3	13.8	100.0	174
Total.....	46.4	24.7	20.8	8.2	100.1	660

**TABLE 134**

*Psychiatric Disability at Follow-up and Summary of Psychiatric Signs in Family History*

Summary evaluation of psychiatric signs in family history	Psychiatric disability at follow-up					Number of men
	Essentially none	Slight	Moderate	Severe and complete	Total	
	Percent					
Not more than suggestive...	58.9	17.7	16.1	7.3	100.0	124
Positive.....	46.1	26.5	23.3	4.1	100.0	317
Strongly positive.....	37.8	28.5	20.4	13.3	100.0	323
Total.....	44.6	25.9	20.9	8.5	99.9	764

**TABLE 135**

*Psychiatric Disability at Follow-up and Preservice Personality*

Preservice personality	Psychiatric disability at follow-up					Number of men
	Essentially none	Slight	Moderate	Severe and complete	Total	
	Percent					
Well integrated.....	72.8	19.3	5.3	2.6	100.0	114
Neurotic traits.....	50.2	26.8	18.0	5.0	100.0	261
Suggestive neurosis.....	50.5	31.2	10.8	7.5	100.0	93
Overt neurosis.....	25.0	35.9	27.2	11.9	100.0	92
Pathological personality....	26.4	23.0	32.4	18.2	100.0	148
<b>Total.....</b>	<b>45.6</b>	<b>26.6</b>	<b>19.2</b>	<b>8.6</b>	<b>100.0</b>	<b>708</b>

grated. Conversely, those who were normal prior to service were roughly three times as likely to have no appreciable disability at follow-up as those with overt neuroses or pathological personalities.

Only 8 percent of the "normal" group were at least moderately disabled at follow-up as compared with 39 percent of the overtly neurotic and 51 percent of the "pathological personality" groups. It is of considerable clinical interest that 44 percent of the men with severe or total disability, and 38 percent of those with at least moderate disability, are drawn from the 20 percent of the sample who had manifest personality disorders prior to entering the service.

It will be recalled from chapter II that each man was evaluated as to any impairment in his overall functioning at the time of entry into service and attributable to emotional difficulties. When men were grouped as to both preservice personality and psychiatric impairment, an even better correlation was found with disability at follow-up. It can be seen in table 136 that 67 percent of those with pathological personalities associated with appreciable impairment, and 58 percent of those with overt neuroses associated with appreciable impairment prior to service, had at least moderate disability at follow-up. Introduction of the preservice impairment as a factor makes it possible to distinguish two distinct types in those who had suggestive neuroses. Those who showed no impairment look like the normals, whereas those with mild impairment are similar to the men with neurotic traits and also to the men with mild but overt neuroses. In fact, the entire sample appears to divide itself into three prognostic groups if condition at follow-up is used as the criterion:

1. Those who were well integrated and those who had suggestive neuroses without impairment.



2. Those with neurotic traits and having no or at most mild impairment.  
Those with suggestive neuroses and mild impairment.  
Those with overt neuroses with no more than mild impairment.  
Those with pathological personalities but no impairment.
3. Those with overt neuroses with more than mild impairment and those with pathological personalities with any degree of impairment.

Not only is condition at follow-up intimately related to preservice personality, but so is the entire pattern of the illness from time of breakdown. It has already been shown that men with apparently normal preservice personalities less often broke down early and more often only after prolonged combat.

**TABLE 136**

*Percentage With at Least Moderate Disability at Follow-up, by Preservice Personality and Impairment*

Preservice personality	Preservice impairment			
	None	Questionable or mild	Moderate or severe	Total
Well integrated . . . . .	7.9	( <sup>1</sup> )	( <sup>1</sup> )	7.9
Neurotic traits . . . . .	20.5	29.6	( <sup>1</sup> )	23.0
Suggestive neurosis . . . . .	8.0	22.1	( <sup>1</sup> )	18.3
Overt neurosis . . . . .		<sup>2</sup> 29.5	58.1	39.1
Pathological personality . . . . .	35.8	53.6	66.7	50.7
Total . . . . .	18.1	32.8	62.9	27.8

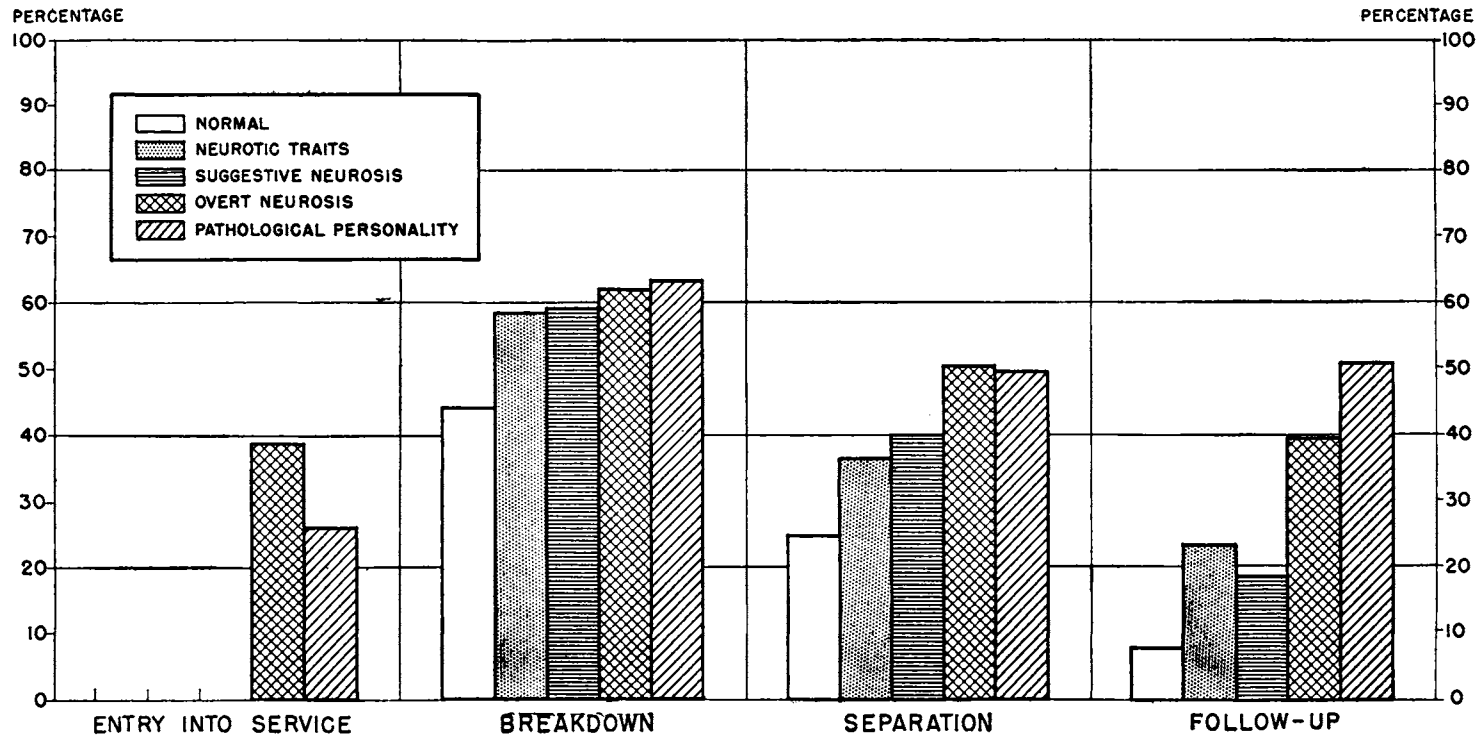
<sup>1</sup> This combination of preservice personality and impairment was inadmissible. See p. 83.

<sup>2</sup> Only cases with mild impairment are represented by this figure.

The course of illness from entry into service to follow-up can be roughly plotted on the basis of clinical assessments of the degree of illness present on entry into service, at breakdown, at separation from service, and at follow-up. The percentage of men with at least moderate disability can be used as an index of the severity of illness. Figure 6 gives this information for each preservice personality group. There is a suggestion that previously normal men are not as sick when they break down as those who had some degree of psychoneurosis before. Breakdown may represent a certain degree of change from the pre-existing equilibrium rather than a common low point necessarily reached by all who break down. The recovery rate of those who were previously normal appears to be faster, and at follow-up their health has very nearly returned to its preservice level, according to this index, which ignores slight disability. For men who had an overt neurosis prior to service, the index does not change very much over the period shown. This is illustrated in figure 7 which is a partly schematic representation of the ebb and flow of disability in two of the personality

FIGURE 6

*Percentage of Cases With at Least Moderate Disability at Various Points in Military Career and at Follow-up by Preservice Personality*



groups. It is probable that improvement is most rapid in the first 6 months after breakdown and that after 2 years disability is relatively fixed. Too few men in the follow-up sample received intensive treatment to permit a study of its effect.

In summary, then, where a man first broke down contains very little information about his chance of being disabled at follow-up, but his emotional health at entry tells a great deal. When the latter is taken as the criterion of predisposition, military service as a whole seems to produce the changes in the percentage of men with at least moderate disability which are shown in table 137.

**TABLE 137**

*Change in Disability From Entry to Follow-up, by Preservice Personality Pattern*

Preservice personality	Percentage with at least moderate disability	
	At entry	At follow-up
Normal at entry . . . . .	0	8
Neurotic traits at entry . . . . .	0	23
Suggestive neurosis at entry . . . . .	0	18
Overt neurosis at entry . . . . .	39	39
Pathological personality at entry . . . . .	27	51

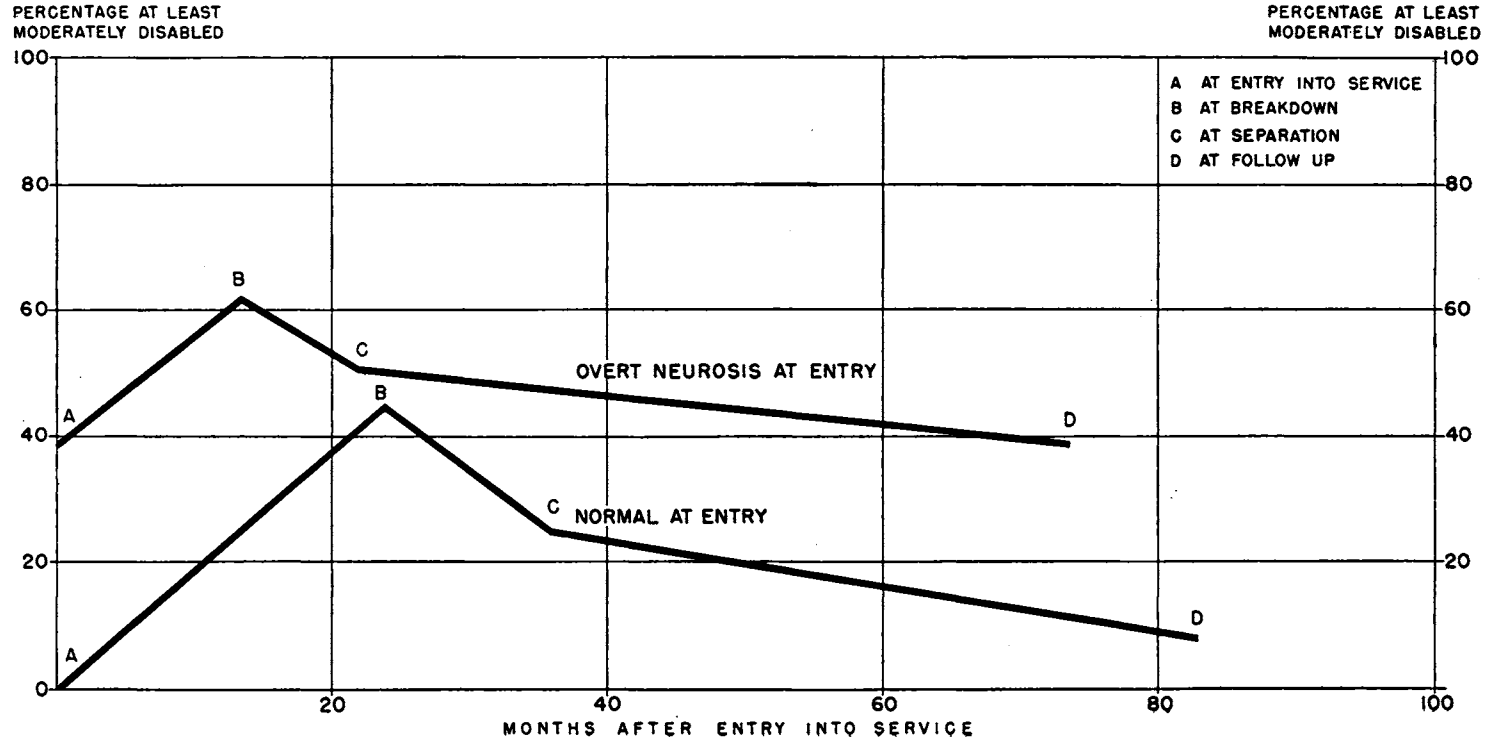
*Preservice adjustment* (a summary of adjustment in various areas of activity) was found to be significantly related to disability at follow-up, as may be seen in table 138. The chance of having more than mild disability was 3.5 times as great in those who had some clear-cut maladjustment as it was in those whose adjustment prior to service was adequate in all areas considered. There is also a suggestion of a relationship between *civilian occupation* before service and disability at follow-up. Students were somewhat more, and laborers and service workers somewhat less, likely to be free of any disability at follow-up. For students the percentage entirely free of disability was 60 and for laborers and service workers it was 33, in contrast to 45 percent for the entire clinical sample. Conversely, 14 percent of the students and 35 percent of the laborers and service workers showed at least moderate disability in contrast to the average of 28 percent for the entire sample.

A somewhat similar relationship was found with the level of *education* prior to entry into the service. In general, those with less education show more disability. Only 35 percent of those with less than 8 completed grades were free of disability at follow-up in contrast to 50 percent of those who had at least completed high school. Only 19 percent of the better educated had more than mild disability at follow-up in contrast to 33 percent of those who had not gone beyond elementary school.

Religion, marital status, and age at entry were found to have no clear-cut relationship to disability.

FIGURE 7

*Changing Level of Illness Throughout Military Service and Subsequently: Two Preservice Personality Groups (Schematic)*



**TABLE 138**

*Psychiatric Disability at Follow-up and Preservice Adjustment Status*

Preservice adjustment status	Psychiatric disability at follow-up					Number of men
	Essentially none	Slight	Moderate	Severe and complete	Total	
	Percent					
Adequate in all areas . . . . .	64.5	24.8	8.9	1.8	100.0	169
Questionable in 1 or 2 areas, none impaired . . . . .	48.8	25.0	22.6	3.6	100.0	168
Questionable in 3 or more, or impaired in 1 or more . . . . .	33.1	28.2	25.1	13.6	100.0	411
Total . . . . .	43.7	26.7	20.9	8.7	100.0	748

**FACTORS PREDICTIVE OF DISABILITY AT FOLLOW-UP**

The foregoing analysis of disability at follow-up in relation to individual elements of the preservice and military periods is replete with suggestions that it may be possible to approach the problem of prognosis as a statistical problem in prediction. The material is at best suggestive since this study is retrospective; moreover, since both the disability assessments at follow-up and the observations regarding each predictive factor were made by the same psychiatric examiner at the same time, it remains possible that examiners may have probed more deeply into the history of men who seemed disabled at follow-up than in those who had completely recovered from their acute episodes. It is believed that adequate precautions have been taken to guard against such contamination of the data, but these possibilities remain and the conclusions reached must therefore be regarded as tentative until such time as they may be verified by a study in which the observations which generate the predictions are made independently of the event to be predicted.

Moderately strong relationships were noted, in the preceding sections, between disability at follow-up and individual predictive factors, but no single one was sufficiently powerful to be satisfying. Accordingly, an attempt was made to synthesize the information contained in several variables by the method of discriminant analysis.<sup>40 41</sup> Twelve variables were selected, the criteria for choice being that each appeared to be correlated with disability at follow-up and could be *ordered*, i. e., the various possible

<sup>40</sup> Fisher, R. A.: The use of multiple measurements in taxonomic problems. *Ann. Eugenics* 7:179-188, 1936.

<sup>41</sup> Fisher, R. A.: The statistical utilization of multiple measurements. *Ann. Eugenics* 8:376-386, 1938.

alternatives for a variable could be arranged *à priori* in a single sequence running from “most abnormal” in some sense on one end to “least abnormal” at the other. Each variable was first quantified by the method already described in chapter II (pp.98–99) and then combined into a single numerical score by Fisher’s method. The twelve variables and their correlation ratios with disability at follow-up are as follows:

Preservice psychiatric impairment . . . . .	.36
Emotional health on separation from service . . . . .	.31
Preservice personality . . . . .	.30
Preservice adjustment . . . . .	.28
Response to psychiatric treatment in service . . . . .	.27
Severity of first psychoneurotic episode in service . . . . .	.23
Type of disposition . . . . .	.22
Psychiatric history of mother . . . . .	.19
Location of veteran at breakdown . . . . .	.16
Psychiatric signs in the family history . . . . .	.15
Intelligence . . . . .	.13
Parental conflict . . . . .	.10

As might be expected, many of the 12 variables are correlated with each other. In particular, preservice impairment, personality, and adjustment form a little constellation of highly associated variables, as do emotional health at separation, response to treatment in service, and type of disposition. If each of the two “constellations” is represented by that variable which is most closely related to disability at follow-up, and to them is added the remaining variable which appears best able to predict disability, there results the following set:

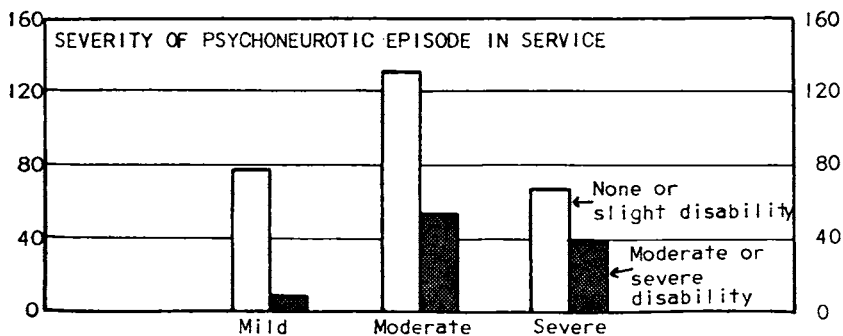
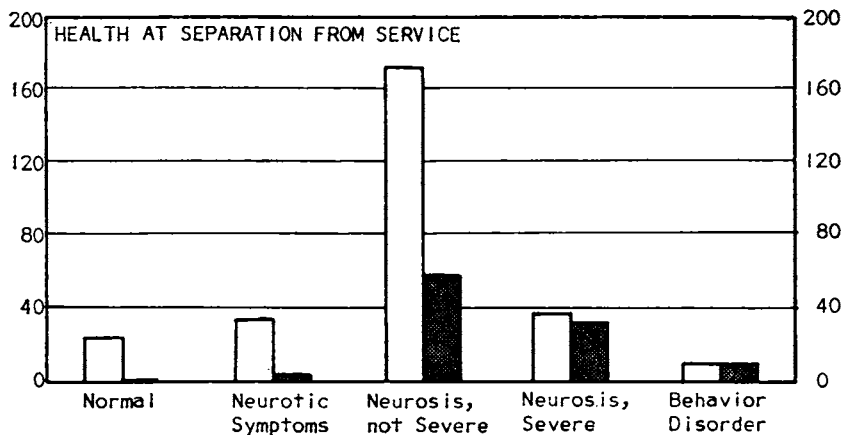
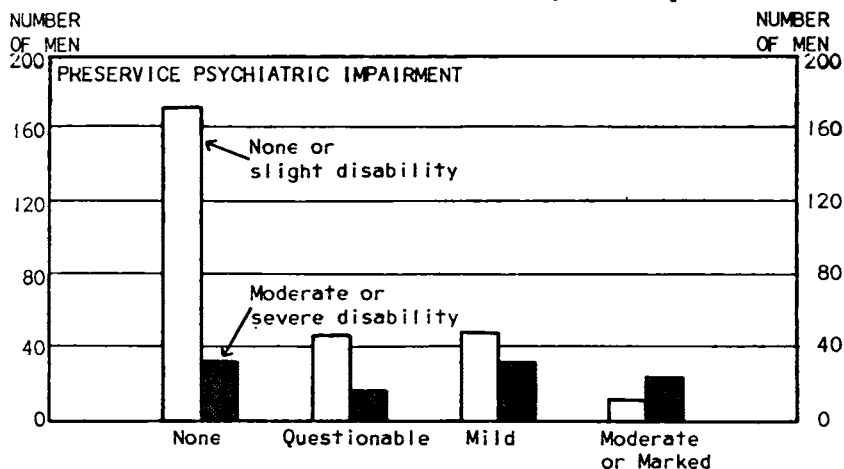
- Preservice psychiatric impairment.
- Emotional health on separation from service.
- Severity of first psychoneurotic episode in service.

This smaller set of three variables contains, it will be noticed, one which relates to the preservice situation, one which relates to the acute episode in service, and one which reflects any gains made between breakdown and separation from service. These 3 variables contain much of the information in the entire group of 12, and the improvement in prediction obtained by adding the second and third variables to preservice psychiatric impairment (the single best predictor) about equals the improvement obtained by adjoining the remaining 9 variables to the 3.

Figure 8 exhibits graphically the relation of each of the selected three variables to disability at follow-up. To permit comparisons with the discriminant based on 12 variables, attention was confined to the 378 individuals for whom information was available for every one of the 12 variables. It will be observed that no one of these is outstandingly good, and that they share a common characteristic: one can more reliably choose men who will *not* be disabled at follow-up than men who will be disabled. Thus, of men who had no preservice psychiatric impairment, numbering 203 in all, only 32, or 16 percent, were more than slightly disabled at follow-up. None of the 24 men who enjoyed normal emotional health at separation, and only

**FIGURE 8**

*Individual Predictive Variables and Disability at Follow-up*



3 of the 36 men who had neurotic symptoms were more than slightly disabled at follow-up; in all, of the 60 men in relatively good emotional health at separation only 3, or 5 percent, were more than slightly disabled at follow-up. Finally, of 85 men whose psychoneurotic episode in service was characterized as mild only 8, or 9 percent, were at least moderately disabled at follow-up. On the other hand, of the 34 men with moderate or marked disability before service 11, or 32 percent, have at most slight disability at follow-up. In contrast to preservice impairment, then, neither emotional health at separation nor severity of the psychoneurotic episode will enable a group to be selected which contains a majority of men who were at least moderately disabled at follow-up.

Figure 9 shows the improvement in prediction which results from using jointly the three variables of figure 8. The quantity  $D_3$  is the discriminant function employing these three variables. The discriminant based on all twelve of the previously named observations is called  $D_{12}$ , and it is somewhat better than  $D_3$ . The particular numerical values for these discriminants are rather arbitrary, and possess no intrinsic meaning except as some individuals have larger or smaller scores than others. It will be observed that  $D_3$  performs much better than any of its constituent variables, being able to segregate, at the "normal" end of the scale 30 men, none of whom exhibited much disability at follow-up, and an adjacent group of 58 men of whom only 6, or 10 percent, were more than slightly disabled. The 2 groups combined contain 88 men, and the 6 disabled members constitute only 7 percent. At the other end of the scale  $D_3$  is able to segregate 20 cases of whom 15, or 75 percent, are at least moderately disabled; the 2 most extreme groups jointly contain 64 men of whom 40, or 63 percent, are moderately or severely disabled. This is much better performance than that of any of the constituent variables.

The discriminant  $D_{12}$  improves considerably on  $D_3$ . Firstly, at the "normal" end of the scale it chooses 60 men none of whom is more than slightly disabled at follow-up; the first 3 groups combined contain 110 men, with 4 disabled members who constitute less than 4 percent. At the other end of the scale,  $D_{12}$  does what no other of these predictors succeeds in accomplishing: it sorts out a set of men, only 7 to be sure, *all* of whom are at least moderately disabled at follow-up and the 2 extreme groups combined contain 36 men of whom 27, or 75 percent, are at least moderately disabled.

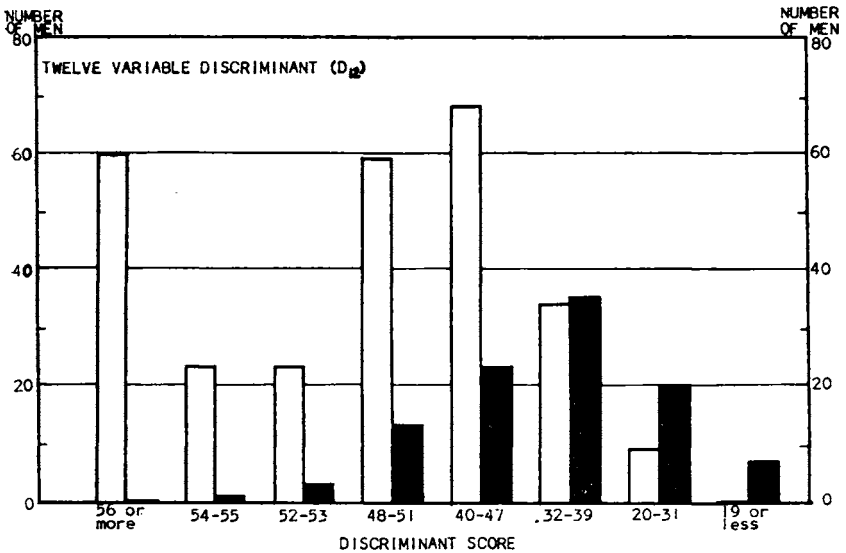
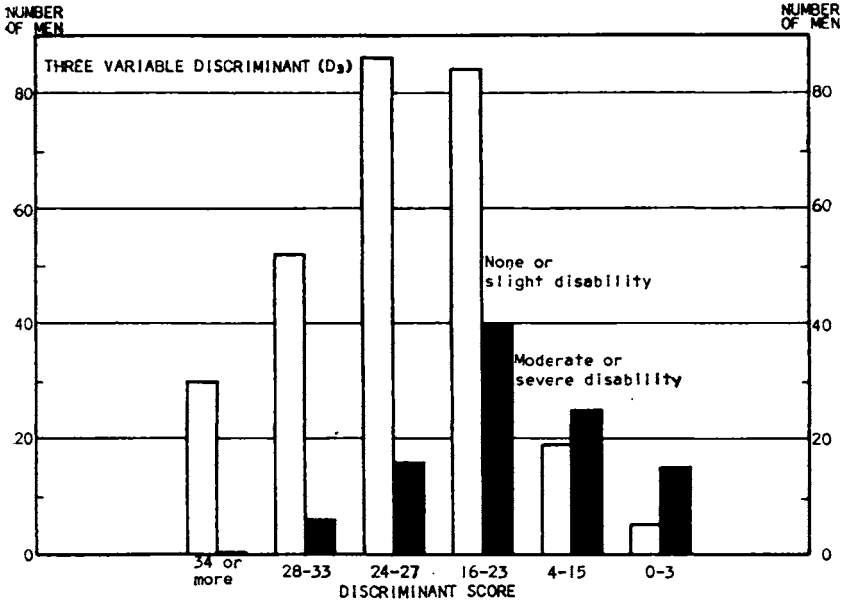
Another way of assessing the relative value of these predictors is by calculation of the correlation ratio between disability at follow-up and the predictor.

<i>Predictor</i>	<i>Correlation ratio with disability at follow-up</i>
Preservice psychiatric impairment. . . . .	. 36
Emotional health at separation. . . . .	. 30
Severity of psychoneurotic episode. . . . .	. 23
$D_3$ . . . . .	. 43
$D_{12}$ . . . . .	. 51



**FIGURE 9**

*Discriminant Scores and Disability at Follow-up*



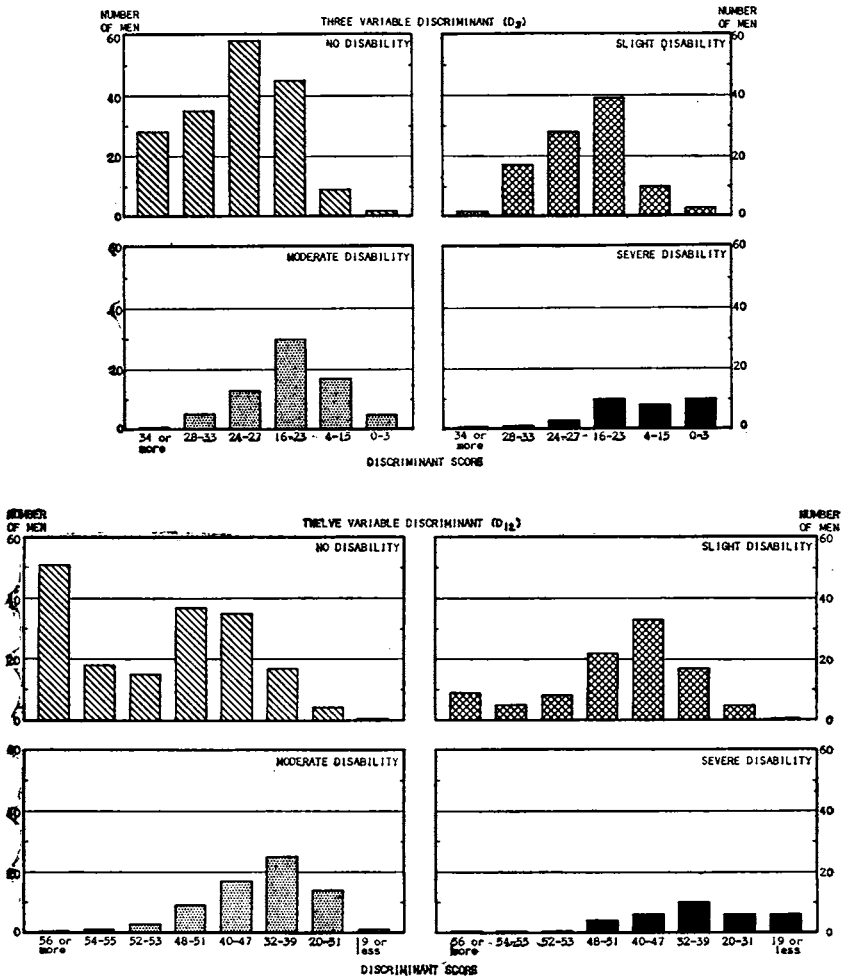
It will be seen that the relative superiority of  $D_3$  over preservice impairment is about equal in a rough sense to the relative superiority of  $D_{12}$  over  $D_3$ . It is plain that the law of diminishing returns is beginning to operate quite rapidly, inasmuch as  $D_3$  adds but two variables to preservice impairment while  $D_{12}$  adds *nine* variables to  $D_3$ .

That all predictors are much more successful in pointing out men who will do well than they are in finding men who will not do well suggests that men who might be expected to do well almost always do recover, while men who might be expected to do poorly sometimes confound expectation by doing well.

Thus far the discriminants have been discussed as to their ability to distinguish between men with little or no disability and men with moderate or severe disability. One would expect that the discriminants should also be able to distinguish, on some level, between men with no disability and those with little disability, and between those whose disability was moderate and those in whom it was severe. Figure 10 shows that they are, indeed, capable of making these distinctions. On the basis of  $D_3$ , for example, men

**FIGURE 10**

*Discriminant Scores and Degree of Disability at Follow-up*



whose score is 34 or more are very unlikely to have any disability at all, while those whose scores are in the range 0-3 are not only very likely to be disabled, but indeed severely disabled. In this figure, the relative heights of the various bars are proportional to the probabilities that individuals having the specified scores will show the given degrees of disability at follow-up.

## SUMMARY

The meaning of psychiatric disability as it is used here is pointed up in striking fashion by the fact that 78 percent of the men considered to have no disability nevertheless reported psychiatric or psychosomatic symptoms of one kind or another, and by the fact that very few of them, usually under 10 percent, exhibited maladjustments in any particular area, although 97 percent of the men with at least moderate disability had some maladjustment and 71 percent had an occupational maladjustment. VA compensation for psychiatric disability is seen to be only weakly correlated with examiners' evaluations of disability in this study. The discrepancy is especially marked at the low end of the disability scale, 27 percent of the men rated by study examiners as not disabled having VA ratings of 10 percent or more. A recheck made in 1953 showed that the situation has improved since the follow-up examinations were made, the percentage compensated having fallen from 44 to 39 and the actual payments being only 60 percent of their earlier level. It is roughly estimated that annual payments on the order of 13 million dollars were made in 1953 to men whom the study examiners would rate as having essentially no disability.

Although treatment for psychiatric symptoms was more often sought during the interval from separation to follow-up by the more disabled, in the aggregate there was so little resort to intensive psychotherapy as to offer little hope that future disability will be appreciably lessened by treatment. There are many reasons for this: (1) Only 55 percent of the men with the greatest disability had sought treatment of any kind; (2) such treatment as they received was mainly symptomatic; (3) the men themselves underestimate their need for treatment; and (4) negative attitudes toward treatment are more common among the more disabled men.

Much of the general improvement in emotional health had already occurred when men were separated from service, but most men continued to improve after separation, and those who actually became worse made a heavy contribution to the group with the greatest disability at follow-up.

Both the examiner's diagnosis and his prognosis correlate quite highly with disability. The personality disorders contribute heavily to the group with at least moderate disability.

Little in the observations on stress seems informative until predisposition is taken into account, when it appears that, for a given preservice personality, the stress of combat does tend to contribute to disability at follow-up, and to do so somewhat in proportion to the extent of any pre-existing neurosis.

The severity of illness at the time of breakdown, and the response to treatment, but not the variety of treatment, also seem somewhat related to disability at follow-up, and in the way one would expect. Similarly, type of disposition from service and health at separation are rather closely correlated with disability at follow-up, despite the considerable improvement which subsequently occurred in most cases.

Several factors in the preservice history have some bearing upon disability at follow-up. Those for which the relationships are apparently real and noteworthy, but of little practical significance, include the following: psychiatric illness in parents, parental conflict, intelligence, occupation, and education. Preservice personality, psychiatric impairment, and preservice adjustment at entry into service, however, are very strongly related to disability at follow-up. Disability at follow-up is, however, somewhat greater than at entry, especially for those with little or no neurosis at entry.

Selected observations from the preservice and military periods were studied by the technique of discriminant analysis which showed that a number of variables could be combined into a moderately efficient predictor, although 3 were found to contain nearly as much information as 12. These three are preservice psychiatric impairment, severity of illness at time of breakdown, and emotional health at separation. It was found, however, that such discriminants were much better able to identify men who would fall at the low end of the disability scale at follow-up than men destined to manifest severe disability at follow-up.

## CHAPTER VI

### DIAGNOSIS AT FOLLOW-UP

Although the psychiatric diagnosis is highly correlated with disability, there are real differences between them and it was considered important to study the examiner's diagnosis in relation to other observations, as in the preceding chapter on disability. The psychoneuroses, it will be recalled, were scaled roughly as to severity, but unfortunately the personality and behavior disorders were not.

#### IN RELATION TO OTHER FOLLOW-UP OBSERVATIONS

##### **Symptoms**

Whereas 45 percent of the entire sample showed essentially no disability at follow-up, only 10 percent were totally free of symptoms. Nearly all of those who had no symptoms were considered not ill, the few exceptions being men with personality disorders, but approximately two-thirds of those who were not ill had one or more symptoms. This might appear to be a contradiction but such complaints as tenseness, irritability, restlessness, or insomnia, were not considered sufficient justification for a diagnosis of psychoneurosis. It was required that the complaint be sufficiently pronounced in degree or constancy to constitute a problem, for a high proportion of all people must have functional symptoms from time to time but may not be considered "psychoneurotic."

##### **Diagnosis and Overall Adjustments**

Fourteen percent of the men with no psychiatric diagnosis showed some evidence of impaired adjustment in at least one area, in contrast to 100 percent of those with severe neuroses (table 139). This relationship is not unlike that seen between disability and adjustment.

Severe psychoneurotic disorders (to some extent by definition) were almost always (93 percent) accompanied by occupational maladjustment. In contrast only 47 percent of the men with personality and behavior disorders were maladjusted in this respect. Three percent of those who were not ill showed a specific occupational adjustment in contrast to 8 percent of those with mild psychoneurotic disorders and 57 percent of those with moderate psychoneuroses. Moreover, any occupational maladjustment exhibited by men with severe neuroses was more apt to manifest itself at least in part as a limitation in the ability to work full time. The percentages of the maladjusted men whose ability to work was so limited are 46 for men with moderate neuroses, 50 for men with personality and behavior disorders, and 84 for men with severe neuroses.

**TABLE 139**

*Overall Adjustment Status and Psychiatric Diagnosis at Follow-up*

Psychiatric diagnosis at follow-up	Overall adjustment at follow-up				Number of men
	Satisfactory	Questionable	Impaired	Total	
	Percent				
Not ill.....	66.8	18.8	14.4	100.0	229
Psychoneurosis					
Mild.....	38.2	25.6	36.3	100.1	262
Moderate.....	3.1	8.1	88.8	100.0	161
Severe.....	0	0	100.0	100.0	47
Personality or behavior disorder..	2.1	15.8	82.1	100.0	95
Total.....	32.7	17.4	49.9	100.0	794

**Compensation**

To some extent men with psychiatric illness would not be compensated because of the legal requirement of service connection or service aggravation; that is, if an illness existed prior to service and was not aggravated by (or during) service it is not compensable. Sixteen percent of the men with a severe psychoneurosis at follow-up were drawing no compensation.

Nineteen percent of those whom study examiners gave no psychiatric diagnosis, not even a mild psychoneurosis, were drawing VA compensation on psychiatric grounds when examined. The evidence of the preceding chapter suggests men were being overcompensated by the VA. Amount of compensation is shown in table 140 in relation to psychiatric diagnosis. Although there is an undeniable association between VA compensation and severity of illness, it is by no means as close as one might expect.

**Treatment After Separation**

Sixteen percent of those who were not ill at follow-up, 38 percent of those with mild neuroses at follow-up, 52 percent of those with neuroses of moderate severity at follow-up, 57 percent of those with severe neuroses at follow-up, and 31 percent of those with personality or behavior disorders at follow-up had received treatment since separation. In general, as has been noted, treatment was apt to be symptomatic and at the hands of a non-psychiatrist, but any psychotherapy was more often given to the sicker men. Psychotherapy was received by 2 percent of those who were not ill at follow-up, 13 percent with mild neurosis, 26 percent with moderate neurosis, 34 percent with severe neurosis, and 16 percent with personality disorders at follow-up. For the most part, psychotherapy was brief and superficial, but it is encouraging that as many as one-third of the severe neurotics, either through their own efforts or at the suggestion of physicians, had sought psychotherapeutic help.

**TABLE 140**

*Psychiatric Diagnosis at Follow-up and Amount of VA Compensation, Men Compensated on Psychiatric Grounds Only*

Psychiatric diagnosis	Monthly compensation			Number of men
	Under \$30	\$30 or more	Total	
	Percent			
None.....	73.8	26.2	100.0	42
Psychoneurosis				
Slight.....	57.0	43.0	100.0	114
Moderate.....	39.1	60.9	100.0	87
Severe.....	35.3	64.7	100.0	34
Personality or behavior disorders.....	72.4	27.6	100.0	29

Sixteen percent of the men with severe neuroses had been treated in a VA hospital, and an additional 11 percent in a VA regional office or contract clinic. Thus it appears that those who were sickest not only had sought treatment, and psychotherapy, more often, but also were more apt to go to the VA for it. There remains, however, a very large group of men with varying degrees of illness who, according to the examiners and by their own opinions, were in need of treatment but were not getting it.

The examiner's opinion as to need for treatment is summarized in table 141. It reflects quite closely his estimate of the severity of the diagnosis. If one adds together, as a summary index of need, those in great need and those in considerable need, then the ranking is as follows:

	Examiner (Percent)	Patient (Percent)
Severe neurosis.....	91	62
Moderate neurosis.....	84	67
Personality disorders.....	44	36
Mild neurosis.....	33	50
No diagnosis.....	3	9

The examiners' opinions are in sharp contrast to those of the subjects themselves. Only 66 percent of the men with at least moderate neuroses thought they needed treatment, whereas the examiners considered that 86 percent were either in great need or would benefit considerably from treatment. For the other diagnoses the discrepancies are not so marked, and in fact those with a mild neurosis have an exaggerated notion of their treatment requirements, according to the examiners.

Corresponding to the lack of insight into their need for treatment is an increasingly negative attitude on the part of these men toward future treatment *if and when needed*. The diagnostic groups differ relatively little with respect to positive attitudes, but neutral attitudes tend to disappear in the groups with moderate and severe neuroses to such an extent that

**TABLE 141**

*Psychiatric Diagnosis at Follow-up and Examiner's Estimate of Need for Treatment*

Psychiatric diagnosis at follow-up	Need for treatment					Number of men
	None	Great	Considerable	Treatment desirable but not necessary	Total	
	Percent					
None.....	82.5	0.9	2.2	14.4	100.0	229
Psychoneurosis						
Mild.....	16.9	5.6	27.8	49.6	99.9	248
Moderate.....	3.4	36.2	47.7	12.8	100.1	149
Severe.....	6.5	65.2	26.1	2.2	100.0	46
Personality and behavior disorders.....	33.3	22.2	22.2	22.2	99.9	90

**TABLE 142**

*Psychiatric Diagnosis at Follow-up and Veteran's Attitude Toward Seeking Psychiatric Help*

Psychiatric diagnosis	Attitude				Number of men
	Positive	Neutral	Negative	Total	
	Percent				
None.....	48.2	38.0	13.9	100.1	166
Psychoneurosis					
Mild.....	49.8	23.7	26.6	100.1	207
Moderate.....	45.9	14.1	40.0	100.0	135
Severe.....	56.4	7.7	35.9	100.0	39
Personality or behavior disorders.....	39.0	31.2	29.9	100.1	77

nearly 40 percent of those with at least a moderate neurosis exhibit frankly negative attitudes. It is discouraging to find men in the greatest need for treatment exhibiting such resistance to the idea of it. Table 142 shows the details of the relationship.

**Prognosis**

The examiner's prognosis is shown in table 143 in relation to his diagnosis. Except for the personality and behavior disorders, a very mixed group, prognosis and diagnosis are very closely related. These prognoses have been made, it will be recalled, on the assumption that men will



receive no intensive treatment. But even with this qualification it is plain that those rated by the examiners as having a severe neurosis are quite unlikely to get well. For those whose neuroses were rated as moderate in severity the prognosis was more often guarded, but 39 percent were rated as poor. The personality and behavior disorders are quite similar, in their prognosis, to the moderate neuroses. An excellent prognosis was given only to those who were not ill or at most had a mild neurosis. This may be a reflection of the attitude of the psychiatrists that neuroses are chronic conditions which do not often spontaneously remit.

**TABLE 143**

*Psychiatric Diagnosis at Follow-up and Prognosis*

Prognosis	Psychiatric diagnosis at follow-up					Total
	Not ill	Psychoneurosis			Personality and behavior disorder	
		Mild	Moderate	Severe		
	Percent	Percent	Percent	Percent	Percent	Percent
Excellent.....	25.1	1.2	0	0	0	7.8
Excellent to good.....	10.1	1.6	0	0	0	3.5
Good.....	41.0	22.7	3.3	0	8.8	21.2
Good to guarded.....	14.5	33.6	4.6	0	11.0	17.6
Guarded.....	7.9	32.8	35.8	8.5	35.2	24.9
Guarded to poor.....	0.4	5.9	17.2	17.0	16.5	8.4
Poor.....	0.9	2.3	39.1	74.5	27.5	16.5
Hopeless.....	0	0	0	0	1.1	0.1
Total.....	99.9	100.1	100.0	100.0	100.1	100.0
Number of men.....	227	256	151	47	91	772

## IN RELATION TO MILITARY EXPERIENCE

### Location at Breakdown

Were it not for the contrary findings in regard to disability, it might be expected that men who first broke down in the Z/I under relatively little stress would more often have had chronic psychoneurotic disorders and therefore appear to be sicker at follow-up. No such clear-cut relationship was found (table 144).

A higher proportion of those with personality disorders at follow-up had first broken down before going overseas than of any other diagnostic group at follow-up. However, as a group the men who had no psychiatric illness at follow-up differ from those with some illness in that more of them broke down in combat and fewer broke down first only after combat. There is no

**TABLE 144**

*Psychiatric Diagnosis at Follow-up and Location at Breakdown*

Location at breakdown	Psychiatric diagnosis at follow-up						Number of men
	None	Neurosis			Personality disorder	Total	
		Mild	Moderate	Severe			
Percent							
Before overseas.....	29.4	31.6	16.2	4.8	18.0	100.0	272
In combat.....	34.2	32.1	21.4	6.4	6.0	100.1	234
Overseas, noncombat.....	27.8	37.7	16.0	5.6	13.0	100.1	162
After combat.....	20.1	36.0	28.8	7.2	7.9	100.0	139
Total.....	28.9	33.7	19.8	5.8	11.8	100.0	807

suggestion that prolonged combat is associated with more severe illness at follow-up. In relation to location at breakdown the percentage who had a moderate or severe neurosis at follow-up is as follows:

	<i>Percent</i>
Before going overseas.....	21
After overseas, noncombat service.....	22
In combat.....	28
After combat.....	36

The entire "after combat" group, regardless of diagnosis at follow-up, consists of the following components:

<i>Location at Breakdown</i>	<i>Percent</i>
Not in combat, but following a wound or other condition incurred in combat.....	14.4
Overseas, after combat, other.....	35.2
Z/I, after overseas combat.....	50.4
Total.....	100.0

There were 70 men who broke down in the Z/I after overseas combat and 37 percent of them had a moderate or severe neurosis at follow-up. Why this particular group is sicker on follow-up is not clear. It may be composed of men who more than others derived support from their buddies and out of a sense of pride or devotion suppressed or covered up their symptoms. Removed from the danger of combat and separated from their buddies, on their return to the Z/I their accumulated repressed anxieties and resentments broke through and overwhelmed them more than others whose facility for denial was not as great and who therefore broke down earlier but not as severely. It was often said that Marines did not break down as readily as soldiers, but when they did break down they were much sicker.

## Major Area of Stress

The severity of neurotic illness at follow-up seems to a great extent unrelated to the major area of stress. For example, the proportions of men for whom combat was the major area of stress are high and quite similar (table 145) for those with no illness or with a psychoneurosis of some degree. In men with personality disorders at follow-up, however, noncombat stresses were more often primary, especially interpersonal frustrations and civilian types of stress.

**TABLE 145**

*Psychiatric Diagnosis at Follow-up and Major Area of Stress Precipitating Breakdown*

Major area of stress	Psychiatric diagnosis at follow-up				
	None	Neurosis		Personality disorder	Total
		Mild	Moderate and severe		
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
None, civilian . . . . .	9.5	8.7	7.8	18.9	9.9
Inherent military . . . . .	8.1	9.5	6.3	10.0	8.3
Interpersonal frustrations . . . . .	10.9	12.9	9.3	24.4	12.7
Combat . . . . .	44.3	42.2	50.7	21.1	42.6
Environmental . . . . .	14.5	15.6	13.2	10.0	14.0
No single area . . . . .	12.7	11.0	12.7	15.6	12.5
<b>Total . . . . .</b>	100.0	99.9	100.0	100.0	100.0
Number of men . . . . .	221	263	205	90	779

## Specific Personality Characteristics Involved in Breakdown

From all of the medical records available and from the follow-up examination, it will be recalled (pp. 113-114), an attempt was made to discern any specific personality characteristics related to a given breakdown. For example, a man with exaggerated dependence may have broken down shortly after entering the Army as a result of separation from home, or a man with "acting out" tendencies may have broken down under regimentation and discipline. On follow-up the percentage found to be ill was slightly higher for such men than for those in whom no single personality characteristic played an obvious role in the breakdown. Men whose breakdown seemed related to their dependency or to the fact they were instinct-ridden seemed most apt to be ill at follow-up.

## Variety and Severity of Combat

Whether or not a man was ill, to any degree, at follow-up is unrelated to whether or not he was ever in combat. Thirty percent with combat experience and 28 percent with no combat experience were not ill at follow-up.

The more severely ill group, however, has a slightly higher percentage who were in combat. The difference is somewhat greater for those who were in naval combat than for those who were in ground combat. When those with experience in ground combat were studied for the possible relationship of prolonged combat to severity of illness at follow-up, only small, insignificant differences were found.

### Treatment in Service

When type of treatment was divided into three categories, (1) hospital routine, (2) rest and sedation, and (3) psychotherapy of any type or intensity, not even a suggestive relationship was found. To some extent this may be the result of more intensive treatment having been given to the sicker men.

**TABLE 146**

*Psychiatric Diagnosis at Follow-up and Pattern of Disposition Following All Psychiatric Admissions in Service*

Pattern of disposition	Psychiatric diagnosis at follow-up							Number of men
	None	Neurosis			Personality disorder	Other <sup>1</sup>	Total	
		Mild	Mod- erate	Se- vere				
Percent								
Duty only . . . . .	42.9	29.9	11.4	2.9	12.0	1.0	100.1	308
Immediate separation <sup>2</sup> . . . . .	17.9	36.6	23.5	7.5	11.7	2.8	100.0	358
Duty and then separation . . . . .	21.9	30.8	25.4	6.5	9.5	5.9	100.0	169
<b>Total . . . . .</b>	<b>27.9</b>	<b>32.9</b>	<b>19.4</b>	<b>5.6</b>	<b>11.4</b>	<b>2.8</b>	<b>100.0</b>	<b>835</b>

<sup>1</sup> Primarily psychotic reactions.

<sup>2</sup> On psychiatric grounds; includes a few Navy separations made through administrative rather than medical channels.

### Disposition

Quite marked is the relationship between disposition from medical care in the service and follow-up diagnosis, as may be seen from table 146. For example, of those men who were returned to duty after an admission for a psychiatric diagnosis, 43 percent had no psychiatric illness at follow-up, and 73 percent had no more than a mild neurosis. In contrast, among those who received a disability discharge in connection with their first admission for psychoneurosis only 18 percent had no psychiatric illness, 54 percent had no more than a mild neurosis, and 31 percent had a moderate or severe neurosis, at follow-up. Although these differences are quite

significant in the statistical sense, the clinical interest lies in the fact that the differences are not larger. That only 54 percent of those with a disability discharge had no more than a mild neurosis on follow-up is of more interest than the fact that this percentage is different from that of 73 percent for men returned to duty without ever having been separated on psychiatric grounds. The precise clinical significance of the 54 percent remains to be delineated: Either recovery is by no means limited to those whom the services returned to duty, or disability discharges were ordered for men who might better have been retained, or both. At follow-up there is no essential difference between those who were immediately discharged for disability and those who were returned to duty at least once and then discharged for disability. Similarly, among men whose only disposition was to duty, those who were reassigned to other duty or evacuated to the Z/I do not differ sensibly from those who returned to duty in the units from which they came.

### Quality of Later Duty

If a man returned to duty the quality of his subsequent performance is somewhat related to his chance of being ill at follow-up: those who required readmission for a psychiatric diagnosis were more often moderately or severely ill (38 percent) than those who continued to serve effectively (10 percent). In a middle group with apparently satisfactory service for 2 months or more after return to duty 23 percent were considered to have a moderate or severe neurosis at follow-up.

### Illness at Separation

Finally, the diagnostic groups at follow-up were compared as to degree of manifest illness at time of separation from service, and a close relationship found. None of the men who appeared to be in normal health at separation was found at follow-up to have a psychotic reaction or a moderate or severe neurosis. There were, however, a few with mild neuroses and a few with personality disorders. These may have been present on discharge but undetected. At the other extreme, 49 percent of the men with severe neuroses at separation had moderate or severe neuroses or psychotic reactions when seen at follow-up. If the personality disorders are omitted from consideration and the percentage with moderate or severe neurosis, or psychotic reaction, is taken as an index of illness at follow-up, then the separation groups vary as follows:

<i>Status at Separation</i>	<i>Percentage With at Least Moderate Neurosis at Follow-up</i>
Normal . . . . .	0.0
Neurotic symptoms only . . . . .	5.0
Neurosis, not severe . . . . .	31.6
Neurosis, severe . . . . .	53.1

In only 41 men was the separation diagnosis a personality disorder, and 68 percent of these were given the same diagnosis at follow-up. The bulk of the men with personality disorders at follow-up, however, were thought

to have a neurosis at discharge; apart from differences in diagnostic standards, which were minimized in this study because a single examiner reviewed the entire history of each individual, this discrepancy suggests that in many men with neuroses superimposed on personality disorders at discharge, the neurosis had improved in 5 years to the point where it no longer overshadowed the underlying personality disorder. Although still ill in some degree, then, these men may certainly be said to have improved since separation.

## **IN RELATION TO PRESERVICE HISTORY**

### **Psychiatric Illness in Immediate Family and Parental Withdrawal**

Many of the essential features of the preservice history, covering both the family history and the personal history of the individual, were correlated with the follow-up diagnosis. Table 147 provides the basic data on the relationship between the follow-up diagnosis and history of psychiatric illness in parents or siblings. Only 20 percent of those with no psychiatric illness at follow-up had a positive history in contrast to 32 percent of those with at least a moderate neurosis, and 36 percent with a personality disorder. Plainly, a positive family history is slightly prejudicial to follow-up status in this sense, but it is nevertheless of considerable importance that as many as 20 percent of those with no psychiatric illness at follow-up had positive evidence of psychiatric disease in one or more parents. The man with not even suggestive psychiatric disease in his immediate family had a 76 percent chance of a follow-up diagnosis of not more than a mild neurosis, and the man with positive evidence of psychiatric disease in his family had only a 54 percent chance. For the man with not more than suggestive evidence in a parent, or a sibling with a positive history, this figure is 62 percent. Fifteen men were regarded as having psychotic reactions at follow-up. Although significantly more were from families in which at least one parent had more than suggestive evidence of psychiatric disease, by no means did all have such a history. The observed ratios are 8/220 or 3.6 percent for the latter group and 7/599 or 1.2 percent for all others. Parental death, divorce, or other withdrawal prior to the end of adolescence was found to be unrelated to follow-up diagnosis.

### **Summary of Family History**

When the summary of the psychiatric history of the family (see table 72, p. 78) is correlated with follow-up diagnosis, certain differences are found which are not, on the whole, particularly impressive. Among men with no psychiatric illness at follow-up 23 percent had no more than "suggestive" signs in their family history, while among men with neuroses or personality disorders only 13 percent had so favorable a family history. Men with no more than suggestive family histories have a 40 percent chance of being free from psychiatric illness at follow-up; for men with positive histories the chance is 26 percent. This discrepancy is of approximately the same order as that discussed above for the history of psychiatric illness in parents and

**TABLE 147**

*Psychiatric Diagnosis at Follow-up and Psychiatric History of Parents and Siblings*

Family psychiatric history <sup>1</sup>	Psychiatric diagnosis at follow-up				
	None	Neurosis		Personality disorder	Total
		Mild	Moderate and severe		
	Percent	Percent	Percent	Percent	Percent
Negative . . . . .	31.8	22.5	15.3	11.5	22.1
Positive in sibling only, or not more than suggestive evidence in any parent, or history of one or more parents unknown . . . . .	47.7	52.4	52.6	52.1	51.0
More than suggestive evidence, in one or more parents, or a parent and sibling . . . . .	20.5	25.1	32.1	36.5	26.9
Total . . . . .	100.0	100.0	100.0	100.1	100.0
Number of men . . . . .	239	275	209	96	819

<sup>1</sup> The grouping was set up on the basis of the following definitions:

*Entirely negative*—All parental histories are known, and in none (parents or sibs) is there even suggestive evidence of an emotional or personality disorder.

*Suggestive only*—All parental histories are known and in none (parents or sibs) is there more than suggestive evidence of an emotional or personality disorder.

*Positive, siblings only*—More than suggestive evidence in at least one sibling, but not more than suggestive in any parent. Parents may have an unknown history.

*Positive, father only*—More than suggestive evidence in the father, not more than suggestive in mother or any sibling. Mother or siblings may have an unknown history.

*Positive, mother only*—More than suggestive history in the mother, but not more than suggestive evidence in the father or any sibling. History of father or siblings may be unknown.

*Positive, two or more*—Two or more, not both siblings, have more than suggestive evidence. Other may be unknown.

*Not more than suggestive, parental histories incomplete*—One or more parental histories unknown, and no member has more than suggestive evidence of emotional or personality disorder.

siblings, although the groups are far from identical. In other words, there are features of the family history apart from specific illness which have prognostic value as to follow-up status.

**Health at Entry**

The man's own statement to the follow-up examiner describing his health at entry into service is unrelated to follow-up diagnosis. The proportions describing their health at entry as "excellent," "fair," or "poor" were about the same in each diagnostic group.

## Intelligence

The diagnostic groups at follow-up differ somewhat as to the proportion rated as below average in intelligence. The percentage below average is 13 for those with no psychiatric illness, 17 for those with mild neurosis, 25 for those of moderate or severe neurosis, and 29 for those with personality disorders. Conversely, a man with average intelligence had a 34 percent chance of having a moderate or severe neurosis or a personality disorder (of any degree) at follow-up, in contrast to 50 percent for those with below average intelligence.

**TABLE 148**

*Psychiatric Diagnosis at Follow-up and Preservice Personality*

Preservice personality	Psychiatric diagnosis at follow-up				Total
	None	Neurosis		Personality disorder	
		Mild	Moderate and severe		
	Percent	Percent	Percent	Percent	Percent
Normal . . . . .	34.0	12.4	4.0	3.3	15.5
Neurotic traits only . . . . .	36.4	41.9	40.0	20.0	37.0
Suggestive neurosis . . . . .	13.4	17.5	13.7	2.2	13.4
Overt neurosis . . . . .	3.8	17.1	19.4	14.4	13.4
Personality or behavior disorder . . . . .	12.4	11.1	22.9	60.0	20.6
<b>Total . . . . .</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>99.9</b>	<b>99.9</b>
Number of men . . . . .	209	234	175	90	708

## Preservice Personality

Preservice personality is quite intimately related to follow-up diagnosis, as table 148 clearly shows. The composition of the group with personality disorders is of particular interest. There were 146 men in this group at entry, and an additional 562 were classified as normal or as having varying degrees of neurosis. At follow-up only 37 percent of the 146 men with personality disorders were still classified as such, although they made up 60 percent of the cases thus diagnosed at follow-up. The balance, 36 cases, are from the 562 who displayed no overt personality or behavior disorders at entry and who presumably developed them during or following their service; this is an incidence of only 6.4 percent. It is significant that 18 percent of the 146 men with a personality disorder at entry were thought to have no psychiatric illness at follow-up, and 45 percent to have a neurosis. In the latter group it may be presumed that the personality disorder had either been converted into or overlaid by a neurosis. It would



seem that in some instances (20 to 30 percent) pre-existing emotional immaturities and personality deviations were improved by military service, and in other instances, under stress of service, neurotic defenses were added. Inasmuch as the same criteria were used for the diagnoses at both periods and the judgments made by a single examiner or coder, it is unlikely that the changes in diagnosis are merely semantic. On the other hand, the study provides no data on the reliability of an individual diagnosis, and some part of the discrepancy presumably reflects error in the formulation of the diagnosis. The probability that men with no prior evidence of personality disorders will develop them is small, about 6 percent in this series. The development of such disorders is significantly more frequent among those who were thought to have overt neuroses at entry.

Only 4 percent of the men with moderate or severe neuroses at follow-up, and 12 percent of those with mild neuroses, appeared to have enjoyed entirely normal emotional health at entry. Thirty-four percent of those with no psychiatric illness at follow-up were entirely normal prior to service. The relationship between preservice personality and follow-up diagnosis is shown in table 149.

**TABLE 149**

*Preservice Personality Pattern and Psychiatric Diagnosis at Follow-up*

Preservice personality	Follow-up diagnosis	
	Percentage not ill	Percentage with moderate or severe neurosis
Normal.....	65	6
Neurotic traits.....	29	26
Suggestive neurosis.....	29	25
Overt neurosis.....	8	36
Personality disorder.....	18	27
Total.....	30	25

Here is a factor, then, which quite reliably predicts illness at follow-up: a previously normal individual is very unlikely to end up with a moderate or severe neurosis (6 percent), and the man with an overt neurosis at entry will almost certainly (92 percent) appear ill at follow-up.

### **Education and Other Factors**

Educational achievement varies slightly by follow-up diagnosis. Men with personality disorders do not differ from the rest of the sample, but otherwise men with more severe illness have less education. Those with no more than a grammar school education constitute 23 percent of the group with no psychiatric illness at follow-up, 29 percent of those with

mild neuroses, and 35 percent of those with personality disorders. There is no evidence, however, that superior educational attainment *per se* has any prognostic value; the relationship rests entirely on the poorer prognosis of men of inferior educational accomplishment.

*Religious faith* was found to have no evident relationship to follow-up diagnosis. Although it does not have the powerful effect of preservice personality, *preservice adjustment* (in all areas) is nevertheless intimately associated with follow-up diagnosis, as may be seen in table 150. The differences exhibited there have the additional meaning that the chance of no illness at follow-up is 45 percent for those with a satisfactory preservice adjustment, 33 percent for those of questionable adjustment, and 19 percent for those of impaired adjustment.

### Psychiatric Treatment

A history of psychiatric treatment before service, or of medical treatment for a psychiatric or psychosomatic disorder, seems unrelated to follow-up diagnosis. Offhand one might have expected that those who were previously so ill as to seek a physician's help would have shown a greater frequency or severity of illness at follow-up than others. Military service seems to be a great equalizer in this respect as it is in others.

**TABLE 150**

*Psychiatric Diagnosis at Follow-up and Preservice Adjustment Summary*

Preservice adjustment summary	Psychiatric diagnosis at follow-up				
	None	Neurosis		Personality disorder	Total
		Mild	Moderate and severe		
	Percent	Percent	Percent	Percent	Percent
Satisfactory .....	35.6	26.1	10.7	5.4	22.1
Questionable .....	26.9	24.5	23.3	7.5	22.8
Impaired .....	37.5	49.4	66.0	87.1	55.1
Total .....	100.0	100.0	100.0	100.0	100.0
Number of men .....	208	253	197	93	751

### SUMMARY

In general the examiner's diagnosis tells about the same story as his estimate of psychiatric disability, but there are important differences associated with the distinction between the neuroses and the personality and behavior disorders.

A complete absence of complaints on the part of the patient is almost always associated with the finding of no illness, but not vice versa. There is a fairly close correlation between severity of neurosis and maladjustment, but those with no psychiatric diagnosis were not considered entirely free of maladjustment at follow-up, for 14 percent had a maladjustment in one area or another. At the other extreme 93 percent of the severely neurotic exhibited an occupational maladjustment, most usually evidenced at least in part by an inability to work full time. Only 8 percent of the men with mild neuroses seemed occupationally maladjusted. Compensation by the VA for psychiatric disability is only roughly associated with the examiner's diagnosis, whether the fact or the amount of such compensation be considered. Especially important is the fact that 19 percent of the group regarded by examiners as not ill were nevertheless being so compensated.

The search for treatment, and especially for psychotherapy, following separation varies greatly by diagnosis, increasing sharply with the severity of any neurosis and being generally low for the personality and behavior disorders. A third of the men with severe neuroses had received some psychotherapy, usually brief. Examiners evaluated the need for treatment in proportion to the severity of any neurosis, and in addition considered that nearly half of the men with personality and behavior disorders might be helped by treatment. The opinions of the men themselves do not closely match those of the examiners, and negative attitudes toward any future treatment tend to increase with the severity of the neurosis. Among men with personality and behavior disorders 40 percent admit to a need for treatment, and attitudes toward future treatment, while not especially positive, are often neutral rather than negative. Finally, the examiner's prognosis is typically at least good for those with no illness, good to guarded for men with mild psychoneuroses, guarded to poor for those with moderate psychoneuroses, poor for those with severe neuroses, and guarded to poor for those with personality and behavior disorders. Of men with severe neuroses only 8.5 percent were given as favorable a prognosis as guarded, and none a more favorable prognosis. The one man whose examiner regarded him as hopeless had a personality or behavior disorder.

Stress during military service means comparatively little in comparison with type of disposition and health at separation, which are fairly predictive of follow-up diagnosis. However, it was noted that men who at follow-up presented personality and behavior disorders had more often first broken down early, in the Z/I, in response to interpersonal stresses of military life and to civilian types of stress. It was also observed that men who first broke down following, rather than during, their combat tour received more severe diagnoses from their examiners. Men whose breakdown seemed especially associated with their own dependency or instinct-ridden characteristics also tended to be somewhat more ill at follow-up.

Treatment during service is not obviously related to follow-up diagnosis, but the quality of any duty following first breakdown is somewhat informative. Those who were separated by CDD or equivalent were much more

often ill at follow-up than those not so separated, but perhaps more important is the fact that only 31 percent of them had a moderate or severe neurosis when re-examined. The most predictive factor in the military history is the separation diagnosis; almost none of the men who seemed normal at separation, or to manifest no more than neurotic symptoms short of actual neurosis, were found by examiners at follow-up to exhibit the signs of moderate or severe neurosis, but if a man was considered to have a neurosis at separation, even if not severe, he had a 32 percent chance of exhibiting at least a moderate neurosis at follow-up, and a 55 percent chance if his neurosis at separation was rated as severe. Also, most men considered at separation to have personality and behavior disorders were so regarded at follow-up, but most of the men given these diagnoses at follow-up were drawn from those who at separation were regarded as having neuroses. That is, a neurosis had been imposed upon a pre-existing personality or behavior disorder and still dominated the clinical picture at separation, but had often disappeared by the time of the re-examination.

Although most elements of the preservice history are only weakly correlated with the follow-up diagnosis, the preservice personality is very strongly correlated. The associations with the family history, and with intelligence and education, are about what one might expect, and perhaps the only noteworthy finding is that an appreciable number of men one or more of whose parents or siblings had been ill were nevertheless themselves completely recovered at follow-up. No relation with follow-up diagnosis was found for a history of parental withdrawal, as by death, for the man's own estimate of his health at entry, for the history of treatment for an emotional disorder before service, or for the religious affiliation of the family. The association with preservice personality probably also extends to preservice psychiatric impairment and preservice adjustment, but these particular relationships were not explored. The man who was entirely normal at entry had only 1 chance in 16 of being found at follow-up to have a moderate or severe neurosis, and 2 chances out of 3 to have no illness at all. At the other extreme, the man with an overt neurosis at entry into service had only a negligible chance of being found to have no illness at follow-up, and an overwhelming prospect of being found to have a neurosis of some degree at follow-up. Men with personality or behavior disorders at entry into service seemed to have at least some chance of being found entirely normal at follow-up, but for over half of them the follow-up examiner again found the same diagnosis and a fourth exhibited signs of moderate or severe neurosis.

## CHAPTER VII

### ADJUSTMENT AT FOLLOW-UP

In chapter IV the incidence of satisfactory and impaired adjustment at follow-up was described for the various areas of activity. In this chapter, the topic of adjustment is explored further in an attempt to understand the preservice background of the men who exhibit maladjustments, the relationship between military experience and the chance that a man will be maladjusted, and the correlation between adjustment and other observations at follow-up. The chapter is organized around the different areas of behavior rather than around the intercorrelations of the several periods in the life history.

#### THE WORK AREA

Occupational adjustment was judged by a man's ability to handle his job and to stay with it, and by his general attitude toward his work. Twenty-three percent of the men studied showed some significant maladjustment in this area. In general, men in occupations toward the top of the socioeconomic scale less often seemed to examiners to be maladjusted in their work than those toward the bottom of the scale. Professional and semi-professional men, proprietors, managers, and officials, and clerical and sales personnel, all considered together, showed a 14 percent incidence of some occupational maladjustment; for craftsmen and operatives of one kind or another the figure is 21 percent; for service workers and laborers it is 39 percent.

Economic adjustment varies with occupation in a similar way, and of course there is a high correlation between occupational and economic adjustments (table 151). It is of interest that whereas nearly all of those who were well adjusted in their work seemed free of significant economic difficulty, 65 percent of those with occupational maladjustments complained of economic difficulties.

In approximately 15 percent of the men studied, ability to work was impaired by emotional illness. With a few exceptions these were men who were ill at discharge from the service. Men who were essentially well at the time of discharge had, at follow-up, less than 1 percent chance of being limited in their ability to work as a result of illness. For those with mild neuroses at time of discharge the figure is 11 percent; for those with severe neuroses, 28 percent; and for those with personality disorders, 34 percent.

Although it is heartening to find that no more than a third of the sickest cases at discharge from the service continue to have limitations in their working ability 5 years later, the overall impairment rate of 1 out of 7 observed for men with neuroses and personality disorders has important economic implications.

**TABLE 151**

*Relation Between Economic and Occupational Adjustment at Follow-up*

Economic adjustment	Occupational adjustment			
	Satisfactory	Questionable	Impaired	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Satisfactory.....	93.5	63.2	27.4	74.5
Questionable.....	2.0	22.8	7.2	4.8
Impaired.....	4.5	14.0	65.4	20.7
Total.....	100.0	100.0	100.0	100.0

To what extent impairment in ability to work reflects the secondary gain of illness cannot actually be determined, but in general it seems not to be related to the secondary gain of *compensation*, which in the vast majority of instances was considered by examiners to have little or no psychiatric importance. The men were, of course, quite compensation-oriented, but disability payments were both too small and too easy to obtain for the secondary gain of compensation to be a major factor. Impairment in ability to work at follow-up was, however, clearly related to an individual's overall adjustment prior to entering service. In only 6 percent of those with good preservice adjustment was employment limited by illness in contrast to 18 percent, or three times as many, of those with poor preservice adjustment.

Disability discharges (on psychiatric grounds) were given to many men who, at follow-up, suffered no impairment in their ability to work. Only 17 percent of the men who were discharged for disability showed any work impairment resulting from illness, in contrast to 8 percent of those who were not medically discharged. One might expect a discharge for disability to discriminate better on such an important characteristic.

Neither the particular stress associated with the first breakdown nor its severity bears any relation to ability to work or to occupational adjustment at follow-up, but there is some correlation between economic adjustment at follow-up and economic status of the parental family. Thirty percent of the men with poor economic adjustments at follow-up came from families which had suffered economic deprivation prior to the man's service, whereas only 19 percent of those who were making good economic adjustments came from such families.

Impairment in ability to work, and occupational and economic adjustments at follow-up were explored in relation to preservice personality. By far the highest relative incidence of impairment was seen in those who had personality disorders prior to entering the service. Although this group constituted only 20 percent of the sample, it accounted for more than a third of the impairment (table 152).

An individual with a good preservice work adjustment had only a 20 percent chance of having an impaired occupational adjustment at follow-up, whereas a man with poor preservice work adjustment had a 47 percent chance. A similar relationship was found between preservice work adjustment and economic adjustment at follow-up.

## FAMILY AND THE HOME

The criteria for satisfactory adjustment to the family with which the veteran lived (parental or his own), to marriage, and in the sexual area, have all been described (pp. 85, 86, and 91). As in the analysis of work adjustment, no statistical relationship was detected between adjustment in these areas and the nature of the individual's military experience. There were no differences between combat and noncombat cases, for example. Severity of illness at the time of first breakdown also had no discernable effect on these specific postwar adjustments. The overall preservice adjustment, on the other hand, was found to be significantly correlated with family adjustment at follow-up. Men with impaired preservice adjustments were four times as apt to have poor family adjustments at follow-up as those with good preservice adjustments (27 percent vs. 7 percent).

**TABLE 152**

*Maladjustments in Work Area at Follow-up, and Preservice Personality*

Preservice personality	Percentage with impaired adjustment in each area		
	Employment	Economic	Occupation
Normal.....	6.7	6.3	9.8
Neurotic traits.....	10.3	19.6	23.5
Suggestive neurosis.....	10.2	16.7	14.9
Overt neurosis.....	17.1	22.4	34.0
Personality disorder.....	24.1	32.2	41.8
Total.....	13.6	20.2	25.6

To some extent there is specificity in the relationship between maladjustments before and after service. For example, the man with a poor sexual adjustment prior to service had a 56 percent chance of a questionable or poor sexual adjustment at follow-up, in contrast to a 13 percent chance for a man with a good adjustment before service. This applies to both single and married men. Similarly, 64 percent of those with poor marital adjustments at follow-up had the same trouble before service, while only 20 percent of those with good marital adjustments at follow-up had difficulty before.

Adjustments in the area of home and family, as in the work area, depend quite intimately on preservice personality (tables 153 and 154). Men with overt neuroses and personality disorders prior to service, especially the latter, are much more than proportionally represented in the group with poor adjustments at follow-up. For example, men with pre-existing personality disorders, who constitute only 20 percent of the sample, account for 37 percent of the instances of family maladjustment. Men who were overtly neurotic prior to service were more apt to be maladjusted in the sexual area at follow-up than in any other area; to some extent this is a statistical confirmation of the sensitivity of sexual adjustment as an indicator of neurotic difficulty.

### THE COMMUNITY

A maladjustment in the area of the community, it will be recalled (pp. 90-91), involves some conflict with the mores and would be expected more often in men with personality disorders. The likelihood of such maladjustment bears no relation to the particular stress associated with breakdown or to the severity of illness at the time of breakdown in the service. There is, however, a strong relationship with preservice community adjustment. A man with a preservice maladjustment in this area had a 56 percent chance of the same maladjustment at follow-up in contrast to only 15 percent for the man with no preservice maladjustment of this type.

Community adjustment at follow-up is also closely associated with preservice personality. Men with personality disorders before service had a 45 percent chance of having impaired community adjustments at follow-up in comparison with 5 percent for men who were normal and 21 percent for men with overt neuroses.

**TABLE 153**

*Quality of Adjustments in the Family Area at Follow-up and Preservice Personality*

Preservice personality	Area and quality of adjustment					
	Family		Marital		Sexual	
	Good	Poor	Good	Poor	Good	Poor <sup>1</sup>
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Normal.....	20.3	10.6	20.5	11.3	17.5	7.8
Neurotic traits only.....	36.8	31.8	37.3	30.4	42.5	35.7
Suggestive neurosis.....	14.6	4.7	15.7	5.2	13.3	9.1
Overt neurosis.....	12.3	16.5	13.1	17.4	9.9	20.1
Personality disorder.....	16.0	36.5	13.3	35.7	16.9	27.3
Total.....	100.0	100.1	99.9	100.0	100.1	100.0
Number of men.....	438	85	375	115	445	154

<sup>1</sup> Or questionable.



**TABLE 154**

*Maladjustments in the Family Area at Follow-up and Preservice Personality*

Preservice personality	Percentage with maladjustment in each area		
	Family	Marital	Sexual <sup>1</sup>
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Normal . . . . .	8.3	12.9	13.3
Neurotic traits only . . . . .	10.8	15.2	22.5
Suggestive neurosis . . . . .	4.7	7.0	19.2
Overt neurosis . . . . .	16.5	23.0	41.3
Personality disorder . . . . .	22.3	31.3	35.9
<b>Total . . . . .</b>	<b>12.7</b>	<b>18.1</b>	<b>25.7</b>

<sup>1</sup> Includes questionable maladjustment.

**SUMMARY OF ALL ADJUSTMENTS**

As was observed in the case of the individual areas of adjustment, the point at which breakdown occurred and the character of military stress are not directly related to the overall adjustment pattern at follow-up. Severity of illness at the time of the first breakdown in the service is similarly unrelated. Disposition from medical care in service, on the other hand, is associated with adjustment at follow-up although, as has already been noted for the work area, the relationship is not as close as one might expect or even hope for. The percentage with a disability discharge (on psychiatric grounds) is 68 for men with an impaired adjustment at follow-up, 65 for those with a questionable adjustment, and 51 for those with an entirely satisfactory adjustment. For men who were not separated for disability the chance of a poor adjustment at follow-up is 44 percent; for men who were separated for disability it is 56 percent. The tendency for men with medical discharges to have somewhat poorer adjustment patterns at follow-up recurs within subdivisions of the sample based on the severity of the precipitating stress. The quality of any duty following the first breakdown also varies considerably among the several adjustment groups. The percentage with poor adjustment at follow-up is 28 for men with good and continued service following return to duty, 49 for men with apparently satisfactory service, and 61 for men with unsatisfactory service. The last group is essentially the same as those who were first returned to duty and then discharged for disability, a group which in its overall prognosis does not differ from those given immediate discharges for disability with no return to duty.

The psychiatric diagnosis at separation is more highly correlated with adjustment at follow-up than are other available facts about the military period. The chance of some maladjustment at follow-up is by no means absent for men who seemed in normal emotional health at separation; it

probably lies within the range of 14 to 29 percent. It is higher than the chance of moderate psychiatric disability or even of psychiatric illness at follow-up for this group. For men with severe neuroses at separation the figure is 71 percent and for those with moderate neuroses at separation, 51 percent.

The preservice period, in contrast to the military, is replete with observations which have a distinct bearing upon adjustment at follow-up. Table 155 illustrates one such observation, the psychiatric history of parents and siblings. Men with an impaired adjustment at follow-up report the greatest amount of psychiatric illness in their immediate family. When the relationship was approached from the standpoint of predicting maladjustments from a knowledge of the history of psychiatric illness in the parental family, and nothing more, it was found that the percentage with maladjustment at follow-up was 39 for those with no illness in their family background, 52 for those with suggestive evidence of illness, and 59 for those with positive evidence. It may be of some significance to note, however, that the relationship does not hold for men who broke down under severe or moderate stress but is found only for those whose breakdown was precipitated by no more than mild stress. A very similar relationship, also restricted to those who broke down under mild stress, is observed for the summary of all psychiatrically significant data (not merely a history of overt psychiatric illness) in the family.

Preservice personality, as may be seen from table 156, is very strongly associated with adjustment at follow-up. From the standpoint of prediction it is useful to note that the chance of a poor adjustment at follow-up, which is 51 percent for the group as a whole, is 26 percent for those who were normal on entering service, 49 percent for those with neurotic traits, 35 percent for those with a suggestive neurosis, 63 percent for those with an overt neurosis, and 73 percent for those with a personality disorder.

**TABLE 155**

*Overall Adjustment at Follow-up and History of Psychiatric Illness in Parental Family*

Psychiatric illness in family	Follow-up adjustment			
	Satisfac- tory	Question- able	Impaired	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
None . . . . .	30.8	19.7	16.5	21.6
Only suggestive evidence . . . . .	42.1	53.1	46.3	46.2
More than suggestive evidence . . . . .	27.1	27.2	37.2	32.3
Total . . . . .	100.0	100.0	100.0	100.1
Number of men . . . . .	266	147	436	849

**TABLE 156**

*Overall Adjustment at Follow-up and Preservice Personality*

Preservice personality	Follow-up adjustment			
	Satisfac- tory	Question- able	Impaired	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Normal.....	28.0	15.1	8.1	15.7
Neurotic traits only.....	37.1	38.1	35.4	36.4
Suggestive neurosis.....	18.1	15.1	8.9	12.9
Overt neurosis.....	7.8	15.1	17.0	13.7
Personality disorder.....	9.0	16.7	30.5	21.3
<b>Total.....</b>	<b>100.0</b>	<b>100.1</b>	<b>99.9</b>	<b>100.0</b>
Number of men.....	232	126	370	728

Preservice adjustment is similarly related to adjustment at follow-up, as table 157 shows. The relationship holds for each severity-of-stress group as well as for the sample as a whole.

**SUMMARY**

The determinants of the adjustment pattern at follow-up are not found in the military period, the only such factors having any predictive value being the mode of separation and the man's health at time of separation. The preservice observations, in contrast, contain a great deal of information about the adjustment pattern at follow-up. Men who had a specific maladjustment before entry into service were very likely still to have had it at separation, even though the interpersonal and environmental context had changed. This is especially true of men with personality and behavior disorders at entry. Two specific findings of interest are: (1) That there is no evidence of secondary gain in the limitation of ability to work because of illness; and (2) men with overt neuroses prior to military service exhibit more sexual maladjustment than any other preservice personality group.

## CHAPTER VIII

### TREATMENT SINCE SEPARATION FROM SERVICE

It will be recalled that although an estimated 35 percent of the men were treated for psychiatric symptoms following separation from service, in about 20 percent, or over half of them, treatment was symptomatic and administered by a nonpsychiatrist. Interest in treatment is twofold: (1) As an indicator of illness, it provides a rough tool for exploring differential rates of recovery; and (2) as a constructive step on the part of the ill, its study reveals to some extent the steps which have been taken to cope with illness. The effect of treatment cannot be discerned in these data, so confounded is treatment with prognosis.

#### IN RELATION TO OTHER FOLLOW-UP OBSERVATIONS

Men who sought treatment and received psychotherapy were more likely to look upon their illness as an emotional one, but by no means did all of those who had had psychotherapy think in such terms. Eighteen percent of them still considered their difficulties primarily organic in nature. By way of contrast, 37 percent of those who had other kinds of treatment considered their illness organic. This suggests that a failure to receive psychotherapy is not wholly a result of resistance on the part of the individual to recognize the psychogenic nature of his symptoms, and that at least some part of the responsibility lies with the physician, who himself may not recognize the true nature of the symptoms or, if he does, fails to impart this knowledge convincingly to the patient. The man who said his health had been greatly and adversely affected by military service was three times as likely to seek treatment as the man who noted no change. Occupation also bears some relation to the likelihood that treatment would be sought; men in the lower occupational groups, presumably less well acquainted with the advantages of psychiatric treatment, sought treatment less often than men higher on the socioeconomic scale. Among the men who sought treatment, however, socioeconomic status is unrelated to type of therapy or to resort to VA facilities for treatment. Employment status, too, is associated with interest in treatment. Half of the men whose employment was limited by illness had sought treatment in contrast to a third of those not so handicapped. Also, among the handicapped group there was a considerable difference in the compensation status of those who did and those who did not seek treatment. Among the men who were not able to work full time because of illness, and who had sought treatment, 80 percent were receiving VA compensation in contrast to 59 percent among men who had not sought treatment but who also were unable to work full time because of illness.

**TABLE 157**

*Overall Adjustment at Follow-up and Preservice Adjustment*

Preservice adjustment	Overall adjustment at follow-up			
	Satisfactory	Questionable	Impaired	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Satisfactory . . . . .	41.3	22.7	9.8	21.8
Questionable . . . . .	24.0	29.5	17.9	21.8
Impaired . . . . .	34.7	47.7	72.2	56.5
<b>Total . . . . .</b>	<b>100.0</b>	<b>99.9</b>	<b>99.9</b>	<b>100.1</b>
Number of men . . . . .	242	132	407	781

Forty-two percent of the men who had some impaired adjustment at follow-up had sought treatment in contrast to 23 percent of those with satisfactory adjustments in all areas. Only 45 percent of the men receiving disability compensation (on any grounds whatever) from the VA had obtained treatment of any kind since separation from the service; for men not compensated by the VA the figure is 27 percent.

One of the grave defects in the handling of veterans with psychiatric disabilities is the greater concentration on compensation than on treatment, a distortion in emphasis for which the entire nation is responsible. Unfortunately the first question which a man is apt to ask is "How do I get compensation?" and rarely "How can I get treatment?" Upon discharge from the service in the latter part of World War II all men were encouraged or required to file applications for "pensions," but no similar effort was made, except for those needing hospital care, to have men apply for treatment. As a result, on follow-up it is found that only 46 percent of the men drawing compensation on purely psychiatric grounds reported having received some treatment. The amount of compensation was unrelated to the type of treatment and to whether it had been received from the VA or elsewhere.

There is a suggestion that the failure of some men to seek treatment may be related to the impersonal "diagnose and dispose" attitude which existed in some installations in the Army, especially early in the war. To some extent this may have been the result of a shortage of psychiatrists but Army policy also was a factor. To be sure, there were many instances in which ignorance or resistance kept men from understanding the nature of their difficulties even when it had been explained to them. A considerable number of men believed that the doctors in the Army had made a mistake in their diagnosis of psychoneurosis and only 25 percent of this group

sought any treatment after discharge from the service. This is in contrast to 37 percent for those who accepted the psychogenesis of their symptoms.

Only a fraction of the men who needed treatment sought it, but those who did were, on the whole, more in need than those who did not make the effort and this is especially true of the men who sought psychotherapy. The percentage of men with guarded to poor prognoses is 41 for those who had no treatment of any kind, 61 for those with symptomatic treatment, and 82 for those with psychotherapy.

Finally, among the men who were judged ill at follow-up, the percentage who had sought treatment was the same for men whose health had worsened after separation as it was for men who had remained the same or even improved. This observation cannot be taken as evidence against the effect of treatment, for the selection of men for treatment may be of such a nature as to yield this observation when the treated men are more likely to get well than the untreated.

## **SUMMARY**

So confounded are treatment and prognosis at the point where the decision on treatment is made that one cannot expect in this material to find objective evidence of its effect. Rather one is impressed by the fact that, by and large, the men who have had treatment have been drawn from among those with the greatest need, but that hardly more than half of any group needing treatment had received it. When one adds to this the fact that most treatment was symptomatic at the hands of nonpsychiatrists, and that any psychotherapy was usually of short duration and in as many as 18 percent compatible with an organic view of his disease on the part of the patient, it becomes plain that treatment following separation from service was probably not a factor of any great influence upon status at follow-up. It may better be considered as partial evidence of illness. As such it is seen to be associated with health at separation from service and with certain of the more important preservice characteristics, especially preservice personality.

## CHAPTER IX

### IMPROVEMENT SINCE SEPARATION FROM SERVICE

Since the vast majority of the men who were not ill at discharge maintained their status or improved further after separation from service, the analysis here is confined to those whom examiners regarded as ill at separation. Among them 24 percent remained the same, 62 percent improved, and 14 percent became worse. Interest here centers upon the identity of those whom examiners classified as either improved, or still ill, or even worse, and the problem is, as before, approached on the basis of observations at all three periods in the life histories of the subjects.

#### IN RELATION TO OTHER FOLLOW-UP OBSERVATIONS

In the preceding chapters it was shown that improvement in health following separation was a significant factor in reducing disability at follow-up and that, for men who were ill at discharge, any subsequent change in condition was not obviously related to a history of treatment. The latter finding is similar to one noted here, namely that men who received psychotherapy improved less often than those who received other types of treatment. This does not mean that psychotherapy was less effective but is another indication of the tendency for the sicker men to receive psychotherapy more often than those who were better able to tolerate their illness.

Residence, whether considered in terms of size of city, rural-urban classification, or section of the country, was not found to be related to the probability of improvement after discharge. Occupation at follow-up, however, was found to be somewhat related (table 158). Those in the more favored occupational groups improved more often than those in the unskilled groups. Although the benefits of treatment are by no means established in these observations, it is a fact that the more skilled groups sought treatment more often. Also, it seems possible that men at the upper end of the socio-economic scale were less often overwhelmed by their functional symptoms and better motivated toward regaining their health. Further, improvement following separation from service is inversely related to the amount of disability compensation (table 159) and the possibility exists that secondary gain of illness played a greater role in the unskilled and less educated groups. Although the association between level of compensation and change in health is a very close one for data of this kind, it will be noted that almost half of the group who described their health as worse after separation were not receiving compensation. The subject of compensation is discussed further in chapter XI.

**TABLE 158**

*Improvement in Psychiatric Status After Separation, by Occupation at Follow-up, Men Ill at Separation From Service*

Occupational group at follow-up	Number of men	Percentage who improved
Professional, semiprofessional, proprietors, managers, officials.....	75	82.7
Clerical and sales.....	90	65.6
Craftsmen and foremen.....	93	69.9
Operatives.....	158	63.9
Service workers.....	40	40.0
Students.....	29	62.1
Laborers.....	68	47.1
Total.....	553	63.8

Marital status was also found to be related to change in condition. Men who were divorced, separated, or widowed had more often changed for the worse, and the men who were married had more often improved (table 160). Whether marriage is cause or effect in this relationship is not known.

### IN RELATION TO MILITARY EXPERIENCE

How long a man served in the Army or Navy prior to his breakdown is not associated with the change in his condition during the follow-up period if he were ill at separation. The type of stress with which breakdown was associated and the location at breakdown (Z/I, overseas, combat, etc.) are similarly unrelated. Those who broke down in or after combat but who

**TABLE 159**

*VA Compensation for Psychiatric Disability and Change in Condition Since Separation, for Men Ill at Separation From Service*

Change in condition since separation	Number of men	Percentage compensated	Men drawing \$30 or more monthly as percent of total compensated for psychiatric disability only
Same.....	137	61.3	50.0
Improved.....	357	50.4	39.5
Worse.....	79	60.8	63.6
Total.....	573	54.5	46.0



**TABLE 160**

*Marital Status at Follow-up and Change in Condition Since Separation, Men Ill at Separation From Service*

Marital status	Change in condition since separation				Number of men
	Same	Improved	Worse	Total	
	Percent				
Single . . . . .	31.3	53.1	15.6	100.0	96
Married . . . . .	21.7	65.9	12.4	100.0	461
Divorced, etc. . . . .	36.6	34.1	29.3	100.0	41
Total . . . . .	24.2	61.7	14.0	99.9	598

continued to improve much more often than those who had recovered from breakdowns, which were not associated with combat, by the time they were discharged from the service.

It cannot be determined whether treatment received during service affected the course of illness after separation, since so many factors operated in the selection of patients for treatment. It was observed, however, that after discharge those who had received individual therapy got worse more often than those who received routine hospital care.

An interesting finding is that, among men who were ill when they left the service, those who were separated by disability discharge improved more often than those who were demobilized <sup>42</sup> (table 161). It seems likely that those who were separated by disability discharge were more ill and therefore had more room for improvement, or that they continued to receive treatment more often. Although there is no demonstrable relationship between severity of illness at separation from the service and improvement after discharge, the bulk of the cases are classified as "neurosis, not severe," and if the severity classification had been more adequate perhaps the expected relationship would be apparent. Nor does such improvement bear any relationship to the frequency of treatment after discharge, as has been noted. It can hardly be argued, on the basis of this finding, that a disability discharge is the more desirable disposition. The effect of the type of disposition, i. e., medical vs. nonmedical, on the follow-up status will be discussed more thoroughly in chapter XVI.

The possible effect of military treatment upon change in condition during the follow-up period was further explored by taking into account apparent severity of illness at separation, but no effect could be demonstrated. In fact, all attempts to correlate improvement after discharge

<sup>42</sup> In some instances the degree of illness was not sufficient to warrant a disability discharge. In other instances, illness, although present, was not detected or reported.

**TABLE 161**

*Type of Separation and Change in Condition After Separation, Men Ill at Separation From Service*

Change since separation	Type of separation	
	Disability discharge for psychoneurosis	Demobilization
	<i>Percent</i>	<i>Percent</i>
None.....	21.3	36.3
Improved.....	67.3	40.7
Worse.....	11.4	23.0
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>
Number of men.....	456	113

were no longer considered “ill” at the time of discharge from the service with treatment (whether received in service or after service) were to no avail. It seemed to make no difference how severe a man’s illness was at the time of breakdown, or what kind of treatment he received for it; the frequency of improvement following discharge remained the same (approximately 62 percent) but, as has already been noted, the classification of severity of any illness at separation was a very gross one. A special analysis was done of all the men who broke down in combat and who were diagnosed as “neurosis, not severe” at separation. They were then divided into two groups—those who received treatment after separation and those who did not. The same percentage in each group reported improvement. The study was repeated for men who broke down in the Z/I and gave similar results (table 162).

**TABLE 162**

*Percentage of Men With Mild or Moderate Neuroses at Separation Who Improved After Separation From Service, by Location at Breakdown, and by Treatment Since Separation*

Treatment since separation	Early Z/I breakdown		Breakdown in combat	
	Number of men	Percent improved	Number of men	Percent improved
None.....	82	65	58	62
Some.....	44	57	42	55
<b>Total.....</b>	<b>126</b>	<b>62</b>	<b>100</b>	<b>59</b>

## IN RELATION TO PRESERVICE HISTORY

Although a history of psychiatric illness in the immediate family is related to the probability of illness on separation from the service after a neurotic breakdown, it is unrelated to the change in condition following discharge. Nor is there any statistically reliable relationship between pre-service personality and change in condition following discharge. There is at most a suggestion that men who were normal prior to service have a better chance of improving during the follow-up period. The preservice adjustment does show a weak relationship, however. Men whose earlier adjustment was satisfactory were more likely to improve after service and vice versa (table 163). Older men were somewhat less likely to improve after separation than younger men, and more likely to become worse. This finding is consistent with clinical experience that neurotic patterns tend to become more fixed with advancing age. Men of poor educational attainment (less than 8 grades) and men of below average intelligence were less likely to improve. However, men of highest educational achievement did no better than those of intermediate attainment.

### SUMMARY

Given an individual who broke down in service and who was still ill with a neurosis on discharge, any change in his condition after discharge seems to be related more to sociologic factors than anything else. What his military experience was, what treatment he had, and how sick he had been, seem to make no difference. It is the poorly educated, unskilled individual of limited intelligence who was not well-adjusted before entering the service, and who was more liable to have had marital difficulty after discharge, who is least apt to improve and most apt to get worse. The overall tendency for the entire sample was to improve.

**TABLE 163**

*Change in Condition After Separation, by Preservice Adjustment, Men Ill at Separation From Service*

Change in condition	Preservice adjustment			
	Satisfactory	Questionable	Impaired	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
None.....	17.5	27.6	26.8	25.4
Improved.....	74.2	63.4	55.3	60.4
Worse.....	8.2	8.9	17.9	14.3
<b>Total.....</b>	<b>99.9</b>	<b>99.9</b>	<b>100.0</b>	<b>100.1</b>
Number of men.....	97	123	340	560

## CHAPTER X

### MAN'S OWN COMPARISON OF HEALTH AT FOLLOW-UP AND AT ENTRY

At follow-up, and in comparison with their health at entry into service, 39 percent of the men considered their health to be somewhat worse, 31 percent much worse, 9 percent better, and 21 percent the same. In earlier chapters it was shown that this attitude on the part of the men correlated quite well with the examiner's estimate of disability, and that the man's attitude was also related to his history in regard to treatment following separation. In this section a further analysis is made of these attitudes in relation to certain aspects of the earlier history in and before service.

#### IN RELATION TO MILITARY EXPERIENCE

From the military period were chosen for study the following observations:

- Length of service prior to breakdown.
- Major area of stress precipitating breakdown.
- Duration of combat.
- Severity of acute episode.
- Type of treatment.
- Pattern of hospital disposition.
- Psychiatric condition at separation.

Table 164 gives the mean duration of service prior to breakdown according to the man's attitude toward the change in his health. The variation shown there suggests that the longer men had served prior to breakdown the more inclined they were, on follow-up, to feel that their health had deteriorated.

**TABLE 164**

*Mean Length of Service Prior to Breakdown, by Man's Own Estimate of Change in Health Between Entry Into Service and Follow-up*

Estimate of change in health	Number of men	Mean months of service to breakdown
Better.....	60	16.9
Same.....	146	19.4
Somewhat worse.....	275	20.9
Much worse.....	220	22.9
Total.....	701	20.9

The attitude men had at follow-up toward any change in their health between entry and follow-up varies considerably as to the major area of stress precipitating breakdown (table 165). Men who broke down under combat stress more often reported that their health had greatly worsened. The meaning of alleged worsening in health may depend, of course, on the attitude a man has toward his health at entry. Accordingly, the influence of major areas of stress was also studied in relation to attitude toward health at entry into service. Men who claimed excellent health at entry described the change in their health in the same way whether or not breakdown was precipitated by combat (table 166). For men who described their health at entry as only fair the proportion of combat cases is, of course, much smaller (see table 167) but there are enough to show that the combat cases regard their change in health much more unfavorably than do the non-combat cases. Men who described their health at entry as impaired or very poor and whose major area of stress and attitude toward their health is known, number only 41, and the proportions reporting their health as worse are:

Combat cases . . . . . 6/6  
 Noncombat cases . . . . . 21/35

Although this discrepancy is not statistically significant, it lies in the same direction as those for men who regarded their health at entry more favorably. It will be observed from tables 165, 166, and 167 that the combat cases, regardless of their alleged health at entry, do not differ significantly in their feeling about the change in their health. Fairly consistently about 78 percent report deterioration. Not so the noncombat cases, whose atti-

**TABLE 165**

*Major Area of Stress Precipitating Breakdown and Attitude Toward Change in Health Between Entry Into Service and Follow-up*

Major area of stress	Change in health from entry to follow-up				Number of men
	Same or better	Worse	Much worse	Total	
	Percent				
None or civilian type . . . . .	38.5	40.0	21.5	100.0	65
Inherent military:					
Not interpersonal . . . . .	31.5	46.3	22.2	100.0	54
Interpersonal . . . . .	35.6	37.9	26.4	99.9	87
Combat . . . . .	21.9	41.7	36.5	100.1	288
Environmental . . . . .	32.6	31.4	36.0	100.0	86
More than one area . . . . .	35.2	33.0	31.8	100.0	88
<b>Total . . . . .</b>	<b>29.2</b>	<b>38.9</b>	<b>31.9</b>	<b>100.0</b>	<b>668</b>

tude toward their change in health depends quite intimately upon their attitude toward their health at entry. Table 168 gives the full detail on this relationship. The men who describe their health at entry in glowing terms are more likely to report subsequent deterioration. These findings certainly suggest that men who did not break down because of combat, and whose health at entry was not excellent, suffered the least deterioration in health. The most summary way of characterizing the entire set of relationships is by means of the percentage reporting the greatest deterioration, as shown in table 169.

**TABLE 166**

*Major Area of Stress Precipitating Breakdown and Attitude Toward Change in Health From Entry Into Service To Follow-up, for Men Who Described Their Health at Entry as Excellent*

Major area of stress	Change in health from entry to follow-up				Number of men
	Same or better	Worse	Much worse	Total	
	Percent				
Combat.....	22.2	40.2	37.6	100.0	234
Other.....	27.4	37.7	34.9	100.0	215
Total.....	24.7	39.0	36.3	100.0	449

**TABLE 167**

*Major Area of Stress Precipitating Breakdown and Attitude Toward Change in Health Between Entry and Follow-up, for Men Who Described Their Health at Entry as Only Fair*

Major area of stress	Change in health from entry to follow-up				Number of men
	Same or better	Worse	Much worse	Total	
	Percent				
Combat.....	18.2	47.7	34.1	100.0	44
Other.....	46.7	32.5	20.8	100.0	120
Total.....	39.0	36.6	24.4	100.0	164

**TABLE 168**

*Relation Between Attitude Toward Change in Health Between Entry Into Service and Follow-up and Attitude Toward Health at Entry, for Noncombat Cases Only*

Attitude toward health at entry	Change in health from entry to follow-up				Number of men
	Same or better	Worse	Much worse	Total	
	Percent				
Excellent.....	27.4	37.7	34.9	100.0	215
Fair.....	46.7	32.5	20.8	100.0	120
Impaired or very poor.....	40.0	40.0	20.0	100.0	35
Total.....	34.9	36.2	28.9	100.0	370

**TABLE 169**

*Man's Opinion of Health at Entry and at Follow-up, by Combat Status*

Health at entry	Percentage reporting their health as much worse		
	Combat	Noncombat	Total
Excellent.....	38	35	36
Fair.....	34	21	24
Impaired or very poor.....	33	20	22
Total.....	37	29	32

It was previously seen that duration of combat for men with some ground combat is not significantly associated (P about .08) with any change in health between entry into service and follow-up. However, as may be seen from table 170, there is a suggestion that men with longer ground combat report a somewhat greater degree of deterioration.

Severity of the acute illness in service is evidently unrelated to the man's estimate of the change in his health between entry and follow-up; the percentages reporting their health to be much worse are 30, 33, and 34 for those whose illness was mild, moderate, and severe in that order.

Treatment of the acute illness in service is quite unrelated to the man's estimate of the change in his health between entry and follow-up. As would be expected, men who considered their health at entry to be excellent and

who were discharged for disability more often regarded their health at follow-up as much worse than at entry than men who were separated on points. For those whose health at entry was at best fair, the observed variation is quite small and statistically insignificant, although in the same direction as that observed for men of excellent health at entry.

For men whose health at entry was excellent, there is at best a slight suggestion ( $P$  about .09) that those whose only disposition was return to duty without reassignment did best: 16 percent reported their health at follow-up as much worse than at entry in contrast to 30 percent for men who were returned to duty but were reassigned, 42 percent for men who were promptly discharged for disability, and 46 percent for men who were at first returned to duty and later discharged for disability.

**TABLE 170**

*Man's Opinion on Change in Health From Entry Into Service To Follow-up, by Duration of Combat, for Ground Combat Cases Only*

Days of ground combat	Change in health from entry to follow-up				Number of men
	Same or better	Worse	Much worse	Total	
	Percent				
1-14.....	34.6	48.1	17.3	100.0	52.
15-44.....	20.3	47.5	32.2	100.0	59
45-104.....	21.8	36.4	41.8	100.0	55
105 or more.....	23.6	34.5	41.8	99.9	55
Total.....	24.9	41.6	33.5	100.0	221

Health at separation is quite intimately associated with any change in health from entry to follow-up. This result simply reflects the fact that men who were well at separation were almost always well at follow-up, and that a man who was not ill at follow-up was unlikely to describe his health as much worse than at entry.

## IN RELATION TO PRESERVICE HISTORY

From the preservice history were chosen the following items for study in relation to the man's evaluation of any change in health from entry to follow-up: The summary of psychiatrically significant data in the family history, preservice personality and impairment, education, adjustment in all areas, marital status at entry, and age at entry. The man's own estimate of his health at entry has already been discussed in connection with the period of military service.



The extent and probable importance of psychiatric signs in the entire family history are not significantly related to change in health after entry. It is perhaps surprising to find that preservice personality and adjustment too have no more than suggestive associations with change in health. Those who had pathological personalities showed the highest incidence of deterioration but differences between other groups are not remarkable.

Educational achievement prior to service is quite significantly related to change in condition after entry, as table 171 clearly shows. Men with the least educational background state that they have suffered the greatest deterioration, and men with the best educational background the least. There is no evidence that change in health is related to marital status at entry or at separation from the service. Finally, age at entry was not found to be associated with change in health after entry.

**TABLE 171**

*Man's Opinion on Change in Health From Entry Into Service To Follow-up, by Educational Attainment*

Highest grade completed	Change in health from entry to follow-up				Number of men
	Same or better	Worse	Much worse	Total	
	Percent				
Under 8 . . . . .	17.0	40.4	42.6	100.0	94
8 . . . . .	28.7	34.7	36.6	100.0	101
9-11 . . . . .	32.6	33.5	33.9	100.0	239
12 . . . . .	29.2	48.2	22.6	100.0	168
13 or more . . . . .	36.4	45.5	18.2	100.1	77
Total . . . . .	29.5	39.6	30.9	100.0	679

**SUMMARY**

Although 70 percent of the entire series described some deterioration in their health, it is the man who had the least education, described his health on entry as excellent, served longest, was in combat, was still ill at separation, and was discharged from the service for disability, who was most apt to report the greatest deterioration. The manifold stresses of war must generally tend to worsen emotional health. For most, the change is temporary and in many instances counterbalanced by the positive effects of having lived through such an experience. Those who actually broke down and had not regained their former health by the time they were discharged either had been confronted by especially overwhelming stress or were apt to have been unaware of some decreased resistance to stress as a result of a protected or nonstressful environment in civilian life.

There are instances in which breakdown was clearly related to stress of a degree far beyond that which the vast majority experienced, even in combat, but in most instances there is no satisfactory explanation for the breakdown of one man and not another similarly exposed. Perhaps some men have a decreased resistance to stress of which even they may not be aware. If this lack of awareness were to some extent the product of limited education and intelligence, it would help to explain the prominence of these characteristics among the men who described the greatest amount of deterioration in their health. It is probable that the individual who is handicapped as to intelligence and education displaces his emotional difficulties more than others onto his military experience as a means of solving his unconscious conflicts.

While there are statistically significant relationships between the man's estimate of any change in his health and his length of service and combat stress, the magnitude of the relationships is not great enough to account for the change in most men, nor sufficiently predictive to be of practical value. The fact that 70 percent of all the men who broke down describe some deterioration in their health since they first entered the service, plus the fact that others who broke down describe no change or even improvement, leaves many questions unanswered.

## CHAPTER XI

### VA COMPENSATION FOR PSYCHIATRIC DISABILITY

VA compensation for psychiatric disability is singled out for further study here primarily because of the great sociologic and economic significance which attaches to such compensation. As an indicator of follow-up status it leaves much to be desired, but its social importance is great and potentially it carries great significance also for the individual by encouraging secondary gain from illness. The analysis which follows is primarily oriented toward the elucidation of VA practice and policy.

#### IN RELATION TO OTHER FOLLOW-UP OBSERVATIONS

Earlier chapters have reviewed the relation between VA compensation for psychiatric disability on the one hand, and the psychiatric examiner's evaluation of disability, psychiatric diagnosis, treatment since separation, and improvement since separation, on the other, but many other aspects of follow-up status were also studied.

Census region of residence at follow-up was examined in relation to compensation status and size of compensation payments in order to test the uniformity with which men applied for compensation and uniformity with which it was granted by the VA in the various sections of the country. The observed discrepancies are both small and statistically insignificant, as may be seen from table 172. Size of community was also studied, without finding any evidence that the incidence or amount of compensation varied by residence (table 173).

**TABLE 172**

*VA Compensation for Psychiatric Disability and Census Division of Residence*

Census division of residence	Number of men	Percentage compensated	Men drawing \$30 or more monthly as percent of total compensated for psychiatric disability only
New England.....	81	46.9	45.7
Middle Atlantic.....	260	43.5	42.2
South Atlantic.....	110	38.2	52.5
East North Central.....	175	38.3	53.1
South Central.....	73	43.8	53.8
West North Central.....	52	36.5	} 39.6
Mountain and Pacific.....	97	42.3	
Total.....	848	41.5	46.6

**TABLE 173**

*VA Compensation for Psychiatric Disability and Size of Community*

Size of community (1940 census)	Number of men	Percentage compensated	Men drawing \$30 or more monthly as percent of total compensated for psychiatric disability only
Less than 2,500.....	104	44.2	50.0
2,500-9,999.....	106	41.5	48.8
10,000-99,999.....	237	38.8	45.9
100,000-999,999.....	213	42.7	49.4
1,000,000 or more.....	186	42.5	40.8
Total.....	846	41.6	46.6
Metropolitan <sup>1</sup> .....	377	43.5	46.6
Other.....	469	40.1	46.5

<sup>1</sup> Residence was within one of 13 largest metropolitan districts according to the 1940 census, e. g., Baltimore, Boston, Chicago, etc.

Seventy-nine men, or 10 percent of the sample for which this information is available, it may be recalled, presented no symptoms or spontaneous psychogenic complaints at follow-up. Ten (13 percent) of these men were drawing compensation for psychiatric disability, in contrast to 44 percent of those with symptoms or psychogenic complaints. One may well wonder, however, why even as many as 10 men out of 79 with no symptoms should draw compensation.<sup>43</sup> In one instance the man stated: "I feel 100 percent better than I have ever been—even before entering the service. My nerves don't bother me as much as they did. I look into the future a lot better. Feel more secure—less worries." Another report said, "pension (10 percent) was entirely unexpected and that he didn't even know he was applying for one. He has no objection to receiving the pension and feels that it helps when it comes in, but that he has no symptoms and doesn't feel that the pension is really indicated."

The symptoms and psychogenic somatic complaints which were in evidence at follow-up were roughly classified as to period of onset, and in table 174 this classification is related to compensation status. Men whose symptoms appeared to be essentially a continuation or elaboration of those present prior to service were compensated much less often (31 percent) than men whose symptoms began in service (55 percent). Presumably this discrepancy represents the influence of the VA policy that illness exist-

<sup>43</sup> Compensation status was rechecked in 9 of the 10 cases in June 1953. In 2 instances, 10 percent disability was still being received and in 7 instances, including the 2 cases cited, compensation had been discontinued.

ing prior to service, and unaggravated by it, is not compensable. No effort was made in the follow-up study to investigate service connection and aggravation from the standpoint of individual entitlement to benefits. The amount of compensation, however, is unrelated to the apparent origin of symptoms.

**TABLE 174**

*VA Compensation for Psychiatric Disability, and Origin of Symptoms and Psychogenic Complaints Made at Follow-up*

Origin of complaints	Number of men	Percentage compensated	Men drawing \$30 or more monthly as percent of total compensated for psychiatric disability only
Military service.....	333	55.0	52.4
Prior to military service.....	192	30.7	41.8
Mixed.....	139	54.0	41.3
Total.....	664	47.7	47.9

As may be seen from table 175, both the likelihood of compensation and the magnitude of any benefits vary greatly in association with the man's expressed opinion of any change in his health following entry into service. However, it is of interest that the correlation is not better; from a clinical standpoint it would not be expected that men would draw compensation who report their condition to be no worse than on entry into the service, but 21 percent were compensated. It might also be expected that more than 62 percent would be drawing compensation among those whose condition was allegedly much worse. These discrepancies cannot be answered by this study but do merit explanation; they involve too many cases to be dismissed as occasional errors of observation.

Occupation at follow-up has no relationship to compensation status, except for a suggestion that the professional and managerial group are less often compensated.

Adjustment status at follow-up is quite significantly associated with the likelihood of compensation, but its relation to size of payment is only a suggestive one ( $P = .05$ ) in the statistical sense. Just 48 percent of those judged to be maladjusted (in one or more areas) at follow-up were drawing compensation for psychiatric disability. In contrast, 26 percent of those whose adjustment was satisfactory were drawing compensation and roughly one-third of the latter received monthly payments in excess of \$30. Whether the maladjustments at follow-up antedated military service or arose out of military service seems unrelated to compensation status.

**TABLE 175**

*VA Compensation for Psychiatric Disability and Man's Own Estimate of Change in Health From Entry Into Service To Follow-up*

Change in health	Number of men	Percentage compensated	Men drawing \$30 or more monthly as percent of total compensated for psychiatric disability only
Same or better.....	202	21.3	11.9
Somewhat worse.....	265	42.6	43.4
Much worse.....	207	62.3	58.1
<b>Total.....</b>	<b>674</b>	<b>42.3</b>	<b>44.9</b>

Compensation is also statistically related to the man's opinion of his need for treatment at follow-up, but by no means as closely as one would expect; 57 percent of those feeling great need for treatment and 35 percent of those feeling no need were receiving compensation. The *amount* of compensation is entirely unrelated to the opinion as to need for treatment. That is, men who are drawing relatively large benefits are no more likely than those drawing small benefits to believe that they need treatment. This suggests again the need for more emphasis on treatment than on compensation in the handling of veterans. The examiner's estimate of the need for treatment is more closely related to compensation than is the subject's own estimate. Table 176 shows how compensation varies, both

**TABLE 176**

*VA Compensation for Psychiatric Disability and Examiner's Estimate of Need for Psychiatric Treatment*

Examiner's estimate of need for treatment	Number of men	Percentage compensated	Men drawing \$30 or more monthly as percent of total compensated for psychiatric disability only
No need.....	262	24.8	28.1
Treatment desirable but not necessary.....	191	42.4	41.9
Treatment would be of considerable benefit.....	173	56.1	46.7
Treatment greatly needed.....	134	61.2	64.5
<b>Total.....</b>	<b>760</b>	<b>42.8</b>	<b>46.5</b>

as to likelihood and amount of any compensation. A majority (54 percent) of those whose payments exceed \$50 monthly are listed by examiners as being in great need of treatment, but this is not true of those whose benefits are smaller. About 5 percent of those called not ill by examiners were drawing at least \$40 monthly.

Although about half of the men who were receiving disability compensation had never had any treatment for their emotional difficulties after discharge, those who had sought specifically psychiatric help after separation from service more often received compensation, and in larger amounts, than those who reported no effort to obtain help with their problems or who sought symptomatic relief from nonpsychiatrists. These facts may indicate merely that the men who were sicker more often sought psychiatric treatment or that seeking such treatment in itself assures more sympathetic or more liberal handling. It is a sad commentary, however, that so many men who are compensated have not sought treatment.

The subjects were also asked, it will be recalled, about their willingness to seek psychiatric aid in the future in case of need. Study of their reactions to this hypothetical question was made separately for those who had been treated since separation and for those who had not. Attitude toward future treatment was found to bear no relation whatsoever to compensation status for men who had already sought help; 57 percent of those with positive attitudes and 58 percent of those with negative attitudes were receiving compensation. But for men who had not previously sought help there was a significant difference: Those with negative attitudes were slightly more often receiving compensation and in larger amounts (46 percent vs. 34 percent). It is possible that among those who draw compensation there is a group who do not merit it and who would resist therapy as a threat to their compensation. But the untreated group is not as sick as the treated group and it may be that it is easier for them to deny illness and therefore react negatively to the possibility of getting treatment. This would appear to be an important area for study by the Veterans Administration.

Attitudes toward various aspects of military service were also explored, viz, toward superiors, assignments, training, discipline, and time spent. None of these was related in any way to compensation status. The motivation for seeking compensation lies elsewhere.

## **IN RELATION TO PERIOD OF MILITARY SERVICE**

There is a quite definite correlation between total length of military service prior to first psychiatric breakdown and amount of compensation (for any cause) and between length of overseas service prior to first psychiatric breakdown and compensation (table 177).

The low average for men with no compensation probably reflects the fact that any residual disability is more likely to be judged non-service-connected or non-service-aggravated if breakdown was early and discharge for disability immediate, as was more apt to be the case with men who had shorter service. Many others not on compensation, of course, served long despite

**TABLE 177**

*Amount of Compensation for All Causes and Length of Service Prior to Breakdown*

Monthly compensation	Average months of service	
	Total	Overseas
None.....	17.5	5.8
\$1-29.....	22.6	7.0
30-59.....	24.2	8.2
60 or more.....	28.1	11.8
<b>Total.....</b>	<b>20.4</b>	<b>6.8</b>

breakdown and were without disability at follow-up. The fact that length of service is associated with size of benefit suggests that examiners and claims adjudicators are influenced by length of service in making recommendations as to level of disability and benefits. The possibility that psychiatric disability is actually greater for men who served longer was discussed previously and found not to be the case.

Location at breakdown is quite strongly associated with compensation status, as may be seen from table 178. Three distinct groups are plainly evident there: (1) Men who broke down before going overseas, of whom only 25 percent are drawing compensation; (2) men who broke down during combat, or after some overseas duty not involving combat; and (3) men who broke down only after leaving combat. The two combat groups differ between themselves quite significantly as to the proportion receiving compensation, but not as to the amount of compensation. Both combat groups differ quite markedly, however, from the noncombat groups in point of average monthly payments. Payments in excess of \$30 were made to 52 percent of the combat cases and to only 38 percent of the noncombat cases. It has been previously shown (p. 146) that the combat cases have no more psychiatric disability than the noncombat cases, so that the differential reflects administrative policy and practice. One further distinction of interest concerns men who broke down in the Z/I. Of those who broke in basic or boot training, only 11 percent were drawing compensation for psychiatric disability in contrast to 30 percent of those who broke later but before going overseas.

The major area of stress precipitating breakdown is similarly related to compensation status. The combat cases exhibit the differences already alluded to, and in addition those whose stress was of the interpersonal variety (regimentation, etc.) are rather less often compensated for disability (29 percent) than other noncombat groups. Some of these are probably diagnosed by the VA as personality disorders and therefore not compensated.



Although the combat and noncombat cases differ in the indicated fashion, severity of combat itself seems unrelated to likelihood of compensation for psychiatric disability. Compensation was being paid to 52 percent of the men whose combat exposure was no more than moderate, and to 54 percent of those whose combat experience involved severe exposure. There is evidence (P about .02) that severity of combat is related to the amount of any payment, however. The size of payment varies for the two combat groups as shown in table 179.

Duration of combat, for men with ground combat experience, is unrelated to the likelihood of compensation for psychiatric disability. In addition, and unlike severity of combat, it is also unrelated to the amount of compensation. This discrepancy between duration and severity of combat

**TABLE 178**

*VA Compensation for Psychiatric Disability and Location at First Breakdown*

Location at first breakdown	Number of men	Percentage compensated	Men drawing \$30 or more monthly as percent of total compensated for psychiatric disability only
Before going overseas.....	303	25.1	35.3
In combat.....	252	43.7	49.5
Overseas, noncombat.....	170	43.5	40.3
After combat.....	140	66.4	54.8
<b>Total.....</b>	<b>865</b>	<b>40.8</b>	<b>45.9</b>

**TABLE 179**

*Amount of Compensation for Psychiatric Disability and Severity of Combat*

Amount of monthly payment	Severity of combat	
	Not more than moderate	Severe
	<i>Percent</i>	<i>Percent</i>
Under \$20.....	46.2	41.6
\$20-49.....	44.6	31.9
50 or more.....	9.2	26.5
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>
Number of men.....	65	113

in this respect merits further study. In chapter V, it may be recalled, severity of combat was found unrelated to the examiner's estimate of psychiatric disability. Both severity and duration of combat are rough indices of stress, and although one could not argue that they are interchangeable, it does appear that if degree of objective stress *per se* underlies the relationship between severity and amount of compensation, its effect should also be seen in duration of combat.

Compensation status is quite reliably associated with apparent severity of the first acute episode in service, but amount of compensation is not. Only 28 percent of the men whose illness seemed mild (or at least not obviously severe) were drawing compensation for psychiatric disability in contrast to 53 percent of those whose illness seemed severe at the time.

Also, since it was the sicker patient who was apt to receive individual psychotherapy and especially if his illness first developed in the service, it is not surprising to find that those who received individual therapy in the service were more often granted disability compensation and possibly even in greater amount than others.

Men who were discharged for psychiatric disability were of course much more apt to be granted compensation for psychiatric disability than those who were returned to duty after breakdown, 57 vs. 15 percent.

Finally, psychiatric condition at separation is perhaps more intimately related to compensation status than any other single factor. Compensation was received by only 8 percent of those who at separation were either normal or at most suffering from neurotic symptoms without having a clinical neurosis, in contrast to 54 percent of those who had a neurosis.

## IN RELATION TO PRESERVICE CHARACTERISTICS AND FAMILY HISTORY

Family history of psychiatric illness, the role of religion in the family, and economic status of the family were all found to be unrelated to compensation status and to the amount of any compensation received.

Preservice personality was studied in relation to compensation status and amount of compensation and no very clear-cut relationship found (table 180). There is considerable variation among the personality groups with respect to the percentage compensated, but plainly some other factor is involved. That factor must surely be the nature of the military experience. When each personality group is correlated with site of breakdown it is seen that there is comparatively little variation among the personality groups provided that they have the same site of breakdown. The observed variation among personality groups then derives wholly from differences as to site of breakdown.

The educational level attained at entry into military service is also unrelated to both likelihood and amount of compensation for psychiatric disability. Occupation before entry is similarly unrelated. The man's own evaluation of his health at entry, on the other hand, is quite reliably related to compensation status. Men who described their health at entry

as excellent somewhat more often drew compensation for disability than men who thought their health was at best fair.

About 17 percent of the men received some form of treatment for an emotional disorder before service. As would be expected, they received compensation less often (33 percent) than men with no such history (44 percent), although the amount of compensation in those who received it was the same in both instances.

Age at entry into military service is unrelated to compensation status. Intelligence also seems unrelated to compensation status and to size of payment if compensated.

**TABLE 180**

*Percentage With VA Compensation for Psychiatric Disability and Percentage Drawing \$30 or More Monthly Among Those Compensated for Any Type of Disability*

Preservice personality	Number of men	Percentage compensated for psychiatric disability	Men drawing \$30 or more monthly as percent of total compensated for any reason
Normal .....	116	35.3	33.3
Neurotic traits only .....	277	49.8	47.6
Suggestive neuroses .....	127	26.0	42.9
Overt neuroses .....	117	38.5	42.6
Personality disorders .....	163	44.8	50.0
Total .....	800	41.3	45.1

## SUMMARY

The man with a service-connected disability who believed his health had deteriorated since he entered the service, who showed some maladjustment at follow-up, who had sought some treatment after discharge and still felt the need for treatment, was the one who was most apt to be drawing compensation. Compared with others who broke down in the service but did not receive compensation, he was likely to have served longer and to have been overseas longer. He was more likely to have been in combat and to have been discharged for disability with persistent psychoneurotic symptoms. What section of the country he came from, or whether from a rural or urban area, his occupation, his attitude toward his military experience, his family history, the economic status of his family, his age, education, intelligence, and his emotional health prior to entering the service, all seem to have no relationship to his chances of receiving disability compensation at follow-up.

While in general these findings are consistent with the policies governing the granting of compensation, closer inspection suggests that much is left to be desired. Some men with no symptoms and others who on follow-

up examination were not considered disabled were nevertheless receiving compensation, as were some who felt there had been no change in their condition since entry into service. More emphasis seems to be placed on granting compensation than on urging treatment for whatever residuals do exist. This is in contrast to the opinions of the examining psychiatrists. Many of the men who are receiving compensation never sought any treatment after their discharge from the service and they are somewhat less inclined to undertake future treatment than those not receiving compensation.

Although compensation was granted more often to those who served longer, length of service was found to have no relationship to the severity of illness at follow-up and it is possible that compensation for disability is being scaled, perhaps unwittingly, in terms of the military performance.

If a careful distinction were being made between conditions which are service-connected and those which existed prior to service, there should be a high degree of correlation between preservice personality and compensation. Actually no relationship at all was found. This is highlighted by the finding that 33 percent of the men who had received treatment of one kind or another for emotional disorders prior to entering the service were receiving compensation, in contrast to 44 percent of the men who had no such history, and their average amount of compensation was the same.

## *Part Three*

### **ANALYSIS OF MILITARY EXPERIENCE**

In chapter III the individual details of military experience have been set forth in discrete fashion, with no indication of their relation to other aspects of the total experience. Part Two provides some information on the relation of follow-up status to the facts of the military period. Here interest lies in the relationships among various aspects of the military experience, of military experience to preservice history, and of military experience to follow-up status. Insofar as the basis data for the last subject have already been given in Part Two, it will be necessary here merely to change their focus from follow-up status to military experience.

As was seen in Part One, a wide variety of information was obtained on the military period, and there is no need here to review it all in the pattern just outlined. It will suffice to choose from the facts on the military period those which seem either most important or most representative, i. e.:

1. The nature of the stress which was experienced.
2. The location at breakdown.
3. The severity of illness at time of breakdown.
4. The treatment received in service and the response to it.
5. The pattern of disposition following any and all psychiatric admissions.

Each of these subjects will be taken up in turn, and in three parts covering the relation of the particular fact of the military period to (1) other aspects of the military experience, (2) elements in the preservice history, and (3) follow-up status.

## CHAPTER XII

### NATURE OF STRESS

It may be recalled from chapter III that a set of categories was developed for recording the qualitative nature of stress and that the pattern of stress for the individual was summarized by designating that category which appeared to play the major role in precipitating the breakdown. In addition, the major area of stress was scaled as to severity, and combat experience was rated as to both severity and duration. The analysis here is primarily in terms of the major area of stress.

#### STRESS AND OTHER ASPECTS OF THE MILITARY EXPERIENCE

In only 4.7 percent of the cases was no stress of any kind reported, and more than one stress was reported by nearly half of the men. Table 181 gives the percentages experiencing each type of stress and the percentage for whom it was the major form. Combat was reported as the major area of stress for almost all men who had ever been in combat. In a few instances, however, where exposure to combat was brief and nontraumatic and where some other type of stress seemed more important in relation to breakdown, the latter was considered the major stress. It is difficult to

**TABLE 181**

*Percentage of Men Experiencing Various Forms of Stress Prior to Breakdown, and Major Area of Stress Precipitating Breakdown*

Type of stress	Percentage of men	
	Experiencing this stress	Having this as major stress
Civilian (domestic, financial, etc.).....	32.9	6.5
Inherent military environmental (separation from home, change in diet, fear of future combat, etc.)..	56.3	7.7
Military frustrations and excessive demands (regimentation, etc.).....	44.4	12.5
Combat (exposure to enemy fire).....	51.6	42.5
Other environmental (physical demands, illness, injury, etc.).....	58.1	14.1
No single area primary.....		12.1
No stress evident.....		4.7
<b>Total</b> .....		<b>100.1</b>

separate objective from subjective stress. Just to enter the service was much more stressful for one man than for another; similarly, to go overseas was a greater stress for some than for others. The coding of the major area of stress for each individual usually involved a compromise between the objective and subjective elements. There is no doubt, however, that some men were exposed to greater objective hardship than others, whether it was climate, illness, poor leadership, or combat, and insofar as they could be ascertained such facts were considered in defining the major area of stress.

One would expect a close relationship between the major area of stress for an individual and where he was in his military career when he broke down. To a great extent stress is determined by the position an individual occupies in his progression from induction to combat overseas. Combat was generally considered to be "severe" stress and other forms mild. Where combat was brief, or where it consisted of being bombed in a rear area, it was considered "moderate" stress or, in a few instances, even "mild."

Men who broke down in combat generally responded more favorably to treatment than those who decompensated under less stress and were, therefore, as a group more predisposed to breakdown. The combat breakdown typically resulted from overwhelming objective stress and danger, so that the mere removal of a man to the comparative safety of a rear area, even if for a short time, should have had a therapeutic effect. For this reason many psychiatrists have questioned the practice of classifying the pure combat breakdown as a psychoneurosis.

It is interesting to study disposition from hospital in relation to the major area of stress (table 182). Disposition depends upon the major area of stress only in that combat cases were returned to duty in considerably greater proportion and medically discharged less often. The fact that the disposition pattern for other than combat cases is so similar, despite the marked variation in circumstances and stress associated with breakdown, makes one question the difference between combat and noncombat cases as possibly reflecting differences in pressure to conserve manpower through reassignment. However, the man who was returned to duty after breakdown in combat was more apt to render good service than the man who broke down elsewhere. In addition to the factor of motivation, this would suggest that it was their greater inherent stability rather than manpower requirements which led to the more frequent return to duty on the part of men who broke down in combat.

The clinical experience that those who break down under little or no stress are more predisposed is given some statistical validation by the finding that at separation from the service they more often regarded their health as the same or better than at entry in comparison with those who broke down under greater stress (32 vs. 16 percent).

As already noted, the observational process inevitably provides a mixture of objective and subjective stress. Certain forms of objective stress, e. g.,

**TABLE 182**

*Major Area of Stress and Pattern of Disposition*

Major area of stress	Percentage distribution by pattern of disposition					Number of men
	Duty only		CDD or IS		Total	
	Never reasigned	Reassigned	On first admission	Only on subsequent admission		
Civilian or none . . . . .	13.3	15.3	46.9	24.5	100.0	98
Inherent military . . . . .	20.9	11.9	41.8	25.4	100.0	67
Military frustrations . . . . .	18.3	16.5	41.3	23.9	100.0	109
Combat . . . . .	12.5	37.0	33.1	17.4	100.0	368
Environmental . . . . .	14.0	15.7	49.6	20.7	100.0	121
No single area . . . . .	13.2	12.3	45.3	29.2	100.0	106
<b>Total . . . . .</b>	<b>14.3</b>	<b>24.1</b>	<b>40.2</b>	<b>21.5</b>	<b>100.1</b>	<b>869</b>

entry into service and separation from home and familiar surroundings, were experienced by all men in the service, but for only a fraction of the sample did they create sufficient subjective stress to be reported. Combat, on the other hand, was a subjective as well as an objective stress for all who participated in it, and a subjective stress for many more who did not.

Civilian forms of stress (chiefly domestic difficulty) were experienced by about 25 percent of the men whose major area of stress was different. Inherent military stress was universal in the objective sense, but on a subjective basis it was present in from about 35 to 60 percent of the cases with a different major area. Military frustrations (regimentation, etc.) also had a fairly universal objective counterpart, but as subjective stresses were reported by about 25 to 35 percent of the men with a different major area. The combination of stresses varies widely and is especially complex for the combat cases who not only endured the most severe form of stress but also suffered other forms of stress more often than others, especially environmental stress.

In addition to its multiplicity, stress varied widely as to severity. In the rough scaling of stress it was its objective aspect which was evaluated, insofar as possible. In consequence it is rare that anything but combat was called severe. In 72 percent of the combat cases and in only 2 percent of the others was the major form of stress rated as severe, in comparison with 4 percent and 94 percent termed mild for the combat and noncombat cases respectively. The figures are the same if one evaluates not simply the major area but all forms of stress sustained by the individual.



Breakdown in the Z/I prior to any overseas service is especially frequent among those whose major area is either inherent military stress or military frustrations. Men with such early breakdown may be classified as a group with especially low resistance to stress. Their objective stress rarely amounted to more than the bare fact of entry into service, being away from home, and changes in diet. The anxiety produced by these changes was, in these men, all out of proportion to that experienced by most men who served and even by most men in this sample of those who broke down.

Men whose first breakdown occurred only after they left combat pose a special problem, but after an investigation into such factors as MOS, arm or service, severity of combat, and specific form of combat stress, it was concluded that this group is no less a combat group than those whose breakdown occurred in combat.

The major area of stress was also studied in relation to severity of illness, treatment, health at separation, and the like, with rather large differences being found. The combat cases were somewhat less often severely ill at breakdown (24 percent in comparison with 33 for noncombat). Evaluation of severity of illness was influenced to some extent by length. Combat cases received more individual therapy than others and their response to treatment also was best. Response was about the same for the other major-area groups.

## STRESS AND PRESERVICE CHARACTERISTICS

In studying the relation between stress and preservice factors, e. g., psychiatric history of parents, one is interested in knowing the extent to which the family background and early history of the individual seem to affect his resistance to types and severities of stress. The findings here apply only to a set of men who broke down and not to a cross section of the general military population. The influence of such factors on the probability of breakdown has been discussed in Part One.

Most of the preservice factors described in chapter II were studied here. The first concerns psychiatric illness in the immediate family: mother, father, and siblings. These histories were integrated into a single summary shown in table 183 and correlated with the major area of stress precipitating breakdown. The variation exhibited there is considerably less than one might expect, although chiefly in the expected direction: more negative histories are associated with more stress, positive histories with less stress. Statistically, the variation is of borderline significance ( $P=M.05$ ). In the group with the most psychopathology in their immediate family (two parents or a parent and a sibling exhibiting at least a clearcut emotional or personality disorder), only 35 percent lasted long enough to break down under the stress of combat in comparison with 53 percent for the group with no history of psychopathology in the immediate family. It seems clear, then, that the psychiatric history of individuals in the family, when evaluated only in terms of presence of illness, is of relatively little practical predictive value with respect to the stress under which these men broke down.

TABLE 183

*Major Area of Stress and Psychiatric History of Parents and Siblings*

Major area of stress	Psychiatric history of parents and siblings <sup>1</sup>							
	Entirely negative	Suggestive only	Positive				Largely negative, but partly unknown	Total
			Primarily siblings	Primarily father	Primarily mother	Two or more		
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
None or civilian . . . . .	8.3	8.5	10.4	8.2	19.4	15.2	15.3	11.2
Inherent military . . . . .	8.8	8.1	4.2	6.1	9.7	9.1	6.1	7.7
Military frustrations . . . . .	8.3	13.8	20.8	14.3	18.1	15.2	8.0	12.5
Combat . . . . .	53.0	41.7	39.6	40.8	36.1	34.8	39.9	42.5
Environmental . . . . .	11.6	14.6	16.7	18.4	9.7	7.6	17.2	14.1
No single area . . . . .	9.9	13.4	8.3	12.2	6.9	18.2	13.5	12.1
Total . . . . .	99.9	100.1	100.0	100.0	99.9	100.1	100.0	100.1
Number of men . . . . .	181	247	48	98	72	66	163	875

<sup>1</sup> See p. 177 for criteria of classification.

This is also true of the severity of the major area of stress precipitating breakdown.

Another basic characteristic of the family background is the fact of death or withdrawal on the part of one or both parents. When the classification as to death, divorce, etc., was related to major area of stress, as in table 184, statistically significant variation was observed, but again its magnitude is perhaps not as great as might be expected. Among men with a negative background in this respect, only 7.5 percent broke down under no stress or under some civilian type of stress, in contrast with 24.1 percent of those who had lost one or more parents by divorce or separation, and 10.5 percent of those who had lost one or more parents by death. Any relationship which may exist is not very strong, therefore, and parental death, or a simple scale of parental withdrawal such as has been used here, is of little or no predictive value in connection with resistance to military stress.

**TABLE 184**

*Major Area of Stress and Parental Withdrawal*

Major area of stress	Form of parental withdrawal				
	None	Death	Separation, divorce	Chronic illness	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
None, or civilian . . . . .	7.5	10.5	24.1	13.5	10.3
Inherent military . . . . .	8.4	7.9	3.6	7.7	7.7
Military frustrations . . . . .	13.6	8.4	16.9	17.3	12.9
Combat . . . . .	41.3	48.2	38.6	34.6	42.2
Military environment . . . . .	15.7	12.0	10.8	19.2	14.5
No single area . . . . .	13.6	13.1	6.0	7.7	12.3
<b>Total . . . . .</b>	<b>100.1</b>	<b>100.1</b>	<b>100.0</b>	<b>100.0</b>	<b>99.9</b>
Number of men . . . . .	479	191	83	52	805

Preservice characteristics for which there is no evident association with the pattern of stress include the following:

- Parental attitudes represented in the extremes of affection and rejection, discipline and indulgence, and protection and independence.
- Attitude of subject toward his mother.
- Attitude of subject toward his father.
- Economic status of parental family.
- Relative emphasis on religion in parental family.
- Presence of overt sibling rivalry.
- Birth order.
- Intelligence.

Residence at separation (geographical region and size of city).

Civilian occupation prior to entry.

Study of parental conflict developed a slight suggestion that men subjected to parental conflict at home were more apt to break under no stress or under civilian types of stress. The percentages noted are shown in table 185. This suggestion does not, however, extend to the severity of the major area of stress.

**TABLE 185**

*Conflict Between Parents and Percentage With Breakdown Under Minimal Stress*

Relationship between parents	Percentage breaking under no or civilian stress
Quite harmonious.....	5.9
Conflict absent.....	9.5
Conflict present, not more than moderate.....	10.3
Conflict present, marked.....	19.5
Total.....	10.6

Only about 5 percent of the men in the sample were foreign born and about 15 percent had foreign-born parents. When this cultural characteristic was studied in relation to major area of stress it was found that for the foreign born and for those with foreign-born parents breakdown was less often associated with no stress or with civilian types of stress. The percentages are:

	<i>Percentage Breaking Down Under No or Civilian Stress</i>
Foreign born.....	4.3
Foreign-born parents.....	4.8
Other.....	12.5
Total.....	10.8

The variety of religious faith embraced in the parental family was also found to be significantly related to the major area of stress. Two comparisons were made: (1) as to proportion of cases with combat the major area for all three religious groups, and (2) as to the entire distribution of major area of stress for the two large religious groups. The percentages observed in the first of these are:

<i>Religious Faith</i>	<i>Percentage With Combat the Major Area of Stress</i>
Catholic.....	51.1
Protestant.....	39.2
Jewish.....	25.0
Total.....	42.0

The observed discrepancy has a probability of less than .001 under the null hypothesis. When just Protestants and Catholics are compared, as in

table 186, the same difference is seen coupled with an excess of Protestants breaking down under no stress or under civilian forms of stress. The explanation for this is not known and the subject is one that should certainly be studied further. It is not an artifact of age differences.

**TABLE 186**

*Major Area of Stress and Religious Faith*

Major area of stress	Religious faith	
	Protestant	Catholic
	<i>Percent</i>	<i>Percent</i>
No stress, or civilian .....	13.6	7.0
Inherent military .....	6.9	8.1
Military frustrations .....	12.4	10.8
Combat .....	39.6	51.7
Environmental .....	15.0	10.5
No single area .....	12.4	11.9
<b>Total</b> .....	<b>99.9</b>	<b>100.0</b>
<b>Number of men</b> .....	<b>419</b>	<b>344</b>

When an evaluation was made of the entire family background with respect to data of psychiatric importance in the fashion described in chapter II, significant differences were found in the distributions with respect to major area of stress, but not as to its severity. Table 187 presents these distributions and shows that the differences are largely in terms of no stress or civilian stress, military frustrations, and combat. Although these differences lie in the expected direction they are, as was noted earlier in connection with individual preservice characteristics, rather smaller than had been anticipated. That is, the psychopathology evident in the parental family produces less than the expected amount of variation in the type of stress required to precipitate breakdown.

Age at entry into service is quite significantly related to the major area of stress associated with breakdown (table 188). That the combat cases are younger could have been expected from the facts of military assignment, but in the special study referred to in the earlier discussion of age and the chance of breakdown (pt. One, p. 38) an effort was made to study age-variation in rate of breakdown *within* different military environments. The pattern of variation exhibited there (p. 39) was found to describe the experience of men serving in the Zone of Interior, and in noncombat assignments in overseas theaters, but was not found for men in combat. The disappearance of the "age effect" in men assigned to regimental combat units may reflect the continuous process of selection which precedes combat, a process

which would tend to eliminate older men with lower resistance and retain those with a higher average level of resistance than men of their age, or it may be that the stress of combat is of such magnitude as to exceed some point on the resistance scale at which younger men no longer have an advantage. It seems clear, however, that resistance to breakdown in regimental combat is no less in the younger than in the older men actually participating in regimental combat in World War II.

**TABLE 187**

*Major Area of Stress and Summary of Psychiatric Signs in Family History*

Major area of stress	Summary of psychiatric signs in family history			
	Not more than suggestive	One to three positive signs	Four or more positive signs	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
No stress, or civilian.....	8.7	8.6	14.1	11.0
Inherent military.....	10.3	7.4	7.5	7.9
Military frustrations.....	7.1	11.3	16.7	12.9
Combat.....	47.6	45.1	37.6	42.3
Environmental.....	15.1	12.5	13.2	13.2
No single area.....	11.1	15.1	10.9	12.7
Total.....	99.9	100.0	100.0	100.0
Number of men.....	126	337	348	811

**TABLE 188**

*Major Area of Stress and Age at Entry Into Service*

Major area of stress	Age at entry			
	Under 20	20-29	30 or over	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
No stress, or civilian.....	10.5	11.3	11.9	11.2
Inherent military.....	6.2	6.4	12.4	7.7
Military frustrations.....	7.7	12.5	17.5	12.5
Combat.....	56.5	43.9	23.7	42.4
Environmental.....	8.6	14.6	18.6	14.1
No single area.....	10.5	11.3	16.0	12.1
Total.....	100.0	100.0	100.1	100.0
Number of men.....	209	471	194	874

While it is an oversimplification to describe an admission rate as the ratio of stress to resistance, this formulation does provide an arbitrary device for scaling resistance whenever stress may be considered fixed. If there is a single environment in which two age groups are equally exposed to stress but manifest different rates of breakdown, their relative resistance may be characterized as proportional to the reciprocals of the admission (or breakdown) rates. Such estimates of relative resistance are given in figure 11 by age and within each of the broad military environments. In every environment except regimental combat relative resistance falls off rapidly with age; because of the small size of the regimental-combat sample it is not very reliable above age 30. The decline is greatest in the first year of service. It is also of interest that the WW II Selective Service statistics show the rejection rate for psychiatric disorders to have increased notably with age. For the period April 1942 to March 1943, the Selective Service Monograph<sup>44</sup> on age gives the following estimated rejection rates:

<i>Age at Examination</i>	<i>Rejections for Mental Disease per 1,000 Examinees</i>
18-25.....	35
26-29.....	55
30-37.....	76
38 or more.....	92

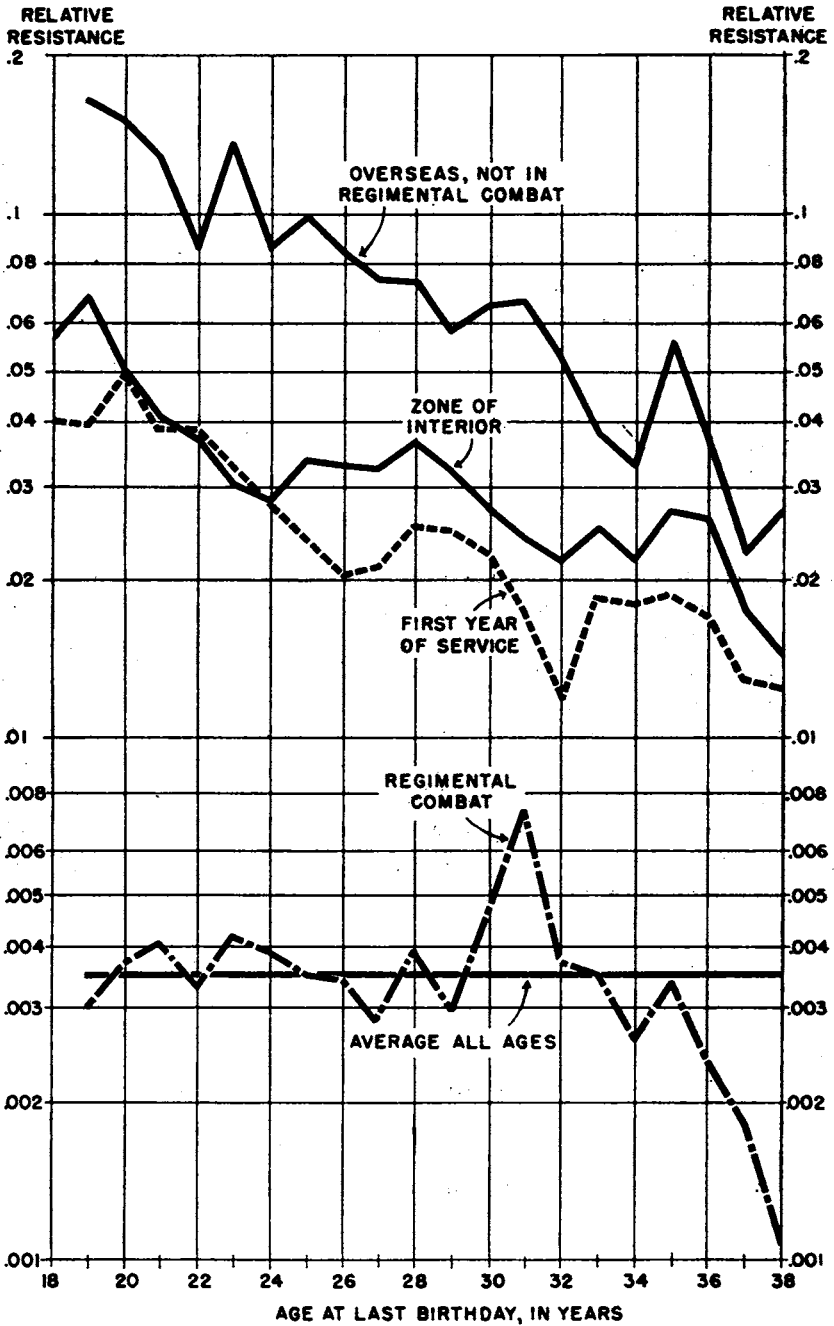
These rates increase about as fast with advancing age as do the neuropsychiatric admission rates for men in their first year of service. Men of 18 and 19 had the lowest rejection rates, and this fact underlies the recommendation by the Selective Service System that "men of 18 and 19 should be liable for induction as they comprise the age group most physically fit." The present study suggests that this age group is also the most emotionally fit to resist the various stresses of military service. At the upper end of the age range the information provided by the present study is of less decisive value; estimates of resistance suggest that the choice of an upper age limit is necessarily arbitrary. In this region, resistance is declining but at least through age 38 there is no suggestion that any particular age is critical and age 38 must be regarded as an arbitrary dividing line.

Educational level also appears to be related to major area of stress (table 189). The least well educated have a fairly average pattern of stress, but the group with the most education, defined as those with formal training beyond the high-school level, show a deficit of combat cases (which may be the result of the assignment process) and an excess suffering from "military frustrations." In the groups of more average educational attainment there are proportionately more combat cases but otherwise the pattern is not a clear one. There may be some confounding with age but this has not been explored.

<sup>44</sup> United States Selective Service System: Age in the Selective Service Process, Special Monograph No. 9, U. S. Government Printing Office, Washington, D. C., 1946.

**FIGURE 11**

*Relative Resistance to Breakdown With Psychoneurosis, by Age and by Military Environment, White Enlisted Males, U. S. Army, 1944*





Marital status, which is even more clearly dependent upon age than is education, is also quite significantly associated with the major area of stress, single men having a considerable excess of combat cases, perhaps because of their age, in comparison with men who were or had been married (table 190).

The veteran's *ex post facto* evaluation of his health at entry into service is another preservice characteristic which has a significant association with the major area of stress. Table 191 shows that the men who rated their health as poor or very poor much less often lasted long enough to break down in

**TABLE 189**

*Major Area of Stress and Educational Level at Entry Into Service*

Completed grades of schooling at entry	Percentage distribution by major area of stress							Number of men
	No stress or civilian	Inherent military	Military frustration	Combat	Environmental	No single area	Total	
Under 8 . . . . .	11.1	7.7	11.1	38.5	17.1	14.5	100.0	117
8 . . . . .	10.5	9.0	8.3	46.6	15.0	10.5	99.9	133
9-11 . . . . .	14.2	5.8	10.0	43.1	12.9	13.9	99.9	309
12 . . . . .	8.1	9.6	14.1	44.9	13.1	10.1	99.9	198
13 or more . . . . .	11.1	8.9	26.7	27.8	14.4	11.1	100.0	90
<b>Total . . . . .</b>	<b>11.5</b>	<b>7.8</b>	<b>12.6</b>	<b>41.8</b>	<b>14.0</b>	<b>12.3</b>	<b>100.0</b>	<b>847</b>

**TABLE 190**

*Major Area of Stress and Marital Status at Entry*

Major area of stress	Marital status		
	Single	Other	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
No stress, or civilian . . . . .	9.6	14.0	11.2
Inherent military . . . . .	5.7	12.0	8.0
Military frustrations . . . . .	12.3	14.7	13.2
Combat . . . . .	49.7	27.4	41.5
Environmental . . . . .	12.1	17.4	14.0
No single area . . . . .	10.7	14.4	12.1
<b>Total . . . . .</b>	<b>100.1</b>	<b>99.9</b>	<b>100.0</b>
Number of men . . . . .	513	299	812

combat, being more vulnerable to the lesser forms of stress in the objective sense. The small group with some evidence of preservice treatment (largely medical) for a psychiatric disorder also appears to have been more vulnerable to objective stress than those with no history of such treatment. Only 20 percent of those who had had any treatment prior to service and who broke down in service lasted until they were in combat in contrast to 47 percent of those who had not previously sought treatment for a disorder of emotional origin.

**TABLE 191**

*Major Area of Stress and Subject's Own Evaluation of Health at Entry*

Major area of stress	Health at entry			
	Excellent	Fair	Poor or very poor	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
No stress, or civilian . . . . .	8.6	12.2	20.5	10.2
Inherent military . . . . .	5.5	12.2	18.2	7.9
Military frustrations . . . . .	9.8	21.5	15.9	13.0
Combat . . . . .	51.2	27.9	15.9	43.3
Environmental . . . . .	13.9	8.7	18.2	12.9
No single area . . . . .	11.0	17.4	11.4	12.6
<b>Total . . . . .</b>	<b>100.0</b>	<b>99.9</b>	<b>100.1</b>	<b>99.9</b>
Number of men . . . . .	490	172	44	706

Each area of preservice adjustment was studied in relation to major area of stress precipitating breakdown, and in each instance men with preservice maladjustments more often broke down under no, or essentially civilian, stress. The ratio of the observed to the expected number of such breakdowns is given below for each type of maladjustment (table 192). A similar picture obtains if one examines the relative numbers for whom combat provided the major form of stress precipitating breakdown; men with specific maladjustments have only 60 to 90 percent of their expected share of such breakdowns.

Finally, the significance of the preservice personality was explored and it is here that the largest variation is found (table 193). The preservice personality classification represents, of course, the most penetrating and descriptive judgment made of the subject, and it would be surprising indeed if it were not found to be intimately related to major area of stress. It is noteworthy, however, that every group, even those with pre-existing overt neuroses, includes men who did not break down until they were subjected to the stress of combat. Those with pathological personalities reached combat much more often than those with psychoneuroses before

service. Those who seemed most sensitive to the interpersonal frustrations of military life were not, however, those with pathological personality types but those with pre-existing overt neuroses.

In summary, then, most factors in the preservice history seem not highly predictive of the type or amount of stress which will eventually precipitate breakdown. Characteristics which were found to be unrelated to major area of stress, or to its severity, include: parental attitudes of affection and rejection, discipline and indulgence, and protection and independence; attitudes of subject toward his father and toward his mother; economic status of the parental family; intensity of religious life in the parental family; overt sibling rivalry; position in the parental family; intelligence of subject; region and size of community of residence; and civilian occupation.

**TABLE 192**

*Preservice Adjustment and Breakdown Under Minimal Stress*

Area of adjustment described as impaired	Ratio of observed to expected number of breakdowns under no or essentially civilian stress
Family.....	1. 45
Sex <sup>1</sup> .....	1. 58
School <sup>1</sup> .....	1. 41
Work <sup>1</sup> .....	1. 67
Social and recreational <sup>1</sup> .....	1. 43
Community <sup>1</sup> .....	2. 34
Marriage <sup>1</sup> .....	1. 25
Summary of all areas <sup>1</sup> .....	1. 32

<sup>1</sup> In entire table, of which this is a detail, there is a significant association between major area of stress and this particular adjustment.

Psychiatric evaluation of parents and siblings appears to have only a weak relationship with major area of stress, men with more negative family backgrounds being able to withstand somewhat more objective stress. Parental withdrawal by death is without effect, but withdrawal by divorce and separation does exert a small effect. There is a suggestion that the extremes of parental conflict predisposed subjects to breakdown. The foreign born and those with foreign-born parents less often broke down under no stress or stress of the civilian types. Religious faith is associated with rather large differences in the pattern of stress, Catholics least often, and Jews most often, breaking down under forms of stress other than combat. A summary of all the signs of psychopathology in the family, exclusive of the personality and adjustment of the subject, is significantly associated with the stress pattern and in the fashion already indicated, but the relationship is not impressive. Age has the expected relation to the dis-

**TABLE 193**

*Major Area of Stress and Preservice Personality*

Major area of stress	Preservice personality					Total
	Normal	Neurotic traits	Neurosis		Pathological personality types	
			Suggestive	Overt		
	Percent	Percent	Percent	Percent	Percent	Percent
No stress, or civilian.....	5.2	7.3	13.8	15.9	16.0	10.9
Inherent military.....	5.2	6.1	14.9	11.2	5.1	7.6
Military frustrations.....	6.9	7.7	17.0	26.2	15.4	13.1
Combat.....	62.9	52.9	22.3	15.9	41.0	42.6
Environmental.....	10.3	14.9	16.0	15.0	7.7	12.8
No single area.....	9.5	11.1	16.0	15.9	14.7	12.9
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.1</b>	<b>99.9</b>	<b>99.9</b>
<b>Number of men.....</b>	<b>116</b>	<b>261</b>	<b>94</b>	<b>107</b>	<b>156</b>	<b>734</b>

tribution of major area of stress, younger men more often requiring the severe stress of combat to force their breakdown. It is believed that this same differential is seen in the comparison of the single and the married; the single men are largely the combat cases. This may well be another manifestation of the age effect. Some association with educational level is also apparent, but may too be influenced by age. The combat cases are found largely in the groups of moderate educational attainment; men of superior educational status have an obvious deficit of combat breakdowns.

Specifically psychiatric aspects of the individual's own preservice characteristics do, however, seem moderately well related to the pattern of stress. Men who described their health at entry as less than excellent, and those who had sought treatment (largely medical) for an apparently psychiatric disorder, much more often broke down under the noncombat forms of stress. Finally, the preservice personality is highly predictive of the stress pattern involved in breakdown. Although no single personality group has a monopoly on any single area of stress, and every area is represented in each personality group, nevertheless there are large and quite significant differences in the expected direction among the personality groups. From the above it would appear that the man who was most resistant to breakdown in WW II was the one who was young (18 to 20), single, well adjusted prior to entering the service, with moderate educational attainment (high-school education), who was of Catholic faith and either foreign born or of foreign-born parents, and whose family history was negative for emotional illness, broken home, or parental conflict.

## STRESS AND FOLLOW-UP STATUS

Another aspect in the analysis of stress deals with its relation to status at follow-up, the basic data for which have already been given in Part Two for each major follow-up observation. The variety of follow-up items which have been examined in relation to the form or severity of stress has been grouped as follows for presentation:

Symptoms reported at follow-up.

Veteran's comparison of condition at follow-up and at entry.

Adjustments.

Change in psychiatric condition since discharge.

Psychiatric disability, diagnosis, and prognosis.

Treatment.

Compensation by the VA.

At follow-up, it will be recalled, about 90 percent of the cases expressed complaints of one kind or another. The percentage with a complaint is independent of the major area of stress. However, complaints of the combat cases in relatively few instances (7 percent) originated in the preservice period, in contrast to 24 to 49 percent for the others who broke down under various forms of noncombat stress. The type and duration of combat were studied in relation to presence and origin of symptoms at follow-up. It was seen that type of combat had no real effect on the presence of symptoms at follow-up or on their classification as to origin. Duration of ground combat; also, had no relation to the presence or origin of symptoms.

The veteran's own comparison of his status at follow-up with that at entry into service is described in table 109; about a third of all the men rated their health at follow-up as much worse than at entry into service. The combat cases considered that they had suffered most (37 percent much worse; 22 percent same or better). Those with little or no stress apparently suffered the least (22 percent much worse; 35 percent same or better). Such comparisons are so subjective that they cannot be referred to any single scale of well-being. The actual severity of illness represented by the "much worse" of the combat cases may be less than the "worse" of another group, but since the differences concern not only the proportions called "worse" and "much worse" but also "same or better," they do seem reliably to indicate that more of the combat cases feel that the breakdown in service has somehow worsened their health. This was particularly so when health prior to service was described as fair rather than excellent.

The specific type of combat, its severity and duration, were also studied in relation to the man's own comparison of his health at follow-up and at entry and found to be quite unrelated.

Adjustment at follow-up seems unrelated to stress; this is true of each individual adjustment area (e. g., work) as well as of the overall adjustment to civilian life. Combat and noncombat cases do not differ in their overall adjustment at follow-up. This finding is of interest in view of the concern that has been frequently expressed that combat veterans would have a particularly difficult time readjusting to a civilian environment.

The incidence of improvement or regression in psychiatric condition following discharge from service bears no relation to the particular type of stress which was associated with breakdown.

Disability at follow-up, which is a measure of the extent to which the patient's neurosis interfered with life functions, especially work, has no evident relation to major area of stress or to its severity. There is, however, a suggestion, discussed on page 146, that those who participated in naval combat are more disabled at follow-up than those who saw other types of combat.

The psychiatric diagnosis formulated by the examiner at follow-up, on the other hand, as has already been indicated in chapter VI, is quite strongly associated with the major area and severity of stress precipitating breakdown. This is primarily because men with pathological personalities were found most frequently to have broken down under no or little stress and rarely from combat or undue hardship. Those with varying degrees of neurotic illness at follow-up did not differ as to percentage of combat cases.

The examiner's prognosis is unrelated to the major area of stress or to the duration of combat. This is also true of any treatment a man may have had following discharge from service.

VA compensation status is profoundly affected by the major area of stress, as was noted in chapter XI, combat cases having a much higher proportion drawing compensation. This complex fact is probably related to such considerations as the following:

1. The man who broke down in combat is more likely at follow-up to feel that his health has deteriorated.
2. The illness of the man who broke down in combat almost certainly was considered to have resulted from military service and was therefore compensable.
3. On review in the VA a combat case would have a better than average chance that compensation would be given.

Severity of combat, on the other hand, is unrelated to the chance of compensation. Among compensated cases, however, those whose combat was most severe are more likely to draw compensation in large amounts. The percentages drawing \$50 or more monthly are 26.5 for men with severe combat and 9.2 for those with combat of only mild or moderate severity. Duration of ground combat, however, is unrelated to both the likelihood and the amount of compensation.

## CHAPTER XIII

### LOCATION AT FIRST BREAKDOWN

The analysis of stress is not confined to the major area, already discussed, because location at breakdown characterizes stress in a somewhat different way and because the general subject is of such intrinsic importance. Accordingly, in the present chapter location at first breakdown is analyzed with reference to the three periods marked off by military service: before, during, and after.

#### LOCATION AT BREAKDOWN AND OTHER ASPECTS OF THE MILITARY EXPERIENCE

In view of the trend toward lowering psychiatric standards for induction and the use of military service itself as a screening device, there is added importance in knowing the prognostic significance of early vs. late breakdown, particularly since even with the fairly rigid induction screening that was practiced in World War II, over one-third of the total psychoneurotic breakdowns occurred in this country prior to overseas shipment, a somewhat greater number than occurred in actual combat.

Those who broke down in combat had previously been exposed to the same types of objective stress, and in the same degree, which in others resulted in breakdown before they ever got to combat. Yet stress for any man consisted of more than just the objective features of a given military assignment or situation. It involved the special meaning it had for him and included things which were happening to those who were close to him both in and out of the service. Only some of the men who broke down complained of the food or of the demands of training, although such environmental factors presumably were objectively about the same for all.

Multiple stresses seemed to contribute to each breakdown regardless of its location. Almost as many men who broke down in combat reported civilian types of stress as those who broke down in the Z/I before going overseas. Conversely, almost as many of the early breakdowns reported stresses of the "inherent military" type as did the combat breakdowns. Such specific stresses as economic hardship, anxiety over entry into service, homesickness, and fear of impending shipment overseas were more often present in the early cases than in the late or combat cases, but these stresses were by no means confined to the early cases. Lack of comfort, change in diet, and food deprivation were often factors in the combat cases, as would be expected, but it is of interest that such stresses also contributed to some of the early breakdowns although their objective severity probably did not approach that experienced by the combat cases.

Large differences were of course found in the average length of service prior to first breakdown among the various "location" groups, as follows:

<i>Location at Breakdown</i>	<i>Months of Service</i>
Z/I, prior to any overseas service.....	11.7
Overseas in combat.....	22.7
Overseas, not in combat, or Z/I after overseas noncombat duty.....	22.7
Overseas or Z/I, after combat.....	30.7

Mission of unit is a War Department classification which could not be applied to Navy and Marine Corps cases. As was indicated earlier (pp. 44-45) at the time of first breakdown about 60 percent of the men were in units whose mission was combat. Even in the early Z/I breakdowns, almost half of the men were in combat units. Since there was never a time when half the Army strength in the Z/I was in such units, it seems plain that the anticipation of combat played a considerable role even in the early breakdowns. Undoubtedly this also applies to many of the cases in which breakdown first occurred overseas prior to any combat experience.

**TABLE 194**

*Location at Breakdown and Apparent Severity of Illness at Breakdown*

Location at breakdown	Percentage distribution by apparent severity of illness				Number of men
	Mild or not severe	Moderate	Severe	Total	
Z/I, before going overseas.....	33.4	30.3	36.3	100.0	284
In combat.....	25.4	53.6	21.0	100.0	224
After combat.....	28.7	46.9	24.5	100.1	143
Overseas noncombat or Z/I after overseas noncombat.....	26.3	44.7	28.9	99.9	152
Total.....	29.0	42.5	28.5	100.0	803

Significant differences were found among the location groups with regard to severity of the illness at the time of breakdown. As table 194 shows, the early cases were more often rated as the most severe, the combat cases less often, but the relationship is by no means close. The type of treatment also varies quite significantly among the location groups, with individual therapy being given more often to men who broke down in combat (42 percent) and less often to those with early breakdown (21 percent).

Average length of service after first breakdown was 9.6 months for the entire sample, some of which was, of course, spent in hospital. The longest service was not, however, on the part of the men who broke down early but



on the part of those who broke down in combat. The calculated means are as follows:

<i>Location at Breakdown</i>	<i>Months of Service After Breakdown</i>
Z/I prior to any overseas service.....	8.1
In combat.....	12.6
Overseas, or in Z/I after overseas service.....	9.9
After combat.....	7.3

It is extremely difficult to interpret these differences because so many factors were operating to produce both larger and smaller differences. For example, the end of the war and demobilization tended to limit the subsequent service of combat cases more than Z/I cases. On the other hand, some combat cases were evacuated to the Z/I, and the time they spent in evacuation and continued hospitalization in the Z/I was included as "service" after breakdown.

It was found that 78 percent of the men who first broke down in combat were returned to duty in contrast to 49 percent of those who broke down elsewhere. Furthermore, the combat case who was returned to duty was somewhat more apt to render satisfactory service than the Z/I case (78 percent vs. 62 percent). Seventy-two percent of the men with a Z/I breakdown ended up with medical or administrative discharges (the latter only rarely) in contrast to 39 percent of the combat cases. The entire pattern of disposition from any and all psychiatric admissions in service is summarized in table 195 for each major location group. It shows the differences in return to duty following the first breakdown and the differences in the chance of a subsequent disability discharge among men who were at first returned to duty. The men who had noncombat service overseas more often than others returned to their original assignments, if they were returned to duty at all. The greater incidence of discharge for men who first broke down only *after* having served in combat probably represents in part a more lenient policy for such men. The pressure to return men to duty was greatest for those who broke down in combat, but it is noteworthy that only 20 percent of these men escaped both reclassification and discharge. The overall disposition picture for 100 men breaking down in combat, then, would seem to be, for their entire period of service:

Immediate (i. e., after evacuation and hospitalization in Z/I) medical discharge after first breakdown.....	22
Subsequent administrative or disability discharge on psychiatric grounds..	17
Reclassified but not discharged.....	45
Never reclassified or discharged.....	16
Total.....	100

The disposition of men who first broke down in the Z/I is of particular interest, since early breakdown may be taken as an indication of lack of aptitude for military service. Forty-five percent of the men with first breakdown in the Z/I received an immediate medical discharge. Of those

who were returned to duty 24 percent subsequently served overseas. Moreover, within the group with Z/I breakdown this percentage varies quite significantly in relation to the stage of training, as shown in table 196.

**TABLE 195**

*Location at Breakdown and Pattern of Disposition*

Location at breakdown	Total cases with breakdown	Percentage with immediate disability discharge <sup>1</sup>	Percentage with return to duty having subsequent disability or administrative discharge <sup>1</sup>	Percentage with immediate or subsequent disability or administrative discharge <sup>1</sup>	Percentage with return to duty having no change of assignment
Z/I, before going overseas . . . . .	328	45.4	48.0	71.6	25.1
In combat . . . . .	265	21.9	21.7	38.9	20.3
After combat . . . . .	149	53.0	44.3	73.8	20.0
Overseas noncombat or Z/I after overseas noncombat . . . . .	180	43.3	35.3	63.3	37.3
Total . . . . .	922	39.5	35.5	61.0	24.9

<sup>1</sup> On psychiatric grounds.

**TABLE 196**

*Location of Z/I Breakdown and Subsequent Service Overseas*

Location at first breakdown	Number of men returned to duty	Percentage with later overseas service
Training center . . . . .	35	17.1
After completion of training, not just prior to overseas shipment . . . . .	121	19.8
Immediately prior to overseas shipment . . . . .	25	56.0
Total . . . . .	181	24.3

When veterans were asked how their health at separation from service compared with their health at entry, those who broke down in the Z/I more often answered that it was the same or better, and those who broke down only after leaving combat more often described the change as for the worse. The observed differences are given in detail in table 197. Psychiatric opinion on emotional health at separation also varied quite significantly with location at breakdown but in a different direction.

Men who first broke down in combat were more often considered in much better emotional health at separation, i. e., normal or exhibiting neurotic symptoms short of a clinical neurosis (23 percent), than those who broke down elsewhere (9 percent of Z/I cases, 8 percent of postcombat cases). Taken together the opinions of the men themselves and of the examiners constitute another indication of the role of predisposition in early breakdown and of the destructive influence of extreme stress.

### LOCATION AT BREAKDOWN AND PRESERVICE CHARACTERISTICS

In order to determine the characteristics of the men who broke down early versus those who broke down late and to ascertain which preservice characteristics might be useful in predicting early breakdown, the details of the family history and of the preservice adjustment and emotional health were correlated with location at breakdown.

The psychiatric history of each parent and of any siblings was used as a scale of psychopathology in the family, and site of breakdown was then analyzed in terms of this scale, but without finding any clearcut statistical evidence of relationship (table 198). However, it may be noted that those with completely negative family histories least often broke down in the Z/I and more often in combat. Almost certainly any relationship is not strong enough to enable family history by itself to be used as a prognostic tool.

**TABLE 197**

*Location at Breakdown and Man's Own Evaluation of Change in Health From Entry To Separation*

Location at breakdown	Percentage distribution by change in health from entry to separation				Number of men
	None, or improvement	Somewhat worse	Much worse	Total	
Z/I, before going overseas . . . . .	25.6	37.2	37.2	100.0	215
In combat . . . . .	16.4	38.5	45.1	100.0	195
After combat . . . . .	8.1	34.1	57.7	99.9	123
Overseas noncombat or Z/I after overseas noncombat . . . . .	20.9	33.6	45.5	100.0	134
Total . . . . .	18.7	36.3	45.0	100.0	667

Attitude toward the mother, on the other hand, is quite significantly associated with location at breakdown, those with too strong a positive attitude toward the mother more often breaking down early (table 199). Exactly half of such men broke down in the Z/I before going overseas,

whereas for those with a normal emotional attachment to the mother the figure is 29 percent. Those manifesting negative attitudes are indistinguishable from those whose attitudes were rated as normal. Further analysis of the data revealed that it was the man who had a positive history of psychiatric disorder in one or both parents, and who in addition had an excessively strong positive attitude toward his mother, who was most apt to break down in the Z/I. There were 30 men so classified and 70 percent of them broke down before going overseas. A very positive attitude toward the mother is far more frequent among men with positive psychiatric histories involving one or both parents, and it is only in the presence of such a family history that the too positive attitude toward the mother is associated with the tendency to break down early. If early breakdown is taken as indicative of low resistance to stress, then a very positive attitude toward the mother, especially in the presence of evidence of mental illness in one or both parents, is a moderately useful index of such low resistance. In the small subsamples considered here, it made no difference which parent was ill.

**TABLE 198**

*Location at Breakdown and History of Psychiatric Illness in Parents and Siblings*<sup>1</sup>

Location at breakdown	Psychiatric illness in parents and siblings <sup>1</sup>						Largely negative but partly unknown
	Entirely negative	Suggestive only	Positive				
			Primarily sibs- lings	Primarily father	Primarily mother	Two or more	
	Per- cent	Per- cent	Per- cent	Per- cent	Per- cent	Per- cent	Per- cent
Z/I, before going overseas . . . . .	23.6	39.2	30.6	36.3	39.5	43.5	38.4
Training center . . . . .	4.2	11.5	6.1	8.8	5.3	8.7	10.8
Other . . . . .	19.4	27.7	24.5	27.5	34.2	34.8	27.6
In combat . . . . .	38.2	27.3	32.7	26.5	23.7	20.3	27.0
After combat . . . . .	15.2	15.0	12.2	17.6	19.7	18.8	16.8
Overseas noncombat or Z/I after overseas noncombat . . . . .	23.0	18.5	24.5	19.6	17.1	17.4	17.8
Total . . . . .	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of men . . . . .	191	260	49	102	76	69	185

<sup>1</sup> See p. 177 for criteria of classification.

The subject's attitude toward his father was analyzed in parallel fashion, but no relationship was found with site of breakdown. Other elements of the preservice history found unrelated to location at breakdown are:

- Economic status of parental family.
- Role of religion in life of parental family.
- Presence of overt sibling rivalry.
- Parental conflict.
- Parental withdrawal via death, divorce, etc.
- Order of birth.

The summary of the entire family psychiatric history is reliably related to the chance of an early breakdown but the strength of the relationship is too weak for it to qualify as a practical prognostic tool. Thirty-seven percent of those who broke down in the Z/I before any overseas service had strongly positive family histories in contrast to 25 percent with negative family histories.

Preservice personality is very strongly associated with location at breakdown, as may be seen in table 200. Sixty percent of those with suggestive or overt neuroses broke down in the Z/I. Men whose personalities seemed normal have about half the expected number of early breakdowns, and those with overt neuroses about twice the number. Perhaps of greater interest, however, is the fact that every location-group is a mixture of all personality-groups. For example, 19 percent of those who were clinically "normal" broke down early, and a considerable number of those who broke down only under the stress of combat had neurotic difficulties prior to entering the service.

**TABLE 199**

*Location at First Breakdown and Attitude Toward Mother*

Location at breakdown	Attitude toward mother		
	Too strongly positive	Normally positive	Negative
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Z/I, before going overseas . . . . .	50.0	29.2	31.7
Basic training . . . . .	8.8	8.7	9.7
Other . . . . .	41.2	20.5	22.0
In combat . . . . .	13.7	30.3	29.3
After combat . . . . .	26.3	15.7	21.9
Overseas noncombat, or Z/I after overseas non-combat . . . . .	10.0	24.8	17.1
Total . . . . .	100.0	100.0	100.0
Number of men . . . . .	80	254	41

When preservice adjustment was examined in relation to site of breakdown it was found that in every area men with poor adjustments had some excess, even if small, of early breakdowns. The ratio of the observed to the expected number of early breakdowns is shown in table 201 for each adjustment area.

**TABLE 200**

*Location at Breakdown and Preservice Personality*

Location at breakdown	Preservice personality					Total
	Normal	Neurotic traits	Suggestive neurosis	Overt neurosis	Pathological personality	
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Z/I, before going overseas..	18.9	19.1	59.6	59.8	33.3	33.3
Basic training .....	4.9	4.9	16.2	14.3	4.9	7.7
Other .....	14.0	14.2	43.4	45.5	28.4	25.6
In combat .....	45.9	35.6	19.2	12.5	24.1	29.3
After combat .....	17.2	24.0	8.1	6.3	20.4	17.5
Overseas .....	13.1	10.1	5.1	2.7	9.9	8.8
Z/I .....	4.1	13.9	3.0	3.6	10.5	8.7
Other .....	18.0	21.3	13.1	21.4	22.2	19.9
Overseas .....	13.1	16.8	12.1	17.0	15.4	15.3
Back in Z/I .....	4.9	4.5	1.0	4.4	6.8	4.6
<b>Total .....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Number of men .....	122	267	99	112	162	762

**TABLE 201**

*Preservice Adjustment and Early Breakdown*

Area of adjustment described as poor	Ratio of observed to expected number of early breakdowns
Family <sup>1</sup> .....	1.29
Sex .....	1.43
School .....	1.30
Work <sup>1</sup> .....	1.38
Social and recreational <sup>1</sup> .....	1.26
Community .....	1.26
Marriage .....	1.04
Summary of all areas <sup>1</sup> .....	1.20

<sup>1</sup> In entire table, of which this is a detail, there is a significant association between adjustment and location at breakdown.

Educational attainment prior to entry was studied with especial attention to the men with the least education, i. e., those who failed to complete grammar school. Although this group shows an excess of early breakdowns, the finding is not statistically significant and over the entire range of educational attainment location at breakdown differs by no more than chance would often produce (table 202). Occupation (table 203) and intelligence also seem unrelated to location at breakdown.

Although the information is somewhat suspect in that it was obtained only after the man had already broken down, his own evaluation of his health at entry is strongly associated with location at breakdown. As table 204 reveals, early (Z/I) breakdown was more than twice as common among men who described their health at entry as impaired or very poor as it was among those who described it as excellent. Preservice treatment for a frank or presumably emotional disturbance is also intimately associated with location at breakdown. Table 205 shows that those who had psychiatric treatment or medical treatment for a presumably psychiatric disorder much more often broke down early than men with no such history.

**TABLE 202**

*Location at Breakdown and Preservice Educational Attainment*

Location at breakdown	Completed grades of schooling at entry					Total
	Under eight	Eight	One to three years of high school	High school graduate	One or more years of college	
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Z/I, before going overseas . . .	41.8	27.1	32.8	36.2	50.5	35.8
In combat . . . . .	28.7	35.0	30.1	27.1	20.6	29.0
After combat . . . . .	11.5	16.4	15.2	19.0	11.3	15.4
Overseas noncombat or Z/I after overseas noncombat .	18.0	21.4	21.8	17.6	17.5	19.8
Total . . . . .	100.0	99.9	99.9	99.9	99.9	100.0
Number of men . . . . .	122	140	335	210	97	904

**LOCATION AT BREAKDOWN AND FOLLOW-UP STATUS**

In the foregoing, location at first breakdown was studied primarily as an indicator of predisposition. The relation between location at breakdown and follow-up status presents a more complex problem. To any predisposition that a man may have had on entering service have been added the effects of stress of manifold qualities and intensities, the effects of treatment,

the effects of the readjustments involved in disposition to duty or in medical discharge, and the effects of the civilian environment to which he returned after separation from service. For practical reasons, only the more important characterizations of follow-up status were studied in relation to location at first breakdown.

It will be recalled that about 10 percent of the sample reported the presence of no symptoms at the time of the follow-up examination. The presence of symptoms at follow-up was not found to be related to the location at first breakdown. If, however, symptoms were present, their apparent origin varied a great deal among the several location groups (table 206). In the main, the differences concern the proportion with onset before or during service; men with early breakdown more often reported symptoms which existed prior to service and the combat cases more often reported symptoms which first appeared in service. It will be noted that the non-combat cases (under designation "Other") with overseas service occupy a middle ground in this comparison and that those who broke down only after leaving combat are very much like those whose breakdown occurred during combat.

Also intimately associated with location at first breakdown is the veteran's own subjective evaluation of his change in health from entry into service until the follow-up examination. Those who first broke down in or after combat more often report a worsening of health, and much more often a severe worsening, during this interval than those who broke down early or without sustaining combat stress (table 207). There is, however, in every

**TABLE 203**

*Location at Breakdown and Preservice Occupation*

Preservice occupation	Percentage distribution by location at breakdown					Number of men
	Z/I, before overseas	In combat	After combat	Other	Total	
Professional, proprietary, managerial.....	55.4	13.8	12.3	18.5	100.0	65
Clerical and sales.....	35.7	26.4	17.0	20.9	100.0	129
Craftsmen, foremen.....	33.3	30.2	14.2	22.2	99.9	162
Operatives.....	32.9	30.6	16.8	19.7	100.0	304
Service workers.....	33.3	27.3	15.2	24.2	100.0	33
Students.....	44.1	30.9	14.7	10.3	100.0	68
Farmers, laborers.....	30.5	35.1	19.1	15.3	100.0	131
Total.....	35.5	29.3	16.1	19.1	100.0	892



location group a substantial fraction, from one- to two-fifths, who reported either no change or an actual improvement in their health. The specific effect of combat in these differences cannot be estimated, since it cannot be assumed that the groups of men have the same expectation of change apart from the fact of combat. Nevertheless, the difference between the combat cases and those who broke down only after some overseas service is of interest: The fraction reporting worsening is increased by nearly a fifth in the combat cases, from 66 to 78 percent.

**TABLE 204**

*Location at Breakdown and Subject's Own Evaluation of Health at Entry*

Location at breakdown	Health at entry			
	Excellent	Fair	Poor or very poor	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Z/I, before going overseas.....	25.2	46.9	64.4	32.9
In combat.....	34.4	21.8	8.9	29.8
After combat.....	19.4	11.7	17.8	17.4
Overseas noncombat or Z/I after overseas noncombat.....	20.9	19.6	8.9	19.9
Total.....	99.9	100.0	100.0	100.0
Number of men.....	511	179	45	735

**TABLE 205**

*Location at Breakdown and History of Preservice Treatment for Psychiatric or Presumably Psychosomatic Disorder*

Location at breakdown	Preservice treatment		
	None	Any	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Z/I, before going overseas.....	28.3	56.9	33.3
In combat.....	32.6	14.6	29.5
After combat.....	18.7	8.9	17.0
Overseas noncombat, or Z/I after overseas noncombat.....	20.4	19.5	20.2
Total.....	100.0	99.9	100.0
Number of men.....	589	123	712

**TABLE 206**

*Location at Breakdown and Presence and Origin of Symptoms at Follow-up*

Location at breakdown	Percentage distribution by presence and origin of symptoms							Number of men
	Presence		Origin if present					
	None	Any	Military service	Before service	Before and during service	After separation	Total	
Z/I, before going overseas								
Basic training . . . . .	12.7	87.3	18.2	50.9	14.5	3.6	100.0	55
Other . . . . .	9.3	90.7	27.8	42.0	18.0	2.9	100.0	205
In combat . . . . .	10.6	89.4	58.0	8.4	17.7	5.3	100.0	226
After combat . . . . .	5.6	94.4	56.6	11.2	23.8	2.8	100.0	143
Overseas noncombat, Z/I after overseas noncombat . . . . .	13.6	86.4	40.1	25.9	16.7	3.7	100.0	162
Total . . . . .	10.1	89.9	43.5	24.1	18.5	3.8	100.0	791

**TABLE 207**

*Location at Breakdown and Man's Own Evaluation of Change in Condition Between Entry Into Service and Follow-up*

Location at breakdown	Percentage distribution by change in condition					Number of men
	Better	Same	Worse	Much worse	Total	
Z/I, before going overseas . . . . .	14.2	23.1	38.2	24.4	99.9	225
Basic training . . . . .	17.0	20.8	47.2	15.1	100.1	53
Other . . . . .	13.4	23.8	35.5	27.3	100.0	172
In combat . . . . .	3.4	21.1	42.6	32.8	99.9	204
After combat . . . . .	4.8	14.4	35.2	45.6	100.0	125
Overseas noncombat, or Z/I after overseas noncombat . . . . .	10.7	22.9	39.3	27.1	100.0	140
Total . . . . .	8.6	20.9	39.2	31.3	100.0	694

A majority of the men had improved since separation, according to the psychiatrists who saw them, but the proportion showing improvement bears no relation to where breakdown first occurred. The percentages with improvement are shown in table 208.

**TABLE 208**

*Location at Breakdown and Psychiatric Improvement Following Separation From Service*

Location at breakdown	Number of men	Percentage improved
Z/I, before going overseas.....	263	56
In combat.....	207	56
After combat.....	136	57
Other.....	155	57
Total.....	761	56

Treatment since separation is also unrelated to location at breakdown for the sample as a whole. Neither the fact of treatment nor the type of treatment bears any clear-cut relationship to location at breakdown; that is, the man who broke down in combat sought treatment later on no more or less often than the man who broke down in the Z/I. For each "location at breakdown" group, the percentage seeking treatment later on was about 35.

Overall adjustment at follow-up is also unrelated to location at breakdown, a fact which confirms the clinical impression that the "combat cases," contrary to what had been expected, constituted no more of a postwar adjustment problem than others.

Perhaps the best index of follow-up status is the examiner's estimate of psychiatric disability. Its relationship to location at breakdown has already been presented in table 127 (p. 146). No significant association was immediately apparent. However, when in addition preservice personality was taken into account it was shown that, except for men regarded as normal at entry, the combat cases exhibit more disability.

Unlike most of the follow-up observations, the examiner's estimate of the need for treatment was found to be significantly associated with location at breakdown. To begin with the combat cases more often were considered not ill. The proportions considered to be "in great need" of treatment differ remarkably little, but not the proportions expected to continue to adjust satisfactorily without treatment. Those who broke down early were more often placed in this latter category (31 percent), and those who broke down in combat less often (18 percent). The examiner's opinion as to need for treatment reflects, of course, not only the severity of evident illness but also its duration, the man's attitude toward it, and the expected response to treatment. The fact that there is no overall association between psychiatric disability and location at breakdown, while there is between need for treatment and location at breakdown, probably indicates that the examiners were considerably influenced by the factors of duration of illness, its tolerance by the man, and the probability of response to treatment.

The relation between psychiatric diagnosis at the time of follow-up and location at breakdown was studied to determine whether;

1. Those with a personality or behavior disorder differ from the rest in location at breakdown.
2. The more severe neurotics differ from the less severe cases.
3. Those not psychiatrically ill differ from those who are ill.

In table 209 it may be seen that men with behavior or personality disorders differ from the rest of the sample chiefly in having many more early breakdowns, and fewer breakdowns in combat, than the rest of the sample. When men with mild psychoneuroses at follow-up are compared with those with at least moderate psychoneuroses no difference is found in their distributions as to location at breakdown. Those who were not considered ill by the examiners at follow-up differ from the ill by more than chance expectation, having an excess of cases with breakdown in combat and a deficit with breakdown after combat. It is a striking fact that men who broke down only after having served in combat are more often than others in the sickest group. A possible explanation for this was mentioned above (p. 172).

For the sample as a whole prognosis does not vary significantly among the several location groups, as may be seen from table 210.

**TABLE 209**

*Location at Breakdown and Psychiatric Diagnosis at Follow-up*

Location at breakdown	Psychiatric diagnosis at follow-up						Total
	Not ill	Psychoneurosis			Personality or behavior disorder	Psychotic reaction	
		Mild	Mod- erate	Severe			
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Z/I, before going overseas . . .	34.3	31.6	27.5	27.7	51.6	40.0	33.8
In combat . . . . .	34.3	27.6	31.3	31.9	14.7	26.7	29.0
After combat . . . . .	12.0	18.4	25.0	21.3	11.6	13.3	17.2
Overseas noncombat or Z/I after overseas noncombat . .	19.3	22.4	16.3	19.1	22.1	20.0	20.1
Total . . . . .	99.9	100.0	100.1	100.0	100.0	100.0	100.1
Number of men . . . . .	233	272	160	47	95	15	822

As would be expected from the inherent nature of a system of compensating men for defects arising out of or aggravated by service, location at first breakdown is quite significantly correlated with compensation status. However, the relationship is much less close than might be expected (table

211). It will be noted that those whose breakdown occurred only after combat were most often granted VA compensation for psychiatric disability (more of them are ill). As a further step in the analysis, each pre-service personality group was studied from the standpoint of any association between location at breakdown and compensation for psychiatric disability. In general, the same relationship was seen as existed in the total sample, although some variation was present. For example, in the essentially normal cases and those with suggestive neuroses prior to service, there was little association between location at breakdown and compensation status, but in the other three groups the association is quite marked.

## SUMMARY

Location at breakdown may be considered as the resultant of two sets of factors: predisposition and stress. Although predisposition (or its converse, resistance) may be regarded as, in some sense, an attribute of the individual and stress as an attribute of the environment, they are postulated entities lying outside the scope of objective determination. Their separate but complementary influences are difficult to disentangle since it is presumed that breakdown results from some interaction between the two. If objective stress appears minimal, then any breakdown will seem more attributable to predisposition, although in fact both factors are necessary. Or, if objective stress seems fairly constant for several sets of men, who nevertheless differ in the proportions breaking down, then such differences may be attributable to variation in resistance. To the extent that an early breakdown, in the face of stress which lies at the lower end of the objective scale of intensity, is indicative of predisposition, "location at breakdown" provides a rough means of assessing preservice observations for their value as measures of predisposition.

**TABLE 210**

*Location at Breakdown and Prognosis Without Treatment*

Location at breakdown	Percentage distribution by prognosis				Number of men
	Excellent to good	Guarded	Poor or hopeless	Total	
Z/I, before going overseas. . . .	30.6	49.4	20.0	100.0	265
In combat. . . . .	37.0	50.0	13.0	100.0	230
After combat. . . . .	25.9	52.5	21.6	100.0	139
Overseas noncombat, or Z/I after overseas noncombat. . .	30.4	52.5	17.1	100.0	158
<b>Total. . . . .</b>	<b>31.6</b>	<b>50.7</b>	<b>17.7</b>	<b>100.0</b>	<b>792</b>

**TABLE 211**

*Location at Breakdown and VA Compensation for Psychiatric Disability*

Location at breakdown	Psychiatric compensation status	
	Number of men	Percentage compensated
Z/I before going overseas . . . . .	303	30.0
In combat . . . . .	252	49.2
After combat . . . . .	140	71.4
Overseas noncombat, or Z/I after overseas noncombat.	170	50.0
Total . . . . .	865	46.2

Most preservice characteristics which were studied proved to have no real relation to location at breakdown and, by that token, may not be regarded as useful indices of predisposition. The few preservice characteristics which were clearly indicative of predisposition are the following:

1. A pathologically strong, positive attitude toward the mother, in the presence of a positive history of psychiatric illness in the family.
2. Impaired preservice personality—the more impaired it was the higher the proportion with early breakdown. Those with more adequate preservice personalities more often broke down only under the stress of combat.
3. Impaired preservice adjustment, especially to the parental family, to work, social and recreational aspects of life, but evidently holding for all adjustment areas.
4. Health at entry described as impaired. For men who broke down, those who described their previous health as impaired or very poor, had more than twice the chance of early breakdown, and about one-fourth the chance of breakdown in combat, in comparison with men who described their health at entry as excellent.
5. History of having sought treatment (not necessarily psychiatric) for a presumably psychiatric disorder. Those with such a history had twice the proportion with early breakdown and about one-half the proportion breaking down in combat.

It is also noteworthy that neither sociological factors nor the elements of the family history are, in themselves, as highly correlated with location at breakdown as are the psychological characteristics of the man himself.

From the standpoint of rate of recovery, location at first breakdown is of great predictive value. First of all, the men with early breakdown were generally sicker at the time of breakdown; combat cases, while acutely ill, were least often severely ill. The combat cases received more individual therapy in the service, presumably because of their better prognosis, but

also because of military policies with respect to treatment and early return to duty, especially in the division area. Combat cases were less often given an immediate discharge for disability, and if returned to duty they less often required an eventual discharge for disability on psychiatric grounds. They served longer, once having broken down, and the quality of their subsequent service was better. Among men who broke down early about 45 percent, or twice as many as in the combat group, received an immediate discharge, and of those returned to duty only about 20 percent ever went overseas thereafter. Among the early breakdowns the discharge rate was lowest in combat units which were in training in the Z/I and in units already scheduled for overseas movement.

Although at separation from service the combat cases were not as sick, they more often complained of deterioration in their health as a result of service. Whether the combat cases recovered faster remains a moot point in view of the fact that they were not as ill as the other cases at time of breakdown. It is clear that at the time of the follow-up examination they had more completely recovered.

Given the facts as to location at breakdown what can one forecast as to status at follow-up, 5 years later? Presence of symptoms is unrelated, although origin of symptoms (i. e., whether they were present prior to service or developed in service), if present, is quite strongly related to location at breakdown, as might be expected. That is, combat cases much less often trace their symptoms back to the preservice period. This fact also indicates that the combat breakdown is not necessarily a circumscribed phenomenon, with new symptoms that completely remit. When the men are asked to compare their health at follow-up and at entry, there are cases in every location-group who feel that their health has greatly deteriorated, but this attitude is most common in the combat group. Improvement since separation from the service seemed not to be related to location at breakdown, nor did resort to treatment since separation. Adjustment and psychiatric disability at follow-up were also unrelated to location at breakdown, a fact which at first seems inconsistent with the generally better condition of combat cases at separation and with the greater tendency for combat cases to be drawn from the more adequate personality groups. However, a given degree of psychiatric illness was associated with more disability in combat cases than in others. In each preservice personality group, except the normal, those who saw combat showed more disability at follow-up than did noncombat cases. It seems likely that the same phenomenon would hold for adjustment at follow-up, with which disability is highly correlated.

In terms of the two questions posed about the relation of location at breakdown to subsequent course of illness, then, it appears that location *per se* is not useful in predicting subsequent disability, and that this fact arises because the experience of breakdown in combat modifies the expectation of subsequent disability.

The examiner's estimate of the need for treatment, his diagnosis, and his prognosis (without treatment) all mark the group with breakdown *in* combat as one of better emotional health and prognosis at follow-up. More of those with an early breakdown had behavior and personality disorders which ordinarily carried a poorer prognosis. Many, however, were regarded as able to continue to function without treatment although it was deemed advisable. To a greater extent than the late breakdowns these men had pre-existent emotional difficulties which they had learned to live with. Those who more often seemed most ill were those who broke down *after* combat.

Finally, it was found that VA compensation status is greatly influenced by location at breakdown, as would be expected. Aggravation of pre-existing disability, or the incurrence of disability, seemed less likely to be questioned, for a man with a preservice neurosis, if he participated in combat. Those who broke down only *after* combat were compensated more often than those whose first breakdown was in combat. There is no reason to believe that those who were hospitalized for psychoneurotic disorders after combat were any sicker at the time of breakdown than those who broke down in combat. The greater degree of illness at follow-up and the more frequent compensation for the postcombat case may be due to the different way these men were handled. The same pressures to return them to duty were not present and the motivation to continued duty of the men, adulterated by the many resentments accumulated during combat, and without the supporting influence of their buddies, was undoubtedly poorer than for the men who broke down in combat.



## CHAPTER XIV

### SEVERITY OF ILLNESS AT FIRST BREAKDOWN

Apparent severity of illness is among the more important assessments made of the first breakdown. The criteria for these assessments and their distribution throughout the sample have been discussed in Part One. Here the inquiry is turned to the prediction of severity of illness, given information on the preservice period and on the early period of military service, and to its association with subsequent military events and with follow-up status. Much of the material on the correlation with follow-up status has been presented in Part Two and is only summarized here.

#### SEVERITY OF ILLNESS AND OTHER ASPECTS OF THE MILITARY EXPERIENCE

The major area of stress, as was pointed out in chapter XII (p. 219), is quite reliably associated with apparent severity of illness. In general, men whose major area of stress was combat were less likely (24 percent) and those whose major area was civilian or "none apparent" were more likely (38 percent) to be regarded as having a severe illness. The same general relationship holds also for severity of stress.

The examiner's concurrence with the service diagnosis is also quite strongly associated with apparent severity of illness at first breakdown. Specific concurrence occurred in 94 percent of the severe cases, in 98 percent of the moderate cases, and in 79 percent of the mild or "not severe" cases.

The choice or availability of therapy also varies widely with apparent severity of illness at the time of first breakdown. Those considered by follow-up examiners not to have had a psychiatric illness in the service, and those whose illness was rated as mild or not severe, were extended individual therapy in 15 to 25 percent of the cases in contrast to 30 to 35 percent of those rated as at least moderately severe. For many reasons the services were unable to provide completely adequate psychiatric treatment by present-day civilian standards. Whether an individual received adequate treatment seemed to have little or no relationship to the severity of his illness.

Response to treatment may well have been used in arriving at the judgment about severity of illness, and, if so, any examination into the association between them is largely artificial. Table 212 shows how closely they are related, the response being best in mild cases, least in severe cases.

Emotional health at separation is also very closely associated with severity of illness at time of first breakdown. If attention is restricted to the 680 men who, at entry into service, appeared to be normal, or have neurotic

symptoms, or a neurosis, and in whose service diagnoses the examiners concurred, then one finds the percentages with not more than neurotic symptoms at separation which appear in table 213. A severe illness in service, then, was cured in very few cases before discharge.

### SEVERITY OF ILLNESS AND PRESERVICE CHARACTERISTICS

Preservice personality was found to be unrelated to severity of illness in service. Similarly, the extent of any impairment of emotional origin had no significant relation to severity of illness in service. This is also true of the preservice adjustment.

**TABLE 212**

*Severity of Illness at First Breakdown and Response to Treatment in Service*

Response to treatment	Severity of illness at first breakdown			
	Mild, or not severe	Moderate	Severe	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
None.....	23.0	40.8	61.1	41.7
Transient.....	34.3	29.4	25.9	29.8
Better than transient.....	42.7	29.8	13.0	28.5
<b>Total.....</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Number of men.....	178	282	185	645

**TABLE 213**

*Severity of Illness at Breakdown and Health at Separation*

Severity of illness at breakdown	Number of men	Percentage with not more than neurotic symptoms at separation
Mild or not severe.....	176	25.0
Moderate.....	291	12.0
Severe.....	213	3.3
<b>Total.....</b>	<b>680</b>	<b>12.6</b>

Health at entry into service, based on the man's recollection when seen at follow-up, was the only other preservice item chosen for study in relation to severity of illness. No association was found between alleged health at entry and severity of illness in service at the time of breakdown.

## SEVERITY OF ILLNESS AND FOLLOW-UP CHARACTERISTICS

The influence of severity of illness upon subsequent follow-up status was studied on the basis of follow-up symptoms, various adjustments, treatment since separation, the veteran's own comparison of his health at entry and at follow-up, apparent change in emotional health following separation from service, disability, prognosis, and compensation status.

The mere presence of symptoms at follow-up was not reliably associated with the severity of illness in service. Whether illness in the service was mild, moderate, or severe, approximately 90 percent had some symptoms at follow-up. Also, if symptoms were present at follow-up their origin, i. e., before, during, or after service, seemed unrelated to severity of illness in the service. It seems plain, therefore, that severity of illness in the service is of little or no value in forecasting the presence or absence of symptoms 5 years later.

Various adjustments at follow-up were studied in relation to severity of illness at the time of first breakdown in service. These include sex, marital life, family life, life in the community, employment, occupation, and economic life as a whole. No relationship was found between adjustment in any area and the severity of first breakdown in the service. Similarly the veteran's comparison of his health at entry and at follow-up bore no significant relationship to the severity of his illness at the time of first breakdown.

The likelihood of treatment following separation from service was, however, significantly associated with severity of illness at first breakdown. Forty-three percent of those with severe illness at first breakdown sought treatment after discharge from the service in contrast to 30 percent of those with a mild or "not severe" illness. Of interest is the fact that the difference was no greater. Severity of illness in service was, however, unrelated to the type of treatment sought later on.

The change in a man's health since separation shows no significant relation to severity of illness in service. Just as many of those who had mild disorders in service improved and got worse, as did those who had severe disorders.

Disability at follow-up, it has been shown (pp. 147-149), is quite significantly related to severity of illness at the time of first breakdown. For example, no disability was found in 49 percent of the cases who had had a mild or "not severe" illness in service but in only 34 percent of those who had had a severe illness. Four percent of those with a mild illness in service had severe disabilities at follow-up in contrast to 12 percent of those with a severe illness. From a clinical standpoint, a much stronger relationship would have been expected. This is added evidence of the real difference between illness and disability. Prognosis, without treatment, was not significantly associated with severity of illness in service.

Finally, compensation by the VA was studied in terms of the proportion being compensated for psychiatric disability and the total amount of VA

compensation for men whose only disability was psychiatric in nature. Table 214 shows a highly significant association (in the statistical sense) between severity of illness at first breakdown and compensation for psychiatric disability. For example, compensation for psychiatric disability was being received by 28 percent of those whose illness at first breakdown had been mild or not severe, and by 53 percent of those whose illness had been severe. The amount of VA compensation, for men drawing compensation for psychiatric disability, however, was not significantly associated with severity of illness in service (table 215).

**TABLE 214**

*Severity of Illness at First Breakdown and VA Compensation for Psychiatric Disability*

Severity of illness at breakdown	Number of men	Percentage compensated
Mild or not severe.....	219	28.3
Moderate.....	317	48.9
Severe.....	221	52.9
<b>Total.....</b>	<b>757</b>	<b>44.1</b>

**TABLE 215**

*Severity of Illness at First Breakdown, and Amount of VA Compensation for Psychiatric Disability, Men Compensated for Psychiatric Disability Only*

Severity of illness at breakdown	Percentage distribution by amount of compensation monthly				Number of men
	Under \$30	\$30-49	\$50 or more	Total	
Mild, or not severe.....	62.7	21.6	15.7	100.0	51
Moderate.....	51.4	34.7	13.9	100.0	144
Severe.....	54.2	33.0	12.8	100.0	109
<b>Total.....</b>	<b>54.3</b>	<b>31.9</b>	<b>13.8</b>	<b>100.0</b>	<b>304</b>

**SUMMARY**

The coding of severity of illness in service reflected the intensity and duration of symptoms and the degree of incapacity. It was, at best, a difficult thing for the coders to evaluate in retrospect from the data available in clinical records and the report of follow-up examination. The reliability of such formulations is, therefore, more open to question than is true of other assessments.

However, in general, the severity of illness at the time of the first breakdown is not highly correlated with other features of the psychiatric history or with follow-up status. None of the preservice characteristics subjected to study here—personality, psychiatric impairment, adjustment summary, or declared health at entry—is significantly associated with severity of illness. It was observed that combat cases and those subjected to the greatest stress tended, on the average, to be less ill at breakdown than others. Specific individual treatment in the service was given somewhat more freely to those who were more ill; the response to treatment in service was greater and emotional health at separation was better on the part of those who were less ill at breakdown.

Rather complete explorations were made of follow-up observations, but the only reliable relationships uncovered concern the likelihood of treatment following separation, disability at follow-up, and VA compensation status. The presence or absence of any symptoms, adjustments, and numerous other follow-up observations are unrelated to severity of illness in service. Since separation, those who in service seemed more severely ill have more often had psychiatric (or symptomatic) treatment; the type of treatment is unrelated to severity. Disability at follow-up is positively correlated with severity of illness at breakdown but not nearly as closely as might be expected. Prognosis, on the other hand, is not related. Finally, although more of those with severe illness in service are compensated by the VA, the amount of such compensation is unrelated to severity of the original illness.

## CHAPTER XV

### TREATMENT IN SERVICE

In civilian life to a much greater extent than is possible in military service, individuals can manipulate their environments and modify their activities to suit their capacities. Because of this, psychiatric treatment for neurotic disorders in civilian life is directed more toward change in the individual than in the environment.

In the military situation, in contrast, mere removal of a man from a stressful situation (combat being the most obvious example) can be a powerful therapeutic tool. For the Armed Forces to have attempted very much in the way of individual psychotherapy in wartime would have been impractical because of the overwhelming number of patients, the time that would be involved, and the paucity of trained therapists.

Often on the basis of a rapid clinical evaluation a decision was reached about a man's prospects of useful duty, and treatment was then geared to this objective. Usually the objective was visualized as relief rather than a fundamental change in character structure.

From a review of military medical records and even from follow-up interviews, it is extremely difficult to learn just what treatment any man did receive. Although an attempt was made by the examiner to evaluate the effect of such treatment on the subsequent course of illness, it was frankly recognized at the outset that the information was woefully incomplete. Nevertheless, a classification of treatment was developed (p. 116) and used in a limited way to explore the interrelations among variety of treatment and other factors of interest in the study.

#### TREATMENT AND OTHER ASPECTS OF MILITARY SERVICE

The relation between major area of stress and type of treatment administered in service has already been discussed in chapter XII (p. 219) where it was shown that combat cases more often received individual therapy (usually psychotherapy) than others. When the choice of therapy was analyzed in terms of location at breakdown the advantage of combat cases in this respect was seen to be even more marked (p. 234). The difference is not related to severity of the acute illness which has also been shown to be significantly and independently associated with the type of treatment. Individual therapy was more often given to more serious cases. Mild cases most often had no more than rest and sedation while in the hospital.

Length of service following the initial breakdown (including any time in hospital) was also studied in relation to type of treatment. In view of

the selection of cases for the different forms of treatment one may not infer from these data that differences in length of service measure the effects of treatment, but the mean values are nevertheless of interest. Men who received individual therapy served somewhat longer, on the average, than men who received routine hospital care, or men who received essentially no psychiatric treatment. Men who received only rest and sedation also served longer than these two groups. The differences, however, are remarkably small (table 216).

**TABLE 216**

*Type of Psychiatric Treatment at First Breakdown in Military Service and Subsequent Length of Service*

Type of psychiatric treatment	Number of cases <sup>1</sup>	Mean months of service (including time in hospital) following first breakdown
None.....	165	8.6
Rest and sedation.....	150	11.0
Individual therapy.....	265	10.7
Hospital routine.....	328	8.4
Total.....	908	9.5

<sup>1</sup> Count of cases is slightly inflated since some men received more than one form of treatment.

Whether men returned to duty following first breakdown varies somewhat with the general type of treatment furnished, the percentages being as shown in table 217.

The quality of any duty rendered after the first breakdown also varies a little in association with the type of treatment, as may be seen from table 218. Positive evidence of good and continued service subsequent to the first breakdown is most frequently observed in the men with rest and sedation only (largely combat cases), and least often in those who received either no psychiatric treatment or routine hospital care.

Emotional health at separation was found to be significantly related to the type of treatment received. The differences are very small and seem more indicative of selection of cases for particular forms of treatment than of the effects of treatment. Essentially no treatment had been received by a disproportionately large fraction of the group with personality or behavior disorders at separation. Men who were not ill at separation were generally not seriously ill in service. It is not surprising that they were most often treated with just rest and sedation.

There is a clear association between response to treatment and type of treatment (table 219). Men with essentially no psychiatric treatment were

**TABLE 217**

*Type of Psychiatric Treatment at First Breakdown in Service and Return to Duty*

Treatment	Percent returned to duty
Essentially no treatment.....	56
Rest and sedation only.....	68
Individual therapy.....	62
Hospital routine.....	48
Total.....	57

**TABLE 218**

*Type of Treatment in Service and Quality of Any Duty Subsequent to First Breakdown*

Quality of any duty following breakdown	Type of treatment in service			
	Essentially none	Rest and sedation	Individual therapy	Hospital routine
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Positive evidence of good performance.....	15.6	32.7	23.9	14.0
Apparently satisfactory.....	54.4	42.1	52.2	51.6
Unsatisfactory.....	30.0	25.3	23.9	34.4
Total.....	100.0	100.1	100.1	100.0
Number of men.....	90	95	180	157

**TABLE 219**

*Type of Treatment in Service and Response to Treatment*

Type of treatment in service	Percentage distribution by response to treatment				Number of men
	None	Slight or transient	More than slight or transient	Total	
Rest and sedation.....	31.7	32.4	35.9	100.0	145
Individual therapy.....	29.3	30.4	40.3	100.0	283
Hospital routine.....	51.1	27.2	21.7	100.0	313
Total.....	39.0	29.4	31.6	100.0	741



excluded from this analysis. Those treated by rest and sedation made about the same response as men given individual therapy, but both groups differ considerably from the men who received only routine hospital care and who much more often showed no change. The relationship was also studied in men with the same apparent severity of illness at breakdown, with the same general result: Men who received the hospital routine responded much less often than men given rest and sedation or individual therapy. For example, among men with moderately severe illnesses, the percentages with a significant response to treatment are shown in table 220.

**TABLE 220**

*Type of Psychiatric Treatment for First Breakdown in Service and Response to Treatment*

Type of treatment	Percent with significant favorable response
None or rest and sedation only . . . . .	31.3
Individual treatment . . . . .	40.5
Hospital routine . . . . .	20.0
Total . . . . .	30.1

In a further attempt to uncover any evidence of the effectiveness of different types of treatment, men were grouped according to location at breakdown and severity of illness. Within such fairly homogeneous groups a somewhat more favorable response was found among men with the more individualized types of treatment. For example, 35 percent of those who broke down in the Z/I with an illness of moderate severity responded favorably to individual treatment, in contrast to only 14 percent among men who received routine hospital treatment. Similarly, 53 percent of the men with combat breakdown of moderate severity responded favorably to individual treatment as compared with 33 percent of the parallel group who received only routine hospital treatment.

It was previously shown that the response to treatment was better for combat than for noncombat cases, but the severity of illness and the type of treatment were not there taken into account. When they are, a marked difference in response may be observed, depending on the location at breakdown. That combat cases responded much more favorably to individual therapy can be seen in table 221. Whether the difference in response reflects a difference in the essential nature of the men and the stressful environment or in the extent of the treatment remains in doubt.

**TABLE 221**

*Response to Individual Therapy in Service and Site of Breakdown*

Response to individual therapy	Site of breakdown		
	In combat	Other	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
None.....	15.5	48.1	31.3
Slight or transient.....	31.0	25.9	28.6
More than slight or transient.....	53.4	25.9	40.2
Total.....	99.9	99.9	100.1
Number of cases.....	58	54	112

**TREATMENT AND PRESERVICE CHARACTERISTICS**

Statistically significant differences were found in the incidence of various types of treatment for the different preservice personality groups but the meaning of the differences is not clear. Those who were previously well adjusted more often had either no specific treatment or just rest and sedation. Those who were previously overtly neurotic more often had a prescribed hospital routine. These differences were not dependent on variations in location at breakdown or in the man's own estimate of his health at entry. Response to treatment was studied in relation to preservice personality and type of treatment. The better integrated personality groups in general seemed to make a better response to treatment.

**RELATION TO FOLLOW-UP OBSERVATIONS**

In Part Two it has been shown that follow-up status is generally unrelated to the broad type of treatment given in service, but rather strongly related to the response to such treatment. There is a clear-cut relation between severity of illness in service and disability at follow-up, but none between treatment in service and either disability or overall adjustment at follow-up.

**SUMMARY**

An *ex post facto* study of different treatments is naturally hazardous; the experimentalist requires an element of physical randomization in the allocation of treatments before he is usually willing to associate differences in outcome with differential effectiveness of therapies. Here the categories of treatment are quite broad and pay little regard to intensity, but in view of the limited resources available for treatment in the military situation only a rough classification is possible. However, it was found that the

choice of treatment is related to preservice personality, site of breakdown, and apparent severity of illness at the time of breakdown, but not follow-up status.

More specifically, individual therapy was given more often to combat than to noncombat cases, to men with a more adequate preservice personality (who were more apt to be in combat), and to those whose illness seemed most severe. Those who were given individual therapy responded more favorably to treatment, were returned to duty more often, performed more satisfactorily after return to duty, and were less often ill at separation from the service. Much of this may be explained by the fact that it was the man who broke in combat who was more apt to have been previously well-integrated, who most often received individual treatment (which by no means should be thought of as either intensive or prolonged psychotherapy, however), and who most often improved (partially as a result of the respite from the overwhelming stress of combat) and was returned to duty.

Although the present study provides no real basis for assessing the effects of the several forms of treatment, it was considered worth while to undertake a single controlled comparison of the several types of treatment. Three treatment groups were established:

- A—Not more than rest and sedation.
- B—Individual therapy.
- C—Hospital routine.

Matching was done on the basis of the following characteristics, so that the confounding of choice of treatment with characteristics of the patient might be minimized:

- Major area of precipitating stress.
- Preservice personality and impairment.
- Severity of breakdown.

The three matched treatment groups (A, B, and C) were then compared as to health at separation and condition at follow-up with essentially negative findings. It therefore appears doubtful that there was any difference in the effectiveness of the three gross types of treatment.

## CHAPTER XVI

### PATTERN OF DISPOSITION

The pattern of disposition has already been discussed at numerous points in the foregoing chapters. Here the objective is to bring together all the material on disposition in order to show its roots in preservice and military characteristics, and its predictive value for follow-up.

#### DISPOSITION AND OTHER ASPECTS OF THE MILITARY EXPERIENCE

It was shown in chapter XII (p. 217) that the disposition pattern of men whose major area of stress was combat differed notably from men not suffering such stress, but that otherwise the type of stress was unrelated to disposition. This was also stated to be the case for gross location at breakdown.

Army and Marine Corps cases differ quite significantly from Navy cases as to disposition. For example, for men who first broke down in the Z/I before seeing overseas service, the disposition patterns are as shown in table 222. The Army and Marine Corps cases were also coded as to mission of unit and when the Z/I breakdowns were studied in relation to mission of unit no significant variation was found in the proportions with an immediate CDD.

Emotional health at separation of course varies with disposition, but as may be seen from table 223 the evidence is that only about 30 percent of those discharged for disability were thought to have severe neuroses.

**TABLE 222**

*Disposition of Men With Z/I Breakdown, by Branch of Service*

Disposition	Army, Marine Corps	Navy
Duty.....	34.9	4.3
Immediate CDD or IS <sup>1</sup> .....	35.7	81.4
Later CDD or IS <sup>1</sup> .....	29.4	14.3
Total.....	100.0	100.0
Number of men.....	258	70

<sup>1</sup> Includes nominal return to duty for administrative separation on psychiatric grounds.

**TABLE 223**

*Disposition and Emotional Health at Separation*

Emotional health at separation	Disposition	
	Duty	CDD (or IS)
	<i>Percent</i>	<i>Percent</i>
Normal (or neurotic symptoms only).....	44.5	1.6
Neurosis, not severe.....	43.7	64.5
Neurosis, severe.....	2.2	29.6
Behavior disorder.....	9.6	4.4
Total.....	100.0	100.1
Number of men.....	229	504

**DISPOSITION AND PRESERVICE CHARACTERISTICS**

The relationship between disposition and psychiatric signs in the family history is quite reliable in the statistical sense. Table 224 gives the pattern of disposition for each family-history group; the tests which were made may be summarized as follows:

1. Immediate CDD (or IS) was most frequent in those with the poorest family history.
2. Of those not given an immediate CDD (or IS), a later CDD (or IS) was more common among those with the poorer family history, the percentages being 26 for those with negative histories and 42 for those with the strongly positive family histories.
3. Among those never given a CDD (or IS), the chance of return to duty without reassignment bears no significant relation (*P* about .07) to family history.
4. Immediate or eventual CDD (or IS) is most frequent among those with the poorest family history.

Preservice personality is also quite significantly associated with the pattern of disposition. Table 225 gives the details for each of the major personality groups. An immediate CDD is especially frequent (57 percent) for those with overt neuroses before service, but it must also be noted that 21 percent with apparently normal preservice personalities also received disability discharges without ever being returned to duty.

An individual in any given preservice personality group (except pathological personality) had a slightly greater overall chance of being discharged for disability if his family history contained evidence of emotional maladjustment or psychiatric illness. For example, among men with suggestive or overt neuroses before service, 63 percent of those with negative family histories were discharged for disability in contrast to 72 percent of the men

**TABLE 224**

*Pattern of Disposition and Summary of Psychiatric Signs in Family History*

Pattern of disposition	Family history		
	Not more than suggestive evidence	Positive evidence	Strongly positive evidence
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Return to duty, never reassigned.....	25.2	14.5	10.0
Returned to duty, reassigned or evacuated...	26.7	24.9	21.4
Immediate CDD or IS.....	30.4	39.1	45.4
Later CDD or IS.....	17.8	21.5	23.1
Total.....	100.1	100.0	99.9
Number of men.....	135	358	359

**TABLE 225**

*Pattern of Disposition in Relation to Preservice Personality*

Preservice personality	Percentage distribution by pattern of disposition					Number of men
	Never reassigned	Reassigned or evacuated	Immediate CDD or IS	Later CDD or IS	Total	
Normal.....	26.3	37.3	21.2	15.3	100.1	118
Neurotic traits.....	13.7	25.7	44.9	15.8	100.1	292
Suggestive neurosis.....	12.9	22.9	46.4	17.9	100.1	140
Overt neurosis.....	9.8	13.1	56.6	20.5	100.0	122
Pathological personality or behavior disorder.....	12.8	17.4	43.0	26.7	99.9	172
Total.....	14.6	23.3	43.1	19.0	100.0	844

with positive family histories. The presence of some preservice impairment in functioning as a result of emotional difficulty also tends to increase the chance of disability discharge. Eighty-one percent of the individuals with histories of definite impairment from overt neuroses prior to service, who broke down in service, were ultimately discharged for disability.

A man's own estimate of his health before entry into military service bears no significant relationship to his disposition after breakdown. When disposition was studied in relation to preservice treatment for an apparently

psychiatric disorder, however, a fairly reliable ( $P$  about .015) association was found. Disposition by CDD, both immediately and later, was more frequent in men with a history of such treatment and conversely return to duty (and ultimate discharge by demobilization) more common in men with no treatment prior to service (42 percent vs. 27 percent). A similar relationship was found with preservice adjustment. Those with the most satisfactory preservice adjustment picture were least likely to receive a CDD, either immediately or eventually. Forty-six percent of the men with satisfactory adjustments were returned to duty successfully in contrast to 31 percent with previously impaired adjustments.

## DISPOSITION AND FOLLOW-UP STATUS

As already noted, psychiatric disability at follow-up is quite significantly associated with disposition, being more severe for men who were discharged for disability. The differences are fairly large; for example, only 16 percent of the men who were returned to duty and were never reassigned had moderate or severe disability at follow-up as compared with 35 percent of those who were discharged for disability.

Also, men with a disability discharge more often suffered some limitation in employment. On the average, men with a disability discharge had about twice the limitation of employment shown by men who were returned to duty (17.5 percent vs. 9 percent). Similarly, men with a disability discharge more often had an impaired adjustment. This is true whether such discharge was immediate or following return to duty.

In view of the overall tendency toward improvement after discharge from the service, it is not surprising that the sicker group (those discharged for disability) improved more often, since many in the demobilized group were not ill at the time of separation from the service. At follow-up roughly two-thirds of the medically discharged group reported improvement since their discharge in contrast to a little over one-third of those who were demobilized.

Although psychiatric diagnosis at follow-up is quite highly correlated with disposition, it is of interest to observe that over half of the men who were discharged for disability had no more than mild neuroses at follow-up, and a considerable number were not ill at all. About 3 percent of those who were demobilized seemed to have severe neuroses at follow-up (table 226).

In comparison with men whose disposition was to duty, those who were discharged on psychiatric grounds had about twice the chance of seeking and receiving treatment after separation. The percentages reporting treatment of any kind, and the percentages reporting psychotherapy, however brief or superficial, are shown in table 227.

The veteran's attitude toward his need for treatment, although significantly associated with the disposition pattern, is far less so than might have been anticipated (table 228). Seventeen to twenty-one percent of those who received medical discharges, and by contrast 11 percent of the men

**TABLE 226**

*Pattern of Disposition and Follow-up Diagnosis*

Disposition	Percentage distribution by diagnosis at follow-up						Number of men
	None	Neurosis			Personality disorder	Total	
		Mild	Moderate	Severe			
Duty, without reassignment.....	46.1	25.8	6.2	3.9	18.0	100.0	128
Duty, other.....	41.2	33.3	15.3	2.3	7.9	100.0	177
Immediate CDD or IS.....	19.0	36.4	24.7	8.1	11.7	99.9	332
Later CDD or IS.....	21.7	35.4	25.7	6.3	10.9	100.0	175
Total.....	28.7	33.9	20.0	5.8	11.7	100.1	812

**TABLE 227**

*Disposition and Treatment in Service*

Disposition	Number of men	Percentage with treatment	
		Any	Psychotherapy
Duty, never reassigned.....	124	16.1	8.1
Duty, other.....	185	27.6	7.0
Immediate CDD.....	328	41.2	15.5
Later CDD.....	179	45.8	21.8
Total.....	816	35.3	13.8

**TABLE 228**

*Pattern of Disposition and Veteran's Opinion on His Need for Psychiatric Treatment*

Disposition	Percentage distribution by need for treatment				Number of men
	Very great	A little	None	Total	
Duty, without reassignment...	11.2	15.5	73.3	100.0	116
Duty, other.....	13.2	23.0	63.8	100.0	174
Immediate CDD or IS.....	17.0	28.3	54.8	100.1	283
Later CDD or IS.....	21.5	24.1	54.4	100.0	158
Total.....	16.1	24.1	59.8	100.0	731



returned to duty without reassignment, described their need for treatment as very great, while 54 percent of those who were discharged medically felt no need for treatment. The examiners' opinions on the need for treatment are not very different from the opinions of the men themselves.

Men who were medically discharged more often received compensation for psychiatric disability, as already noted in chapter XI, but there is no significant difference in the amount of compensation they received in comparison with men who were demobilized.

Men discharged for psychiatric disability have a relatively poor prognosis about twice as often as those who were returned to duty and later demobilized. There is only insignificant variation between those given an immediate discharge and those first returned to duty and then later medically discharged. It is of interest that over 20 percent of those who were medically discharged had good prognoses and that approximately 15 percent of those who were demobilized had poor prognoses (although they were not necessarily very ill) at follow-up.

## SUMMARY

This exploration of the pattern of disposition following any and all psychiatric admissions suggests that no aspect of the pattern is of any importance except the simple dichotomy of eventual disability discharge or return to duty. That distinction, however, is almost always associated with real differences in the observations made in each period. One might wish that the distinction prove even more powerful than it is, however, in view of importance of disability discharges in relation to manpower in time of war and to subsequent disability compensation.

The limited study made on the relation between disposition and other observations on the military period may be summarized as follows:

1. Type of stress leading to breakdown is strongly associated with disposition, combat cases being returned to duty much more often than others. Within the noncombat cases the particular stress pattern bears no evident relation to disposition.
2. Army and Navy cases differ quite significantly in regard to disposition, the latter most often receiving an immediate medical discharge (or a nominal return to duty followed immediately by an administrative separation on psychiatric grounds).
3. Among the men who broke down in the Z/I, return to duty was more common in those who were already assigned to units whose mission was combat.
4. At separation, the two large disposition-groups differed quite significantly as to their emotional health, but only 30 percent of those who received medical discharges were described as having severe neuroses.

Characteristics observed for the preservice period were more extensively explored, with the following results:

1. Men with a less favorable family background from a psychiatric standpoint were more often discharged for disability.
2. Men with less adequate preservice personalities were more often discharged for disability; if this fact is taken into account, knowledge of the family background provides essentially no additional information.
3. Men with more psychiatric impairment before entry were more often discharged for disability; knowledge of this fact seems to add somewhat to the information contained in preservice personality.
4. The man's own estimate of his health prior to entry is not associated with disposition.
5. Men who were treated for a presumably psychiatric condition before entry were more often discharged for disability.
6. Men whose overall adjustment was impaired before entry were more often discharged for disability.

One cannot know, of course, the extent to which such relationships simply mirror the criteria used by medical officers in deciding upon disposition, as contrasted with independent information on probable health at separation. To the extent that the latter problem is of concern, disposition is a poor vehicle of study in this material, for the medical officers who were responsible for disposition prepared the medical records upon which much of the present information is based and thus were usually familiar with at least the outline of the preservice history.

As a means of predicting health at follow-up, disposition is of considerable value, although it remains uncertain whether this is so by virtue of an independent effect exerted by disposition or of its inherent value as a descriptive index of health at separation. A tabular summary of the relationships discussed above appears here as table 229, and provides, for each follow-up observation under scrutiny, a comparison of cases returned to duty with those discharged. Most of the differences shown there suggest that men who were discharged for disability were, at follow-up, about twice as badly off as those who were returned to duty. A marked exception to the average picture is afforded, however, by the percentages receiving VA compensation for psychiatric disability, which are in a 1:4 ratio. That is, although by most indices men with a disability discharge are about twice as likely to be ill, they are about four times as likely to be compensated for disability by the VA, a fact which certainly suggests that compensation is influenced not only by evident illness but also by disposition.

In an effort to approximate the specific effect of separation *per se*, two groups of different disposition were matched on the basis of identical major area of stress, severity of illness at breakdown, and preservice personality and impairment. These two groups, consisting of 172 men returned to duty and 172 separated by CDD, were then compared as to disability at follow-up, diagnosis at follow-up, attitude toward psychiatric

**TABLE 229**

*Pattern of Disposition and Various Follow-up Characteristics*

Follow-up characteristic	Pattern of disposition			
	Duty		Disability discharge	
	Number of men	Percent <sup>1</sup>	Number of men	Percent <sup>1</sup>
Any symptom or complaint.....	295	84	502	94
Symptom or complaint existed prior to service.....	247	39	472	52
Man regards health as worse than at entry.....	286	64	410	75
At least moderate disability.....	303	18	495	35
Employment limited by illness.....	345	8	539	17
Impaired adjustment.....	320	44	521	56
Ill at separation, improved since.....	105	37	491	67
Moderate or severe neurosis.....	305	14	507	33
Received treatment after discharge.....	309	23	507	43
Veteran admits need for psychiatric treatment.....	290	32	441	45
Examiner considers veteran in need of psychiatric treatment.....	301	54	485	73
Percentage with VA compensation for psychiatric disability.....	340	15	534	57
Percentage of compensated men drawing at least \$30 monthly.....	42	38	279	48
Percentage with good prognosis.....	301	45	497	24

<sup>1</sup> Percentage having this specified follow-up characteristic.

diagnosis or discharge, and amount of compensation for disability (whatever the cause). There was only a slight suggestion (*P* about .08) that men returned to duty had an excess with no disability. In the statistical analysis a quite significant difference in the distribution of psychiatric diagnoses was found, but from a clinical standpoint a more dramatic contrast would be expected between the group returned to duty and the one medically discharged. The details are shown in table 230. The two matched groups do not differ as to their evident attitude toward their original psychiatric diagnosis or discharge. They do, however, differ quite significantly as to compensation status. The percentage drawing compensation is 28 for men returned to duty and 72 for men with a disability discharge. These differences are extremely suggestive but do not establish the fact that disposition *per se* has an effect, for there is no guarantee that the matching was sufficient to insure homogeneity as to prognosis independently of disposition; only an experiment based on randomization would provide compelling evidence.

**TABLE 230**

*Diagnosis at Follow-up by Disposition in Service*

Diagnosis at follow-up	Disposition	
	Duty	Discharge
	<i>Percent</i>	<i>Percent</i>
Not ill. ....	41	19
Neurosis		
Mild. ....	31	41
Moderate. ....	13	27
Severe. ....	4	4
Other. ....	11	8
Total. ....	100	99
Number of men. ....	150	157

## *Part Four*

### **ANALYSIS OF PRESERVICE PERIOD**

The analysis of the life history begins with follow-up status and ends here with the preservice period. Condition at follow-up and the events of the military period have been traced back to their roots, if any, in the family and developmental period prior to military service; it remains to scrutinize the early period more closely and to summarize its influence upon later events. The probability of breakdown is not considered here, having been adequately discussed in Part One.

Three main features of the preservice period have been chosen for intensive study and will be presented serially in separate chapters: the family history, personality and impairment, and adjustments. Within each chapter there is first a discussion of the particular preservice characteristic in relation to other preservice characteristics, then a discussion of its bearing on the events of the military period, and next an analysis of its influence on follow-up status, and finally a summary.

## CHAPTER XVII

### FAMILY HISTORY

The basic descriptive data on the family are presented, item by item, in chapter II. To a considerable extent these items are themselves inter-correlated, and in addition they appear to exert some influence upon later events, through the development of the individual whose life history is under scrutiny here.

#### IN RELATION TO OTHER ELEMENTS OF THE PRESERVICE PERIOD

There are two foci of interest: (1) the interrelations among various elements of the family history itself; and (2) the influence of the family upon the individual who later broke down.

#### Interrelations Among Elements of Family History

The specifically psychiatric history of the mother and father are quite reliably, but not very closely, related. If one parent exhibited an emotional disorder the other was more likely to be so classified than if the first parent had a negative history. For example, when there was no evidence of psychiatric illness in the mother, only 13 percent of the paternal histories revealed evidence of illness in contrast to 33 percent when the maternal history contained evidence of such illness.

Economic deprivation of the family is somewhat associated with psychiatric illness in parents and siblings, especially in the father. Among families with no suggestion of psychiatric illness either in parents or in any siblings, only 16 percent were classified as "relief status, or poor," in comparison with 37 percent so classified among families in which the father showed signs of psychiatric illness.

The parental psychiatric history is not related to the extent of any religious influence in the parental home, but it is reliably associated with both sibling rivalry and parental conflict. There was clear-cut evidence of sibling rivalry in 11 percent of the families with entirely negative psychiatric histories, and in 25 percent of those in which either parent was ill. An even more marked association characterizes parental conflict and parental (especially paternal) psychiatric history. Among families having no evidence of psychiatric illness in parents or siblings, only 8 percent appeared to examiners to exhibit evidence of marked parental conflict, and 15 percent conflict of any degree at all. In families with paternal illness, however, the comparable percentages are 38 and 59.

## Relation of Family History to Characteristics of the Individual who Later Broke Down

Of the several elements of the family history available for study, greatest use was made of the presence of psychiatric illness in parents and siblings. The rather intimate association with preservice personality is exhibited in table 231. An entirely negative psychiatric history for parents is common among normal individuals and is progressively less frequent in the less favorable personality patterns. Conversely, the chance that an individual in this series will be rated normal in preservice personality pattern is about 1 in 3 if neither parent exhibited evidence of psychiatric illness, and about 1 in 25 if both parents seemed ill.

Adjustment to the parental family also reflects any psychiatric illness in the parents and probably also in the siblings. A satisfactory adjustment was most often found (85 percent) in the complete absence of psychiatric illness in parents and siblings, and least often (33 percent) when two or more members of the family (including at least one parent) gave evidence of psychiatric illness. Conversely, an impaired family adjustment was observed in 6 percent of the men with no psychiatric illness in their immediate families, and in 39 percent of the men two or more members (including at least one parent) of whose families seemed to examiners to have been ill.

**TABLE 231**

*Preservice Personality and Psychiatric History of Parents*

Psychiatric history of parents	Percentage distribution by preservice personality						Number of men
	Normal	Neurotic traits	Suggestive neurosis	Overt neurosis	Pathological personality	Total	
Both negative.....	29.7	36.0	9.9	8.1	16.2	99.9	222
One or both suggestive, neither positive.....	9.0	36.8	17.4	14.9	21.9	100.0	201
One positive, other negative..	19.7	34.2	6.6	18.4	21.1	100.0	76
At least one positive, other at least suggestive.....	3.9	31.1	16.5	18.4	30.1	100.0	103
Total.....	17.1	35.2	13.1	13.5	21.1	100.0	602

The man's work adjustment is very much like his adjustment to his family in its clear-cut association with psychiatric illness in parents and siblings. A satisfactory work adjustment was reported by examiners in 80 percent of the men having no evidence of illness in parents and siblings, and in only 59 percent of the men having two or more members of the family ill in the psychiatric sense. An impaired work adjustment was found in 8 percent of

the men with no psychiatric illness in the family, and in 29 percent of the men having two or more members of the family ill.

The man's overall preservice adjustment was studied in parallel fashion, and with a somewhat similar result. If there was evidence of psychiatric illness in two or more members of the family (including at least one parent), the overall adjustment was very likely to seem poor, but in the complete absence of such illness it was likely to be fairly good. Most men fall in between these two extremes; in table 232 the entire sample is classified in this fashion. Which parent was thought to have been ill seemed not to affect the relationship.

The man's own evaluation of his health at entry into service is not definitely associated with the presence of psychiatric illness in his family.

**TABLE 232**

*Psychiatric History of Parents and Siblings and Overall Preservice Adjustment*

History of psychiatric illness in parents and siblings	Percentage distribution by overall preservice adjustment				Number of men
	Satisfactory	Questionable	Impaired	Total	
Entirely negative . . . . .	38.3	24.0	37.7	100.0	175
A suggestive or positive history, but involving only one parent or only siblings . . . . .	17.8	22.4	59.8	100.0	594
Two or more (including at least one parent) with psychiatric illness . . . . .	7.2	13.0	79.7	99.9	69
Total . . . . .	21.2	22.0	56.8	100.0	838

The possible influence of parental withdrawal was sought upon the personality pattern, the overall adjustment, and the man's own evaluation of his health at entry, but without finding any relationships of consequence. For personality pattern the hypothesis tested, and found acceptable ( $P > .05$ ), was that the men of all five major personality-pattern groups were homogeneous as to presence or variety of parental withdrawal. However, it was noted that men with pathological personalities were drawn somewhat more heavily from the group characterized by parental withdrawal via divorce, separation, and desertion. This suggestion is related to the finding that the overall adjustment rating is somewhat dependent upon parental withdrawal, being least favorable in the presence of a history of divorce, separation, or desertion. A satisfactory overall adjustment was found in 27 percent of the men who did not suffer parental withdrawal of any kind, and in 10 percent of the men whose homes were broken by



divorce, separation, or desertion. Conversely, an impaired overall adjustment was found in 50 percent of the first group and in 73 percent of the second. Finally, parental withdrawal is very weakly associated with the man's own opinion of his health at entry.

The religious influence in the parental home was found to have no noteworthy association with either the personality pattern or the overall adjustment of the individual.

Men with a definite history of sibling rivalry were about twice as likely to exhibit an impaired community adjustment as men with no such history.

Parental conflict was analyzed in relation to personality pattern. The association with personality pattern is quite significant statistically, and strong enough to possess considerable clinical interest, especially in regard to the development of pathological personality types. A normal personality pattern was found in 28 percent of the men whose parents had a harmonious relationship, and in 7 percent of those whose parents were in marked conflict. The parallel percentages for pathological personality types are 13 and 31.

Finally, the summary of psychiatric signs in the family history was investigated with reference to the personality pattern, work adjustment, and the man's own opinion of his health at entry. If the family history was not definitely positive, there was little chance that the examiner would regard the individual as having a neurosis or a pathological personality (table 233). The work adjustment was rated impaired in 7 percent of the men whose family histories contained no more than suggestive evidence of psychopathology, in 15 percent with positive histories, and in 20 percent with strongly positive histories. Declared health at entry into service is much less intimately related to the summary of psychiatric signs in the family history. Men who described their health at entry as poor constitute only 2 percent of those whose family histories were not more than suggestive, in contrast to 8 percent of those whose family histories were strongly positive.

## IN RELATION TO MILITARY PERFORMANCE

For the most part, the study of military performance was undertaken on the basis of the summary of psychiatric signs in the family history, but occasionally specific elements of the family history were used. Also, military performance was generally represented by major area of stress and location at breakdown, but limited use was made of other characteristics as well. The following discussion is organized around specific elements in the military history.

The variety of religious faith embraced in the parental family was found to be quite significantly associated with major area of stress, although the examiner's evaluation of the intensity of religious controls was not. Catholics least often broke down under minimal stress.

**TABLE 233**

*Summary of Psychiatric Signs in Family History<sup>1</sup> and Preservice Personality*

Preservice personality	Family history		
	Not more than suggestive	Positive or strongly positive	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Normal.....	33.9	11.6	15.2
Neurotic traits.....	38.8	35.0	35.6
Suggestive neurosis.....	5.8	14.2	12.8
Overt neurosis.....	5.8	16.5	14.7
Pathological personality.....	15.7	22.7	21.6
Total.....	100.0	100.0	99.9
Number of men.....	121	620	741

<sup>1</sup> Psychiatric illness in the family is just one element in this summary of family history. See table 72.

The summary of psychiatric signs in the family history bears a significant association with major area of stress, but not with its severity, as was indicated in chapter XII. The analysis there also showed that the most powerful single factor in the preservice history is the personality pattern, and since the family history is rather closely correlated with preservice personality the association between stress and family history was examined within each personality pattern and found to represent no more than chance variation. That is, whatever association the family history has with the amount or quality of stress necessary for breakdown derives from information all of which is contained in the classification of preservice personality. It is the *effect* of the total disturbance in the family on the individual who is destined to break down in service, as reflected in his own development, which is the significant factor in the individual's level of resistance to stress. It is not the existence of psychiatric illness in the family, *per se*, that is important in this regard.

The relation of family history to location at breakdown has been discussed in chapter XIII and need only be summarized here. Psychiatric illness in other members of the family, attitude toward father, economic status, religious influence, overt sibling rivalry, order of birth, and parental conflict are definitely not associated with site of breakdown. An overly strong positive attitude toward the mother, on the other hand, was found to be associated with a tendency to early breakdown. The family summary is probably related to location at breakdown; if a statistical test is made on

the basis of early vs. later breakdown the discrepancy is a reliable one, men from families with negative histories less often breaking down early.

Months of service before and after breakdown and the quality of any subsequent duty were investigated in relation to the summary of psychiatric signs in the family history. It was found that men with positive family histories lasted as long as any others before breaking down. However, after breakdown the men with the most favorable family histories served an average of 5 months longer than men with the poorest, partly because they were less often discharged for disability. The quality of any duty following first breakdown is also associated with the family history.

Emotional health at separation is also quite reliably associated with the summary of psychiatric signs in the family history (table 234).

**TABLE 234**

*Emotional Health at Separation and Summary of Psychiatric Signs in Family History*

Emotional health at separation	Family history			
	Not more than suggestive	Positive	Strongly positive	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Normal.....	14.8	8.1	5.4	7.9
Symptoms, short of neurosis.....	15.7	8.7	7.2	9.1
Neurosis, not severe.....	56.5	59.2	50.4	55.0
Neurosis, severe.....	7.8	18.1	26.9	20.4
Behavior disorder present.....	3.5	5.0	7.2	5.7
Posttraumatic syndrome.....	0	.3	.6	.4
Other.....	1.7	.6	2.4	1.6
Total.....	100.0	100.0	100.1	100.1
Number of men.....	115	321	335	771

## IN RELATION TO STATUS AT FOLLOW-UP

The relative frequency with which men voiced various complaints at follow-up bears some relation to the summary of psychiatric signs in the family history, but the man's own opinion of his change in condition between entry and follow-up does not. The more psychopathology that was found in other members of the family, by and large, the more disability seemed evident at follow-up. If parental conflict of any extent appeared in the history, the degree of disability at follow-up was much greater. The percentages with at least moderate disability at follow-up are 34 for men with a strongly positive family history, 27 for men with a positive history, and 23 for men with no more than a suggestive family history.

Economic adjustment at follow-up is moderately correlated with the economic status of the parental family, but employment status is not. The percentage with an impaired overall adjustment at follow-up is quite sensitive to the presence of psychopathology in the family history, being 71 percent in men two or more members of whose families had definite psychiatric illness and 39 percent in men with no such illness in the parental family. This relationship is confined to men who broke down under minimal stress; it does not hold for men breaking down under moderate or severe stress. A poor overall adjustment at follow-up is more likely among men who suffered parental withdrawal by divorce, separation, or desertion. This relationship, too, is confined to men who broke down under minimal stress.

Change in condition following separation from service appears to be unrelated to either presence of psychiatric illness in the immediate family or the summary of all psychiatric signs in the family history. However, as was shown in chapter VI, the examiner's psychiatric diagnosis at follow-up is rather closely related to the presence of psychiatric illness and to the summary of psychiatric signs in the family history, but not to parental withdrawal.

The history of treatment following separation from service, the man's opinion on his need for treatment, and the examiner's estimate of the need for treatment are all somewhat related to the presence of psychiatric illness and to the summary of psychiatric signs in the parental family.

Compensation status was reviewed in relation to economic status of the parental family, degree of religious influence, parental conflict, and summary of psychiatric signs in the entire family history. These are all discussed in chapter XI where an absence of any significant relationship was noted.

The examiner's prognosis at follow-up seems unrelated to parental withdrawal but significantly associated with the presence of psychiatric illness in members of the parental family, its economic status, the presence of parental conflict, and the summary of psychiatric signs in the family history. For example, a poor prognosis was made in only 15 percent of the men with no evidence of psychiatric illness in the immediate family, and in 51 percent of the men in whose families two or more members manifested clear-cut evidence of psychiatric illness. However, if one knows the examiner's diagnosis, knowledge of this element of the family history does not improve one's forecast of his prognosis.

## SUMMARY

The family history provides a background for the events and changes examined here. Numerous elements of the family history, especially psychiatric illness in the father, in large part, but by no means exclusively, determine preservice personality and adjustments. With the introduction of stress, military behavior continues to reflect the family history, but only

faintly until separation, at which time the effects of stress have largely disappeared. At follow-up, again, the family history is rather firmly associated with psychiatric status.

Just what one will make of the relationship between family history and other elements in the psychiatric history will depend upon one's purpose. If one's interest be a purely intellectual one the foregoing analysis may suffice to demonstrate, subject to the various qualifications which must be made in this study, that these relationships exist. But if one's interest be an operational one, e. g., to predict disability at follow-up, then they do not suffice, for predictions will ordinarily be based on all available information, of which the family history is at best one component. In the discriminant analysis of disability at follow-up, there are seven other factors, including three preservice attributes of the man himself (personality, impairment, and adjustment) which are more powerful predictors. Moreover, elements of the family history do not ordinarily contribute information which is independent of that contained in the personality classification. Whatever influence the family history has on the life history of the individual has been incorporated in his personality pattern, degree of psychiatric impairment, and various adjustments by the time he enters military service.

## CHAPTER XVIII

### PRESERVICE PERSONALITY

Although preservice personality and psychiatric impairment are highly correlated, by definition, there is evidence that a knowledge of both assessments is more informative than of either alone. It is perhaps useful to exhibit at the very outset the correlation between these two major variables, therefore, and this is done in table 235. Plainly the set of cases falling within any impairment group is rather heterogeneous as to preservice personality, and vice versa, except that those of "normal" preservice personality have no evidence of impairment. For some purposes, then, a classification based on both characteristics is useful. Although this chapter is concerned primarily with the preservice personality patterns of the clinical sample, such questions as the relation between the family history and preservice personality are best approached via the 1951 Army control sample and the chapter is accordingly divided into two parts.

**TABLE 235**  
*Preservice Personality and Preservice Psychiatric Impairment*

Preservice personality	Preservice impairment					
	None	Questionable	Mild	Moderate	Marked	Total
	Number of men					
Normal.....	109	0	0	0	0	109
Neurotic traits.....	192	45	31	0	0	268
Suggestive neurosis.....	26	53	22	0	0	101
Overt neurosis.....	0	0	70	40	4	114
Pathological personality.....	54	20	44	39	4	161
<b>Total.....</b>	<b>381</b>	<b>118</b>	<b>167</b>	<b>79</b>	<b>8</b>	<b>753</b>

### THE CLINICAL SAMPLE

#### Preservice Personality and Other Preservice Characteristics

In the preceding chapter preservice personality was considered in relation to various elements of the family history and it will suffice here merely to mention the salient findings, which are: (1) the less psychiatric illness in the parental family the more nearly normal the subject of study; (2) parental withdrawal is not clearly associated with preservice personality, but homes broken by divorce, separation, and desertion may have produced

more men with pathological personalities; (3) parental conflict has a deleterious effect on preservice personality and tends especially to produce pathological personalities; (4) the presence of any significant psychiatric signs in the family history, as they are defined here (p. 78, table 72), seems to predispose to overt neurosis and pathological personality; (5) the degree of religious influence in the home is without effect on preservice personality.

Parental attitudes were defined on the basis of affection and rejection, discipline or indulgence, and protection or independence, separately for each parent. Their relation to preservice personality is quite significant in the statistical sense, and may be summarized in the following statements:

1. The extremes of maternal affection and rejection are reflected especially in an increased frequency of pathological personalities; paternal rejection is also associated with an excess of pathological personalities.
2. Both indulgence and extreme discipline, on the part of the mother, are associated with an excess of pathological personality types.
3. The extent of paternal discipline is inversely correlated with the percentage having a normal personality, the excesses being found among the pathological personality types and the overt neuroses.
4. The degree of maternal overprotection is inversely correlated with the percentage found to be normal, and positively correlated with the percentage with pathological personality (table 236); the degree of paternal protection and independence is unrelated to the personality classification.

Suggestive or overt neuroses were more often found among men with strongly positive attitudes toward their mothers than among men with normal or even negative attitudes. Positive attitudes toward fathers, on the other hand, were more often found among normal men, and negative attitudes among those with personality disorders.

**TABLE 236**

*Extent of Maternal Protection or Grant of Independence and Preservice Personality*

Protection or grant of independence by mother	Percentage distribution by preservice personality						Number of men
	Normal	Neurotic traits	Suggestive neurosis	Overt neurosis	Pathological personality	Total	
Extreme overprotection.....	1.9	33.3	14.8	18.5	31.5	100.0	54
Moderate overprotection....	12.1	41.7	13.6	12.1	20.5	100.0	132
Average protection, and above average independence.....	19.2	39.1	12.6	11.9	17.2	100.0	396
Total.....	16.0	39.2	13.1	12.5	19.2	100.0	582

Other characteristics of the man himself were studied in relation to preservice personality in order to explore the meaning of the personality classification. The position in the family constellation (only child, oldest boy, etc.) is not significantly related to personality. Intelligence, usually obtained only as a clinical impression, is moderately associated with the examiner's view of personality (table 237); lower intelligence is more common among men with neuroses or pathological personalities. Of the 6 men regarded as definitely deficient, 4 were classified as having pathological personality types, 1 an overt neurosis, and 1 neurotic traits. Religious preference was found not to be significantly associated with preservice personality. Table 238 presents the data for this comparison; the calculated probability is about .07 under the null hypothesis.

All the individual preservice adjustments were studied in relation to preservice personality, of which they are presumably an expression. The marked association with adjustment to the parental family is shown in table 239. Maladjustment is fairly frequent among men with neuroses or pathological personalities, and quite rare among men considered normal. Sexual adjustment is similarly related. School adjustment is also similar except that men with pathological personalities were more often maladjusted than men with suggestive or overt neuroses (table 240). The work adjustment was often impaired (table 241) among men with pathological personalities, and especially among men with overt neuroses. Adjustment in the social and recreational area is also poor for men with pathological personalities or overt neuroses. It is in the area of community adjustment that the men with pathological personality types are so different from men with evidence of neurosis (table 242), a fact which merely reflects the

**TABLE 237**

*Clinical Impression of Intelligence and Preservice Personality*

Preservice personality	Intelligence			
	Definitely superior	Above average	Below average	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Normal.....	17.8	17.6	11.2	16.4
Neurotic traits.....	37.8	38.2	24.8	35.6
Suggestive neurosis.....	11.1	12.9	18.4	13.8
Overt neurosis.....	13.3	13.5	17.6	14.3
Pathological personality.....	20.0	17.8	28.0	19.9
Total.....	100.0	100.0	100.0	100.0
Number of men.....	45	482	125	652



**TABLE 238**

*Religious Preference and Preservice Personality*

Preservice personality	Religious preference			
	Protestant	Catholic	Jewish	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Normal.....	12.6	20.1	13.0	15.7
Neurotic traits.....	35.9	34.2	46.3	36.0
Suggestive neurosis.....	13.1	12.4	18.5	13.2
Overt neurosis.....	15.5	12.8	13.0	14.2
Pathological personality.....	22.8	20.5	9.3	20.8
Total.....	99.9	100.0	100.1	99.9
Number of men.....	373	298	54	725

**TABLE 239**

*Preservice Adjustment to Parental Family and Preservice Personality*

Preservice personality	Percentage distribution by family adjustment				Number of men
	Satisfactory	Questionable	Impaired	Total	
Normal.....	96.4	1.8	1.8	100.0	112
Neurotic traits.....	71.7	16.3	12.0	100.0	258
Suggestive neurosis.....	74.7	13.2	12.1	100.0	91
Overt neurosis.....	58.8	19.6	21.6	100.0	97
Pathological personality.....	47.7	22.8	29.5	100.0	149
Total.....	69.2	15.4	15.4	100.0	707

criteria for the classification of pathological personality. Marital maladjustment is a major problem for men with pathological personality types, and much less so for those with neuroses (table 243).

The overall preservice adjustment provides no new information, since it merely adds together the individual maladjustments, but nevertheless offers a convenient summary. No single area is given any more weight than any other in its construction, however. Men with overt neuroses manifest about the same overall picture as men with personality disorders, although the underlying pattern of individual adjustments differs some-

**TABLE 240**

*Preservice School Adjustment and Preservice Personality*

Preservice personality	Percentage distribution by school adjustment				Number of men
	Satisfactory	Questionable	Impaired	Total	
Normal . . . . .	86.7	13.3	0	100.0	113
Neurotic traits . . . . .	60.4	28.6	11.0	100.0	255
Suggestive neurosis . . . . .	59.1	30.1	10.8	100.0	93
Overt neurosis . . . . .	37.5	32.7	29.8	100.0	104
Pathological personality . . . . .	25.5	29.5	45.0	100.0	149
Total . . . . .	53.8	27.2	19.0	100.0	714

**TABLE 241**

*Preservice Work Adjustment and Preservice Personality*

Preservice personality	Percentage distribution by work adjustment				Number of men
	Satisfactory	Questionable	Impaired	Total	
Normal . . . . .	92.6	6.4	1.1	100.1	94
Neurotic traits . . . . .	74.4	15.7	9.9	100.0	223
Suggestive neurosis . . . . .	70.8	15.7	13.5	100.0	89
Overt neurosis . . . . .	39.0	21.0	40.0	100.0	100
Pathological personality . . . . .	45.7	26.8	27.5	100.0	138
Total . . . . .	64.9	17.5	17.5	99.9	644

what (table 244). If preservice impairment is combined with preservice personality, there is a great deal of further differentiation in the summary of adjustments (table 245). The fact of the association is, of course, largely a restatement of the coding procedures but it also serves to illustrate the nature of the distinction involved between personality and preservice impairment.

Preservice marital status was found to be quite significantly associated with preservice personality and in the fashion shown in table 246. It was found that this association is largely, if not altogether, dependent upon the age differentials which appear in table 247. The association with age does not involve the men considered to have pathological personality types,

**TABLE 242**

*Preservice Community Adjustment and Preservice Personality*

Preservice personality	Percentage distribution by community adjustment				Number of men
	Satisfactory	Questionable	Impaired	Total	
Normal . . . . .	98.2	1.8	0	100.0	110
Neurotic traits . . . . .	93.5	3.2	3.2	99.9	248
Suggestive neurosis . . . . .	90.4	2.4	7.2	100.0	83
Overt neurosis . . . . .	87.2	4.7	8.1	100.0	86
Pathological personality . . . . .	62.8	8.3	29.0	100.1	145
Total . . . . .	86.5	4.2	9.4	100.1	672

**TABLE 243**

*Preservice Marital Adjustment and Preservice Personality*

Preservice personality	Percentage distribution by marital adjustment				Number of men
	Satisfactory	Questionable	Impaired	Total	
Normal . . . . .	97.1	0	2.9	100.0	34
Neurotic traits . . . . .	57.0	15.2	27.8	100.0	79
Suggestive neurosis . . . . .	64.6	18.7	16.7	100.0	48
Overt neurosis . . . . .	48.1	20.4	31.5	100.0	54
Pathological personality . . . . .	19.4	14.5	66.1	100.0	62
Total . . . . .	53.1	14.8	32.1	100.0	277

but the older men are much more likely to be classified overtly neurotic at entry. The effect of age upon resistance to stress is apparently reflected in the preservice personality pattern.

Preservice educational attainment is also quite significantly associated with preservice personality. The better-educated men have an excess with neurotic disorders and a deficit of men with personality disorders. The latter group is more heavily drawn from the less well educated, as would be expected from the examiners' opinions on their intelligence and on their adjustments.

Preservice occupation, including status as a student, does not vary significantly among the various preservice personality groups.

The man's own estimate of his health at entry into service is also quite highly correlated with preservice personality (table 248). Men considered to have pathological personalities usually described their health as excellent, but men with suggestive or overt neuroses usually regarded their health as no better than fair.

A quite significant association was found between preservice personality and a history of treatment (table 249). Plainly, treatment for a presumably emotional disorder is a major element in the histories of men considered by examiners to have had either a suggestive or an overt neurosis.

**TABLE 244**

*Preservice Adjustment Summary and Preservice Personality*

Preservice personality	Percentage distribution by summary adjustment				Number of men
	Satisfactory	Questionable	Impaired	Total	
Normal . . . . .	69.7	23.9	6.4	100.0	109
Neurotic traits . . . . .	24.8	26.4	48.8	100.0	258
Suggestive neurosis . . . . .	20.4	25.5	54.1	100.0	98
Overt neurosis . . . . .	2.8	13.0	84.2	100.0	108
Pathological personality . . . . .	2.5	11.7	85.8	100.0	162
Total . . . . .	22.7	20.7	56.6	100.0	735

**TABLE 245**

*Percentage of Men With Impaired Preservice Adjustment, by Psychiatric Impairment and Preservice Personality*

Preservice personality	Preservice psychiatric impairment			
	None	Questionable or mild	Moderate or marked	Total
Normal . . . . .	6.4	( <sup>1</sup> )	( <sup>1</sup> )	6.4
Neurotic traits . . . . .	43.7	61.3	( <sup>1</sup> )	48.8
Suggestive neurosis . . . . .	37.5	59.5	( <sup>1</sup> )	54.1
Overt neurosis . . . . .	0	76.9	95.3	84.3
Pathological personality . . . . .	70.4	90.6	97.7	85.8
Total . . . . .	36.2	71.2	96.6	56.6

<sup>1</sup> These particular combinations of personality and impairment were inadmissible.

**TABLE 246**

*Preservice Marital Status and Preservice Personality*

Preservice personality	Number of men	Percentage ever married
Normal . . . . .	113	30.1
Neurotic traits . . . . .	246	28.0
Suggestive neurosis . . . . .	93	51.6
Overt neurosis . . . . .	108	47.2
Pathological personality . . . . .	151	37.1
Total . . . . .	711	36.3

**TABLE 247**

*Age at Entry Into Service and Preservice Personality*

Preservice personality	Age at entry			
	Under 20	20-29	30 or more	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Normal . . . . .	19.7	16.5	10.4	15.9
Neurotic traits . . . . .	37.2	37.9	25.0	35.0
Suggestive neurosis . . . . .	10.9	11.5	20.1	13.2
Overt neurosis . . . . .	9.8	13.4	23.8	14.8
Pathological personality . . . . .	22.4	20.8	20.7	21.1
Total . . . . .	100.0	100.1	100.0	100.0
Number of men . . . . .	183	419	164	766

**TABLE 248**

*Man's Own Opinion of Health at Entry and Preservice Personality*

Preservice personality	Percentage distribution by health at entry				Number of men
	Excellent	Fair	Poor or worse	Total	
Normal . . . . .	90.0	9.1	0.9	100.0	110
Neurotic traits . . . . .	76.7	20.0	3.3	100.0	245
Suggestive neurosis . . . . .	42.7	45.1	12.2	100.0	82
Overt neurosis . . . . .	28.1	51.7	20.2	100.0	89
Pathological personality . . . . .	79.1	15.8	5.0	99.9	139
Total . . . . .	68.7	24.7	6.6	100.0	665

## In Relation to Events of the Military Period

All the elements of the military experience were studied in relation to preservice personality and are discussed in turn.

Although branch of service was found to have no significant association with preservice personality, component of the Army of the U. S. (A. U. S.) does seem related (table 250). Regular Army and National Guard personnel were more often regarded as having either a normal personality or a pathological personality type, and less often any evidence of neurosis.

Apart from the chance of breakdown, discussed earlier in chapter II, performance is best evaluated in terms of relative amount of stress required to precipitate breakdown, or quality of duty thereafter, and these are

**TABLE 249**

*Personality Pattern and Treatment for Emotional Disorder Prior to Entry Into Service*

Personality pattern	Number of men	Percent treated
Normal . . . . .	108	1.9
Neurotic traits . . . . .	246	5.7
Suggestive neurosis . . . . .	79	39.2
Overt neurosis . . . . .	88	60.2
Pathological personality . . . . .	133	9.0
Total . . . . .	654	17.1

**TABLE 250**

*Component of the Army of the United States and Preservice Personality*

Preservice personality	Component of the A. U. S.		
	Regular Army, National Guard	Inductee	Total Army
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Normal . . . . .	25.3	15.6	17.5
Neurotic traits . . . . .	32.3	34.4	34.0
Suggestive neurosis . . . . .	7.1	15.6	14.0
Overt neurosis . . . . .	7.1	15.4	13.8
Pathological personality . . . . .	28.3	19.0	20.7
Total . . . . .	100.1	100.0	100.0
Number of men . . . . .	99	422	521

discussed below. There is also interest, however, in the medical and administrative experience of men in the various personality groups. The court-martial rates are rather uniform except for men with pathological personality types. Educational level also plays a role in court-martial rates, but adjustment for the differential in education would not greatly affect the relative standing of the men with pathological personality types, as shown in table 251. The average number of days lost under Article of War 107 (chiefly absence without leave) is shown in table 252, and further underscores the large differences among personality groups from the standpoint of ineffectiveness for nonmedical reasons. Men with pathological personalities also had the highest admission rate prior to breakdown, 1,069 in comparison with 696 for men called normal, and for the other personality groups the rates increase in proportion to the degree of neurotic involvement, reaching a peak at 936 for men with overt neuroses. Approximately the same picture emerges for the entire period of service, except that men with overt neuroses broke down more rapidly and thus experienced an admission rate for psychoneurosis (756) well above that for men with pathological personality types (489); for that reason their average rates for the entire period of service are nearly equal, 1,482 for men with overt neuroses and 1,484 for men with pathological personalities.

**TABLE 251**

*Court-Martial Rates and Preservice Personality Pattern*

Reason for court-martial	Courts-martial per 1,000 man-years of service, by preservice personality		
	Pathological personalities	Other personality groups	Total
AWOL.....	113	46	59
Other.....	101	26	40
All causes.....	214	72	100

Of more direct interest are those elements of the military experience which may be regarded as stressful, beginning with length of service itself. Men with suggestive or overt neuroses served only 13 or 14 months before breakdown in comparison with 22 to 24 months for the other personality groups. Men with pathological personalities lasted as long as men whom examiners regarded as normal. Average length of service overseas prior to breakdown (including men who never went overseas) was about 6.6 months for the entire sample, but varied greatly by type of personality (table 253). In a statistical test of normals vs. men with pathological personality types, the difference between the means of 9.8 and 8.3 was found to lie within the range of chance variation.

**TABLE 252***Average Days Lost Under Article of War 107 and Preservice Personality*

Preservice personality	Average days lost per man	Average days lost per man-year served
Normal.....	11.63	3.76
Neurotic traits.....	7.15	2.70
Suggestive neurosis.....	5.94	3.16
Overt neurosis.....	5.90	3.24
Pathological personality.....	19.35	7.09
<b>Total.....</b>	<b>10.08</b>	<b>4.03</b>

The percentage of men in combat units at the time of breakdown varies greatly with personality type, from 69 percent for normals to 32 percent for men with overt neuroses. Men with pathological personality types occupied a middle ground, 45 percent being in such units. Men with overt neuroses at entry had a dangerous MOS less often than others, but it is of interest that as many as 20 percent of them did. These differences reflect the extent to which screening operates in the assignment process.

Location at breakdown was discussed in chapter XIII, where it was shown that breakdown occurred in the Z/I prior to overseas shipment in 60 percent of the men with suggestive or overt neuroses, in 19 percent with not more than neurotic traits, and in 33 percent with pathological personality types. The percentages first breaking down in or after combat are reversed. The major area of stress precipitating breakdown was analyzed for each personality group in chapter XII; each exhibits a characteristic stress pattern. Those who were described by the examiner as normal or as having no more than neurotic traits exhibit similar stress patterns

**TABLE 253***Mean Months Overseas<sup>1</sup> Prior to First Breakdown, by Preservice Personality*

Preservice personality	Number of men	Mean months
Normal.....	105	9.76
Neurotic traits.....	243	7.73
Suggestive neurosis.....	122	3.18
Overt neurosis.....	103	2.65
Pathological personality.....	142	8.27
<b>Total.....</b>	<b>715</b>	<b>6.63</b>

<sup>1</sup> Men who never went overseas, or who broke down before going overseas, are represented in these averages by 0 months.



dominated by combat (63 and 53 percent). The group with suggestive neuroses is almost evenly distributed among all varieties of stress, although combat is the most frequent (22 percent). Men with overt neuroses are similarly distributed, but the most frequent stress is not combat but the interpersonal frustrations of military life. Men with pathological personality types present a very mixed picture; often (41 percent) combat stress was required to precipitate their breakdown, and yet they broke down under no stress as often as those with overt neuroses (16 percent).

The percentages breaking down under no or at most mild stress are as follows:

Normal.....	32
Neurotic traits.....	41
Pathological personality.....	54
Suggestive neurosis.....	74
Overt neurosis.....	84

These figures are very nearly complementary to the percentages breaking down in or after combat.

Within the sample with Army service the men assigned to the various personality groups were compared as to severity of any combat required to precipitate breakdown (table 254). Normal men more often required severe combat to precipitate their breakdown than was true of the other personality groups. However, men with some personality impairment who reached combat usually did not break down until subjected to at least moderate combat and the personality groups do not differ significantly as to duration of any ground combat.

Awards of the Purple Heart and other individual decorations vary quite markedly by preservice personality. For the sample as a whole 10.5 percent received the Purple Heart for wounds received in action. This is probably not far from the Army average for men who were in the service in 1944, as indicated in chapter I. The percentage with Purple Heart awards ranges from 18 for normals to 1.6 for men with overt neuroses. The relative frequency of other awards for meritorious or hazardous service varies in similar fashion, being 9.0 percent for men with normal personalities and 0 for men with overt neuroses. In the clinical sample there was but one Silver Star winner (there were four others in the record sample) so that very little is known of the personalities of such men. The one Silver Star holder was considered to have a personality disorder at entry. There were, however, 11 Distinguished Flying Cross winners in the clinical sample, distributed as follows by preservice personality: normal (1), neurotic traits (7), suggestive neurosis (2), and pathological personality (1).

In general, neither the pattern of personality nor impairment seemed reliably associated with severity of illness at the time of the first breakdown. However, if the group with overt neuroses at entry is singled out and compared with normals it is plain that the latter were not as sick when they did break down. Response to treatment was also observed to be somewhat better among men with more adequate personality patterns.

**TABLE 254**

*Severity of Combat Prior to Breakdown and Preservice Personality, for Men With at Least Mild Combat Stress<sup>1</sup>*

Preservice personality	Percentage distribution as to severity of combat				Number of men
	Mild	Moderate	Severe	Total	
Normal . . . . .	7.5	9.4	83.0	99.9	53
Neurotic traits . . . . .	10.3	36.4	53.3	100.0	107
Suggestive or overt neurosis . . . . .	9.4	21.9	68.8	100.1	32
Pathological personality . . . . .	6.4	25.5	68.1	100.0	47
Total . . . . .	8.8	26.4	64.9	100.1	239

<sup>1</sup> Men with only rear-area exposure are omitted.

For the period after breakdown a variety of indices may be used to compare the preservice personality groups. The percentage with an immediate disability discharge ranged from 21 for men with normal personalities to 52 for men with overt neuroses, and the percentage with later disability discharge from 15 for normals to 27 for men with pathological personalities. About one-fourth of the normal men were returned to their own units without reassignment or evacuation to the rear. Normal men remained in service for an average of 12.6 months after the first breakdown, other groups 8 to 9 months, and with more of this time spent in hospital. For the period after breakdown the average admission rates for all causes are:

<i>Preservice Personality</i>	<i>Admissions per 1,000 Men per Year</i>
Normal . . . . .	854
Neurotic traits . . . . .	906
Suggestive neurosis . . . . .	781
Overt neurosis . . . . .	926
Pathological personality . . . . .	1,254

In this period the admission rates for psychoneurosis only are highest for men with overt neuroses and only very little less for men with pathological personalities prior to service.

The quality of any duty following the first breakdown was found to vary quite significantly by preservice personality. Of those who were returned to duty after the first breakdown, 21 percent served well and continuously, 51 percent apparently served satisfactorily for at least 2 months thereafter but positive evidence of good and continued service is lacking, and for 28 percent service was obviously short or otherwise unsatisfactory. The percentage with positive evidence of good and continued service is lowest and about the same for men with overt neuroses or pathological

personalities (13 percent) and highest for men with normal personalities (32 percent) prior to service.

Although at the time of breakdown men in the various personality groups differed very little as to severity of illness, by the time they were separated from service their original differences again manifested themselves, but the evidence of illness had by no means disappeared completely from those who were normal at entry (table 255).

**TABLE 255**

*Emotional Health at Separation and Preservice Personality*

Preservice personality	Percentage distribution by emotional health at separation						Number of men	
	Normal	Symptoms only	Neurosis		Behavior disorder	Other		Total
			Not severe	Severe				
Normal.....	28.4	14.7	47.1	8.8	0	1.0	100.0	102
Neurotic traits.....	7.0	14.0	59.3	15.5	2.7	1.6	100.1	258
Suggestive neurosis.....	5.5	11.0	62.6	18.7	2.2	0	100.0	91
Overt neurosis.....	1.9	1.0	66.3	29.8	0	1.0	100.0	104
Pathological personality.....	1.4	3.4	46.6	23.6	21.6	3.4	100.0	148
Total.....	8.0	9.5	56.3	18.8	5.8	1.6	100.0	703

### In Relation to the Follow-Up Period

Residence at follow-up was studied in relation to preservice personality to see if there were any differences associated with either geographic region or size of city, but none was found.

The presence of symptoms at follow-up was most frequent among men with overt neuroses before entry into service and least frequent among men called normal. The origin of any symptoms was similarly dependent upon preservice personality.

Most of the men in each personality group stated that their health had deteriorated between entry into service and follow-up, and the variation among them in this respect does not meet the criterion of statistical significance. However, if attention is paid to the full range of their opinion, including the distinction between actual improvement in health and no change, the preservice personality groups do vary significantly: Men with the most impairment prior to entry were the most inclined to report some improvement in their health. The percentage reporting such improvement ranges from 5 percent for men with normal personality patterns to 20 percent for men with overt neuroses.

In chapter V it was shown that psychiatric disability at follow-up is very highly correlated with preservice personality and that the likelihood of moderate or severe disability at follow-up was small (about 8 percent) for men considered normal at entry. Also, and in keeping with the opinion expressed by the men themselves about beneficial changes in their health after entry, 25 percent of those with overt neuroses at entry were considered free of disability at follow-up. It was also shown there that if the information about preservice psychiatric impairment was added to that on personality, the correlation with disability at follow-up was further improved. Moreover, disability at follow-up was about the same for men with overt neuroses at entry as it was for men with pathological personalities. Finally, it was also shown that preservice personality and combat interacted considerably in producing disability at follow-up, in that men who broke down in combat were more likely to be disabled at follow-up than men whose breakdown was elsewhere, provided there was some prior evidence of neurosis. It appears that vulnerability to the stress of combat is reflected not merely in a heightened chance of breakdown but also in its more sustained effect. In other words, combat has a more devastating effect on men with pre-existing neuroses than upon men who are relatively free of such disorders.

The various adjustments in the follow-up period were reviewed in chapter VII in relation to preservice personality. In the work area there are wide variations in adjustment among the preservice personality groups. The percentage with an occupational maladjustment varies from 10 to 42 percent (table 256). Two indices of employment status were considered: (1) proportion unemployed, whatever the reason; and (2) proportion whose employment is limited by illness (table 257). The latter index includes as limited those who declared they could work only part time because of illness. The two indices are not independent, of course, but overlap in their inclusion of men who said they were unemployed because of illness. Together the two indices present a quite interesting picture. Unemployment seems unrelated to the degree of neurotic illness, but differentiates sharply between men with pathological personalities (24 percent) and others (12 percent). However, if the part-time limitation is added to unemployment, then men with overt neuroses at entry occupy a middle ground between those with pathological personalities and those with no more than suggestive neuroses.

Overall economic adjustment pertains largely to level of income in relation to level of aspiration rather than to the specific facts of employment. It bears about the same relation to preservice personality as does occupational adjustment. Family, marital, and sexual adjustments all depend heavily on preservice personality, men with overt neuroses or pathological personalities before entry into service exhibiting more maladjustment at follow-up. There is a suggestion that men with overt neuroses suffer a particular disadvantage in the sexual area.

**TABLE 256**

*Occupational Adjustment at Follow-up and Preservice Personality*

Preservice personality	Percentage distribution as to occupational adjustment				Number of men
	Satisfactory	Questionable	Impaired	Total	
Normal.....	83.9	6.3	9.8	100.0	112
Neurotic traits.....	69.0	7.5	23.5	100.0	255
Suggestive neurosis.....	77.7	7.4	14.9	100.0	94
Overt neurosis.....	60.0	6.0	34.0	100.0	100
Pathological personality.....	51.0	7.2	41.8	100.0	153
Total.....	67.4	7.0	25.6	100.0	714

**TABLE 257**

*Employment Status at Follow-up and Preservice Personality*

Employment status	Preservice personality					Total
	Normal	Neurotic traits	Suggestive neurosis	Overt neurosis	Pathological personality	
<b>Employed</b>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Full time.....	85.7	78.3	79.6	72.4	63.9	75.8
Part time						
Because of illness.....	3.4	4.9	7.1	10.5	8.2	6.5
Other.....	2.5	1.5	3.1	5.7	3.8	3.0
<b>Unemployed</b>						
Because of illness.....	3.4	5.3	3.1	6.7	15.8	7.1
Other.....	5.0	9.9	7.1	4.8	8.2	7.7
Total.....	100.0	99.9	100.0	100.1	99.9	100.1
Number of men.....	119	263	98	105	158	743

Adjustment to the community at follow-up also bears a clear relationship to preservice personality. The percentage with such maladjustments is 45 for men with personality disorders, 21 for men with overt neuroses, and 5 for men who seemed normal at entry into service.

The overall adjustment at follow-up was impaired for 73 percent of the men with pathological personalities, 63 percent of the men with overt

neuroses, and 26 percent of the men with normal personality patterns, at entry into service.

When all five preservice personality groups were compared as to the direction and likelihood of a change in condition following separation from service, separately for men who were ill and men who were not ill at separation, no more than chance variation was observed. Improvement after separation was fairly general for men who were ill at separation, and it seemed remarkable that the chance of improvement did not reflect preservice personality. Accordingly, the comparisons were repeated separately for men with "neurosis, not severe" and for men with "neurosis, severe" at follow-up, but again only insignificant variation was observed.

The follow-up diagnosis, like the assessment of disability, depends very intimately upon preservice personality, as was noted in chapter VI. Table 258 reveals that the relationship is about what one might expect, and interest attaches chiefly to the points at which the two classifications fail to correspond closely. Thus, of 146 men classified as having a pathological personality at entry, at follow-up 18 percent were given no psychiatric diagnosis and 45 percent a diagnosis of neurosis. Also, among 95 men given the preservice diagnosis of overt neurosis at follow-up 14 percent were classified as having a personality or behavior disorder, and 8 percent no diagnosis.

**TABLE 258**

*Psychiatric Diagnosis at Follow-up and Preservice Personality*

Preservice personality	Percentage distribution as to psychiatric diagnosis at follow-up					Number of men
	None	Neurosis		Personality or behavior disorder	Total	
		Mild	Moderate or severe			
Normal . . . . .	64.5	26.4	6.4	2.7	100.0	110
Neurotic traits . . . . .	29.0	37.4	26.7	6.9	100.0	262
Suggestive neurosis . . . . .	29.5	43.2	25.3	2.1	100.1	95
Overt neurosis . . . . .	8.4	42.1	35.8	13.7	100.0	95
Pathological personality . . . . .	17.8	17.8	27.4	37.0	100.0	146
Total . . . . .	29.5	33.1	24.7	12.7	100.0	708

Particular interest attaches to the 15 men considered to have psychotic reactions at follow-up, 10 on the basis of examiners' interviews and 5 on the basis of available records. Those who were examined have, of course, more adequate histories, which may be described as follows:

- 1049:** An asocial individual prior to entering service, with history of attempted suicide, divorce, and excessive drinking. Only identifiable stresses of service were administrative in character; examiner inferred latent homosexuality from panic states. At follow-up, examiner considered patient to have a paranoid psychosis (probably dementia praecox) associated with chronic alcoholic intoxication.
- 1085:** Prior to entering service man exhibited marked passivity, dependence, and chronic, moderately excessive use of alcohol. In the service he was often intoxicated, but managed to fulfill a service assignment for about 3 years, including a year overseas, before breaking down sufficiently to require evacuation home. At follow-up the examiner found marked paranoid trends, chronic alcoholic intoxication with hallucinations and continued passivity and dependence.
- 1202:** Before service patient exhibited obsessive-compulsive features and was placed in the category "neurotic traits." He participated in air combat and was twice hospitalized with "operational fatigue" but completed his tour and "collapsed completely" on return to the Z/I. At follow-up examiner finds a schizophrenic reaction marked by loss of affect and withdrawal.
- 1331:** Patient was overtly neurotic before entering service, with considerable incapacity in the area of work and also in regard to interpersonal relations generally; examiner expressed surprise that patient passed through the induction screen. He broke down soon after entering service, without the intervention of any external stress of consequence. At follow-up examiner made diagnosis of schizophrenia, not on basis of delusions and hallucinations but because of breakdown in his interpersonal relations and withdrawal, accompanied by severe anxiety and irritability.
- 1513:** Prior to entering service the patient adjusted as a mild, simple case of schizophrenia; he was asocial and seclusive. He was unable to adjust to requirements of Army life, and following discharge for psychoneurosis he returned to restricted, protective confines of parental family. The examiner's follow-up diagnosis is schizophrenia.
- 1584:** A schizoid individual upon entering service, a "lone wolf," with inadequate adjustments in all areas. No external stress of any importance figured in his early breakdown in service. At follow-up the examiner provided the following diagnostic formulation:  
Characterological diagnosis: schizoid personality.  
Psychiatric syndrome: chronic ambulatory paranoid schizophrenia.  
Symptomatic diagnosis: restlessness, irritability, asocial adjustment, sexual maladjustment, and paranoid suspiciousness.

**2018:** At entry into service, patient presented a prepsychotic personality, with latent homosexual conflict, repressed aggression and hostility, and behavior problems. However, he served in ground combat as a machinegunner for brief period, with actual breakdown after leaving combat. At follow-up examiner found a schizophrenic reaction qualified as mixed, chronic, and progressive.

**5119:** Schizophrenia of paranoid type with various behavior difficulties and hallucinations. The patient was unable to continue his abnormal behavior under military discipline, and developed somatic complaints which led to psychiatric study and discharge. Objective stress was slight. At follow-up patient exhibited a typical paranoid development, with ideas of reference, persecutory delusions, and hallucinations.

**5269:** At entry into service patient seemed somewhat immature, excessively dependent upon mother, but with good scholastic achievement and adjustments outside the home. Military service was spent entirely at a technical school which was not well tolerated. At follow-up examiner made diagnosis of early schizophrenia with some hallucination, but patient was apparently doing well in school.

After separation from service, treatment was sought somewhat more frequently by men with evidence of neurosis at entry. The examiner's opinion on the need for further treatment is more strongly associated with preservice personality pattern. Some measure of effect of the breakdown may be gained from the examiner's opinions on men who at entry surely did not need treatment, i. e., those classified as normal or as manifesting no more than neurotic traits of one kind or another. Examiners considered that about 8 percent of the men who were normal at entry were in great need of treatment at the time of follow-up, and that another 13 percent would derive considerable benefit from treatment. For men with neurotic traits the parallel percentages are 12 and 26. It would therefore be a mistake to regard the more adequate personality groups as unscathed by their war-time experience of breakdown, even though *differences* in the relative need for treatment largely reflect preservice differentials in personality and impairment.

Compensation by the VA for psychiatric disability is not strongly related to preservice personality, as was pointed out in chapter XI. There are opposing tendencies at work: (1) Preservice illness is no basis for entitlement; (2) if disability is regarded as service-connected, compensation is scaled to its apparent severity, and (3) where a man broke down would, as a practical matter; probably influence rating boards. Virtually all of the differences among personality groups as to percentage getting compensation for psychiatric disability may be explained on the basis of variations in site of breakdown. For example, when the preservice personality groups were



standardized as to site of breakdown, the percentages drawing compensation for psychiatric disability were found to be:

	<i>Standardized Percent</i>
Normal . . . . .	32
Neurotic traits . . . . .	45
Suggestive neurosis } . . . . .	39
Overt neurosis } . . . . .	
Pathological personality . . . . .	45
Average . . . . .	42

There remains, of course, some suggestion that men considered normal at entry were less often compensated because they were less often ill at follow-up, and neurotics because they were more often ill before service. No effort was made in the follow-up study to undertake an independent assessment of entitlement. It has already been shown (pp. 139-141) that there is only a moderate association between VA compensation and the follow-up examiners' opinions as to disability. The clearest point of discrepancy pertains to the compensation of 25 percent of the men considered by follow-up examiners to manifest no disability at all, a group which represents 28 percent of those being compensated by the VA from among the men with a history of psychoneurosis during World War II. The fact that preservice personality is not associated with VA compensation unless site of breakdown is taken into account, therefore, is merely indicative of the gross character of VA disability ratings in this area.

The examiner's prognosis was also found to depend very heavily upon preservice personality, as would be expected. Table 259 gives the observed distribution of examiners' prognoses for each preservice personality. Unfavorable prognoses were made in about one-fourth of all cases, but in only 8 percent of the men considered as normal prior to entry. In view of the close association between follow-up prognosis and diagnosis, an effort was made to ascertain whether the prognosis for any particular diagnostic group varied significantly with preservice personality. No evidence of such relationship was seen in 125 cases with a follow-up diagnosis of moderately severe psychoneurosis, but among 223 cases with a mild psychoneurosis, evidence of a relationship was observed as shown in table 260. That is, among men diagnosed by examiners as having mild neuroses at follow-up, those with neuroses or pathological personalities *at entry* were given much less favorable prognoses than those with at most neurotic traits at entry.

## SUMMARY

The preservice personality classification obviously has its roots in the family history, and especially in the specifically psychiatric history of the parents. Rarely was a man classified as normal at entry if either parent had a clear-cut history of an emotional or personality disorder. Conflict between the parents is also closely associated with preservice personality, and especially so with personality disorders. Parental withdrawal, on the

**TABLE 259**

*Examiner's Prognosis Without Treatment and Preservice Personality*

Preservice personality	Percentage distribution by examiner's prognosis				Number of men
	Excellent to good	Good to guarded, guarded	Guarded to poor, poor, hopeless	Total	
Normal . . . . .	61.6	30.4	8.0	100.0	112
Neurotic traits . . . . .	32.0	48.6	19.3	99.9	259
Suggestive neurosis . . . . .	38.0	41.3	20.7	100.0	92
Overt neurosis . . . . .	15.4	42.9	41.8	100.1	91
Pathological personality . . . . .	14.5	38.8	46.7	100.0	152
Total . . . . .	31.6	41.9	26.5	100.0	706

**TABLE 260**

*Preservice Personality Pattern and Examiner's Prognosis at Follow-up, Men With Mild Psychoneuroses at Follow-up*

Preservice personality	Number of men	Percentage of those with mild psychoneuroses whose prognoses were guarded or less favorable
Normal . . . . .	29	38
Neurotic traits . . . . .	95	31
Suggestive or overt neurosis . . . . .	74	53
Pathological personality . . . . .	25	56
Total . . . . .	223	42

other hand, is not associated with preservice personality in any general way, but there is a suggestion that pathological personality types may more frequently issue from families broken by divorce, separation, or desertion. Apparent religious influence in the home seemed to have no obvious effect on preservice personality. When all the psychiatric signs in the family history were considered together as a summary of the family history it appeared that men with no more than an occasional suggestive sign in their family histories rarely had an unfavorable personality pattern, whereas those with a strongly positive family history usually had an unfavorable pattern.

To the extent that one might wish, on the basis of these data, to determine the probability of a neurosis or personality disorder in men with a specific family history, two considerations must be borne in mind: (1) The present sample consists of men who broke down and does not represent the population of men who served; and (2) the assessments of the family and the individual's personality were made in the same interview.

Since the preservice personality pattern is a characterization of the man and his behavior patterns, it is of course quite strongly associated with such personal details as specific adjustments, education, etc. Exploration of the association between preservice personality and such other characteristics is of value, therefore, primarily in lending further meaning to the preservice personality pattern. Not significantly related to preservice personality are the man's birth order and position in the family constellation, his religious faith, and his occupation. It was earlier noted, however, that men of different religious faiths had different patterns of stress; although they do not differ grossly as to personality, men of different religious faiths appear to have different levels of resistance. All other characteristics of the man himself were found to be significantly associated with preservice personality: age, education, marital status, IQ, specific adjustments, health at entry, and history of psychiatric treatment. The association with intelligence is not very marked, but is strong enough to conclude that men with an apparently low IQ are more likely than others to be regarded as having overt neuroses or pathological personalities. The age variation is probably sufficient to explain the difference in marital status.

For every specific area, men with overt neuroses more often exhibit maladjustment than those with at most suggestive neuroses, and this is also true of men with pathological personality types. There are, however, differences between the men with overt neuroses and those with pathological personalities, the former exhibiting more maladjustment in the work area and the latter in the areas of school, the community, and marriage. However, the men with pathological personalities evidently had more maladjustments *per man* than those with overt neuroses.

In their military performance the personality groups also differ quite widely. Court-martial rates are three times as high for men with pathological personalities as for others, and admission rates prior to breakdown are highest for men with pathological personality types and also vary in proportion to the severity of any neurosis prior to service. Length of service prior to breakdown seemed most sensitive to the degree of neurotic illness; men with pathological personality types served almost as long as normals, but men with suggestive or overt neuroses served about half as long, and served overseas about one-third as long. The proportion of men serving in combat units at the time of breakdown is also sensitive to preservice personality; men with overt neuroses had about half the chance of being in such units as did normal men; men with pathological personalities occupy a middle ground. The variation in military occupation is quite

similar, but it is important to note that as many as 20 percent of the men with overt neuroses were in the most dangerous occupations (rifleman, etc.) at breakdown. Location at breakdown is perhaps the most important index of stress; 60 percent of the men with overt or suggestive neuroses broke down in the Z/I without ever going overseas, but about 23 percent broke down only during or after actual combat. For the other personality groups the latter percentage is as follows: normal 63, neurotic traits 60, and pathological personality 44. Interpersonal difficulties were particularly stressful for men with overt neuroses, and only somewhat less so for men with suggestive neuroses or pathological personalities. Other stresses inherent in military service, although no particular problem for men with pathological personalities, took a toll from men with suggestive or overt neuroses. Finally, breakdown occurred without the intervention of any obviously military stress in about 15 percent of the men with at least suggestive neuroses or pathological personalities.

There is some evidence that the intensity of combat, for men who broke down in combat, was greater for normal men than for others, although this is not confirmed by duration (days) of combat. The percentage with Purple Heart awards varies from 18 for normals to 2 for men with overt neuroses at entry. Men who won the DFC were drawn from all the pre-service personality groups except those with overt neurosis.

Performance after breakdown also varied quite significantly by preservice personality. The percentage with an immediate discharge for disability ranged from 21 for normal men to 52 for men with overt neuroses, and a later discharge for disability from 15 for normal men to 27 for men with pathological personality types. Normal men remained in service about 13 months after breakdown, others eight to nine months. The admission rate for all causes following the first breakdown was especially high for men with pathological personality types, being about 1.5 times that for normals. The quality of any duty following the first breakdown also varies considerably among the several preservice personality groups, the percentage with positive evidence of good and continued service being 32 for normal men and about 13 for men with overt neuroses or pathological personalities. Finally, at separation the emotional health of the various personality groups differed greatly, despite their similarity at the time of first breakdown. By the time men were separated from service the percentage with not more than neurotic symptoms (insufficient for a diagnosis of neurosis) varied from about 40 for normal men to about five for men with either overt neuroses or pathological personalities at entry. Men with neurotic traits or suggestive neuroses at entry occupy a middle ground. By the time men were separated, then, the original differentiation represented by the preservice personality classification was already firmly re-established, although at a much lower level of emotional health.

It is not surprising, therefore, that the changes which occurred after separation also had the effect of preserving the original differentiation by personality group, as the general level of emotional health in the group as

a whole continued to improve. Most of the men considered that their health at follow-up was not as good as at entry into service, 5 to 10 years before, and the personality groups do not differ in this respect. However, the men with overt neuroses at entry into service more often reported that their health improved in the interval from separation to follow-up.

The best index of follow-up status is the psychiatric disability classification which shows that about 5 years after breakdown the personality groups maintain about the same relative position as at entry, but within a somewhat less favorable region of the disability scale. To the extent that the preservice and follow-up disability assessments are comparable as to method, they provide a means of estimating the net change in condition, as shown in chapter V (p. 157). The effect on men with overt neuroses at entry is minimal or even absent, and this is borne out by a study of all degrees of impairment. It is also small for men with normal personality at entry; otherwise, about 20 percent more men have moved from the region of absent or slight disability to one of at least moderate disability.

Specific adjustments, e. g., to the community, vary at follow-up (as at entry) with preservice personality. Men with normal preservice personalities seldom exhibited maladjustments in any area. Men with neurotic traits or suggestive neuroses characteristically had more, 10 to 20 percent usually being reported as having impairments of each type. Men with overt neuroses usually had more impairments of every type, and men with pathological personality types still more. The only area in which men with overt neuroses at entry more often exhibited impaired adjustments at follow-up than men with pathological personalities is the sexual area, and the actual margin is an insignificant one (41 percent vs. 36 percent).

For men who were ill at discharge and for men who were not, the likelihood of subsequent improvement in emotional health bears no relation to preservice personality. That is, all personality groups share in the general improvement following separation.

The final diagnosis at follow-up, like the evaluation of psychiatric disability, closely reflects preservice personality. At follow-up only 9 percent of the men regarded as normal at entry were given diagnoses less favorable than mild psychoneurosis, in contrast to 34 percent of those with neurotic traits, and 27 percent with suggestive neuroses at entry. Half of the men with overt neuroses at entry were regarded as having no more than mild neuroses at follow-up. Behavior or personality disorders were seldom seen at follow-up except in the group with this designation at entry, and at follow-up many of the latter were considered to have neuroses of some degree, rather than personality disorders.

There was some tendency for men with less adequate preservice personality patterns to seek treatment more often in the follow-up period. Examiners seldom considered the need for treatment to be great in the case of men regarded as normal at entry. Men in the other personality groups were more often so classified, especially those with pathological personalities at entry. Within each preservice personality group the need for

treatment is further related to the degree of psychiatric impairment at entry.

The association between preservice personality and the fact or amount of VA compensation for psychiatric disability may be explained solely on the basis of differences in location at breakdown.

Finally, the examiner's prognosis is also very closely associated with preservice personality. Examiners rarely gave a poor prognosis to men whom they regarded as normal at entry, but often (40 to 50 percent) did so for men with pathological personalities or overt neuroses at entry.

## **THE 1951 ARMY CONTROL SAMPLE**

Although the 1951 Army control sample is a reasonably representative sample of young men entering the Army, and therefore a better guide than the clinical sample to any general association between family history and preservice personality, it must be borne in mind that the entire preservice history was obtained at a single interview.

There is also interest in comparing the examiner's assessment of preservice personality with his forecast of military performance and with the evaluation made by the man's company commander at the time the psychiatric evaluation was made.

### **Preservice Personality and Family History**

The psychiatric history of the mother is quite significantly associated with preservice personality insofar as the latter describes the level of neurotic involvement. It does not seem related to the development of a pathological personality. The percentage of men considered to have either suggestive or overt neuroses is 6 for men with negative maternal histories, 17 for those with suggestive histories, and 28 for those with positive histories. The psychiatric history of the father is similar, except that its effect seems also to extend to the development of pathological personality types. The percentage of men with either suggestive neuroses, overt neuroses, or pathological personalities is 13 for men with negative paternal histories, 33 for men with suggestive, and 33 for men with positive. The psychiatric history of the siblings is also related to preservice personality. For men whose siblings had negative psychiatric histories the percentage with neuroses or pathological personalities was 14, in contrast to 36 for men whose siblings had at least suggestive history of some emotional disorder. Parental withdrawal seemed to have no significant association with preservice personality.

For each parent the scaling of affection and rejection is reliably associated with preservice personality; the extremes of affection and rejection by either parent seem somewhat prejudicial to the development of normal personality patterns. The percentage of men with suggestive neuroses, overt neuroses, or pathological personalities is 15 for men whose mothers occupy an average position on the scale, but 22 for men with overly affec-

tionate and 43 for men with rejecting mothers. In the paternal history the corresponding percentages are 16, 31, and 26.

Maternal discipline and indulgence were found to be reliably associated with preservice personality, but not paternal. The percentage of men with at least suggestive neuroses or pathological personalities is 15 for those whose mothers occupy a middle ground on this scale, 24 for those with indulgent mothers, and 35 for those with overly disciplining mothers.

Preservice personality also varies somewhat among groups established by the scaling of maternal protection vs. grant of independence, but not paternal. The percentage of men with suggestive neuroses, overt neuroses, or pathological personality types is 16 for men whose mothers occupy an average position on this scale, 22 for men with overprotecting mothers, and 24 for men given more than an average grant of independence by their mothers.

The attitude of the man toward each of his parents is quite significantly associated with preservice personality. The percentage with at least suggestive neuroses or pathological personalities is lowest (13 and 16) for men whose attitudes were classified as average or normal, and highest (53 and 50) for men with overly positive attitudes.

Economic status of parental family is not reliably associated with preservice personality, although there is a suggestion ( $P=.09$ ) that poorer families more often produced men with overt neuroses or pathological personalities. The degree of religious influence in the parental family has no real association with preservice personality.

Overt sibling rivalry, on the other hand, is quite significantly associated with preservice personality. The percentage with at least suggestive neuroses or pathological personalities is 16 for men with no overt sibling rivalry, 22 for men with suggestive evidence of such rivalry, and 35 for men with clear-cut evidence.

Parental conflict is another factor with a strong association with preservice personality. The percentage with at least suggestive neuroses or pathological personalities is nine for men whose parents were said to have a harmonious relationship, 23 for men whose parents were described as not in conflict, and 30 for men whose parents were considered to be in conflict.

Cultural origin of the parental family is unrelated to preservice personality, as is the presence of an assimilation problem in the family history. Parental figures prior to the end of adolescence were divided into biological parents only and all others, but without finding that this distinction had any bearing on preservice personality. The summary of all psychiatric signs in the family history is, of course, quite strongly associated with preservice personality (table 261). It is of particular interest that a third of the men with strongly positive family histories<sup>45</sup> appeared to be well adjusted

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<sup>45</sup> See p. 78, table 72, for criteria.

and emotionally normal at induction. Position in the family constellation, or birth order, is not associated with preservice personality.

Intelligence, on the other hand, is quite strongly associated with preservice personality, especially as to the likelihood of neurosis. The percentages with neurosis are 8.3 for men of at least average intelligence, and 26.0 for men below average.

**TABLE 261**

*Summary of Psychiatric Signs in Family History and Preservice Personality, 1951 Army Control Sample*

Preservice personality	Summary of family history				
	Negative	Suggestive	Positive	Strongly positive	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Normal .....	73.3	85.7	56.9	35.9	54.4
Neurotic traits .....	19.8	7.1	27.7	30.0	26.1
Suggestive neurosis .....	2.6	0	8.9	10.0	7.6
Overt neurosis .....	0	0	1.5	11.2	4.4
Pathological personality .....	4.3	7.1	5.0	12.9	7.6
<b>Total</b> .....	<b>100.0</b>	<b>99.9</b>	<b>100.0</b>	<b>100.0</b>	<b>100.1</b>
Number of men .....	116	14	202	170	502

All the specific adjustments except possibly marital, which was not studied because so few men were married, and the summary of all adjustments, are significantly associated with preservice personality. Table 262 summarizes all these data. Only community maladjustments are specific to one personality group, all the others being shared by men with neuroses and by men with pathological personality types, but the latter usually exhibit somewhat more maladjustment in any specific area.

The man's own evaluation of his health at entry is largely a function of the degree of neurotic involvement suggested by the personality classification, as table 263 shows. Although men with pathological personality types did not regard their health at entry as especially impaired, they did not describe their health as favorably as men considered to be normal.

The extent to which men had sought treatment for a presumably psychiatric or psychosomatic disorder is not significantly associated with preservice personality.

### Forecasts of Military Performance

The 1951 control sample is under study by Dr. David McK. Rioch and his group at the Army Medical Service Graduate School, and ultimately it will be known just how strongly correlated are military performance and



TABLE 262

*Percentage With Specific Maladjustments, by Preservice Personality, 1951 Army Control Sample*

Preservice personality	Approximate number of men	Percentage with impaired preservice adjustment, by area						Overall summary
		Family	Sex	School	Work	Social and recreational	Community	
Normal.....	273	2.2	2.6	1.8	0	0	0	9.2
Neurotic traits.....	131	4.6	7.6	13.7	6.9	2.3	.8	37.4
Suggestive neurosis.....	38	7.9	18.4	18.4	2.6	15.8	0	52.6
Overt neurosis.....	22	13.6	18.2	22.7	18.2	22.7	0	68.2
Pathological personality.....	38	21.1	23.7	39.5	13.2	21.1	28.9	86.8
Total.....	502	5.2	7.4	10.0	3.8	4.4	2.4	28.3

TABLE 263

*Preservice Personality and Declared Health at Entry, 1951 Army Control Sample*

Preservice personality	Percentage distribution by declared health at entry					Number of men
	Excellent	Fair	Impaired	Very poor	Total	
Normal.....	81.3	17.9	0.7	0	99.9	273
Neurotic traits.....	61.1	34.4	3.8	.8	100.1	131
Suggestive neurosis.....	10.5	60.5	23.7	5.3	100.0	38
Overt neurosis.....	0	22.7	40.9	36.4	100.0	22
Pathological personality.....	63.2	31.6	5.3	0	100.1	38
Total.....	65.7	26.7	5.4	2.2	100.0	502

preservice characteristics in this small sample. In addition, however, the psychiatric examiner and the man's company commander were asked to make certain predictions, and these may be studied in relation to preservice personality:

1. Psychiatric prediction as to likelihood (a) that man will become a psychiatric casualty within the first 30 days of combat, or (b) that he will be evacuated for psychiatric reasons from a noncombat job in an active combat theater, or (c) that he will be admitted to hospital with a psychiatric diagnosis not in an active combat theater.

2. Evaluations by company commander as to (a) probable response to training, (b) emotional stability, (c) motivation for service, and (d) probable military performance.

Examiners were of the opinion that all men with overt neuroses would become psychiatric casualties, and about one-third of the men with pathological personality types, if they were to enter active combat. Only 5 percent of the normal men were expected to break down in combat (table 264). If men with overt neuroses were to serve in noncombat assignments in active combat theaters, they expected 77 percent to break down. For men with pathological personality types the corresponding figure is 26 percent (table 265). Examiners estimated that the chance of breakdown would be the same in the Z/I and in overseas noncombat theaters.

Independently of the psychiatric evaluation, the company commander rated each man as to his response to training, emotional stability, motivation for service, and probable military performance (table 266). Statistical tests show some association between preservice personality and emotional stability ( $P < .01$ ), motivation for service ( $P$  about .02), and probable military performance ( $P < .01$ ), but no more than a suggestion of any relationship to early response to training ( $P$  about .09). Men considered by psychiatrists to have overt neuroses rarely were given an outstanding rating by their company commanders, but only 1 out of 4 was rated poor. It will be noted that all four ratings show about the same

**TABLE 264**

*Relation Between Preservice Personality and Psychiatric Forecast as to Early Breakdown in Any Combat Assignment, 1951 Army Control Sample*

Preservice personality	Percentage distribution by psychiatric forecast					Number of men
	No break-down	Break-down	Organic illness only	Administrative discharge	Total	
Normal . . . . .	94.9	4.8	0	0.4	100.1	273
Neurotic traits . . . . .	71.0	27.5	0.8	0.8	100.1	131
Suggestive neurosis . . . . .	36.8	63.2	0	0	100.0	38
Overt neurosis . . . . .	0	95.5	4.5	0	100.0	22
Pathological personality . . . . .	67.6	32.4	0	0	100.0	37
Total . . . . .	78.0	21.2	0.4	0.4	100.0	501

picture for each personality group. From the continuing study of the military performance of this control group an answer may be obtained to the question, "Who is the better predictor at the level of the training camp, the psychiatrist or the company commander?"

### SUMMARY

Personality pattern appears to have been adversely affected by the following characteristics of the family history: psychiatric illness in either parent or siblings, overprotection or rejection by either parent, overdiscipline or overindulgence by the mother, an overly-positive or overly-negative attitude on the part of the man toward either parent, overt sibling rivalry, parental conflict, and the summary of psychiatric signs in the entire family history. Unrelated to the personality pattern are: parental withdrawal, degree of paternal discipline or indulgence, parental protection and grant of independence, economic status of family, role of religion in the family, cultural origin of the family, presence of a problem of cultural assimilation, and parental figures prior to end of adolescence. Although there are some specific differences between the 1951 Army control sample and the clinical sample in regard to these relationships, on the whole they are very similar, and it can hardly be doubted that most of them are generally valid.

**TABLE 265**

*Psychiatric Forecast as to Breakdown in Overseas Noncombat Theaters, and Preservice Personality, 1951 Army Control Sample*

Preservice personality	Percentage distribution by psychiatric forecast					Number of men
	No break-down	Break-down	Organic illness only	Administrative discharge	Total	
Normal . . . . .	98.2	1.5	0	0.4	100.1	273
Neurotic traits . . . . .	87.7	10.0	0.8	1.5	100.0	130
Suggestive neurosis . . . . .	47.4	52.6	0	0	100.0	38
Overt neurosis . . . . .	22.7	77.3	0	0	100.0	22
Pathological personality . . . . .	73.7	26.3	0	0	100.0	38
Total . . . . .	86.4	12.8	0.2	0.6	100.0	501

**TABLE 266**

*Preservice Personality and Company Commander's Evaluation, 1951 Army Control Sample*

Company commander's evaluation	Preservice personality (percent)					
	Normal	Neurotic traits	Suggestive neurosis	Overt neurosis	Pathological personality	Total
<b>A. Evaluation of Response to Training</b>						
Outstanding . . . . .	21.2	19.2	13.5	9.5	13.2	19.1
Average . . . . .	70.2	69.2	70.3	66.7	65.8	69.5
Poor . . . . .	8.5	11.5	16.2	23.8	21.1	11.4
Total . . . . .	99.9	99.9	100.0	100.0	100.1	100.0
<b>B. Evaluation of Emotional Stability</b>						
Outstanding . . . . .	22.0	17.6	13.5	0	13.2	18.6
Average . . . . .	72.9	71.0	67.6	71.4	71.1	71.8
Poor . . . . .	5.1	11.5	18.9	28.6	15.8	9.6
Total . . . . .	100.0	100.1	100.0	100.0	100.1	100.0
<b>C. Evaluation of Motivation for Service</b>						
Outstanding . . . . .	14.7	13.0	8.1	0	13.2	13.0
Average . . . . .	77.3	73.3	75.7	76.2	63.2	75.0
Poor . . . . .	8.1	13.7	16.2	23.8	23.7	12.0
Total . . . . .	100.1	100.0	100.0	100.0	100.1	100.0
<b>D. Predicted Military Performance</b>						
Outstanding . . . . .	20.9	16.8	8.1	9.5	10.5	17.6
Average . . . . .	72.2	69.5	75.7	61.9	68.4	71.0
Poor . . . . .	7.0	13.7	16.2	28.6	21.1	11.4
Total . . . . .	100.1	100.0	100.0	100.0	100.0	100.0
Approximate number of men . . . . .	273	131	37	21	38	500

## CHAPTER XIX

### PRESERVICE ADJUSTMENT

Each of the various adjustments in the preservice period was to some extent scrutinized in relation to other elements of the preservice history, the military period, and the follow-up period, but the only systematic study was made of the overall summary of preservice adjustments.

#### IN RELATION TO OTHER PRESERVICE CHARACTERISTICS

The discussion here is organized around the specific areas of adjustment; most of the underlying data have already been presented in earlier chapters, and to that extent the present section constitutes a summary focused on adjustment.

#### Parental Family

Adjustment to the parental family was studied somewhat more intensively than other adjustments. It was found to be fairly closely associated with the psychiatric history of parents and siblings and with the summary of psychiatric signs in the entire family history, which includes not only emotional disorders, but broken homes, etc. Preservice personality is also very intimately associated with adjustment to the parental family, being especially poor for those with pathological personalities.

The man's adjustment to his parental family was found to be positively correlated with other specific adjustments: sexual, school, work, marital, social and recreational, and community. For example, the percentage with an impaired school adjustment ranges from 13 for men with satisfactory adjustments to the parental family to 36 for men with impaired family adjustments; the parallel percentages with impaired work adjustments are 10 and 29.

**TABLE 267**  
*Preservice Work Adjustment and Preservice School Adjustment*

School adjustment	Percentage distribution by work adjustment				Number of men
	Satisfactory	Questionable	Impaired	Total	
Satisfactory.....	80.5	11.1	8.4	100.0	369
Questionable.....	57.9	24.2	18.0	100.1	178
Impaired.....	36.4	24.0	39.5	99.9	129
Total.....	66.1	17.0	16.9	100.0	676

## **Sex**

Preservice sexual adjustment was explored to a much lesser extent. Its association with family adjustment has already been noted; no correlation with the summary of psychiatric signs in the family history, however, was seen. It is rather closely related to preservice personality. The percentage with definite impairment in the sexual area ranges from 2 for men with normal personality patterns to 26 for men with overt neuroses. Similarly, for men who were already married at entry, there is some correlation between the sexual and marital adjustments: A satisfactory marital adjustment was found in 57 percent of the men with satisfactory sexual adjustments and in only 24 percent of the men with impaired sexual adjustments.

## **School**

As already noted, the school adjustment is positively correlated with the family adjustment; it is also quite strongly associated with the work adjustment (table 267). Its association with preservice personality was observed in chapter XVIII, the percentage maladjusted ranging from none among normal men to 45 among those with pathological personalities. The association between intelligence and school adjustment may be illustrated by the fact that the percentage maladjusted is 14 for men considered by examiners to be average or above in intelligence, and 31 for men considered to be below average.

## **Work**

Adjustment in the work area is positively correlated with family and school adjustments, as noted above. In chapter XVII it was shown that the psychiatric history of parents and siblings and the summary of psychiatric signs in the family history had a strong influence upon the work adjustment, and in chapter XVIII that the preservice personality pattern is similarly related.

## **Community**

The community adjustment, which involves acceptance of the mores and willingness to remain within the boundaries of the law and public opinion, has already been seen to be related to adjustment to the parental family. It is also related to social and recreational adjustment. There is evidence also of a weak association with sibling rivalry. Community adjustment was questionable or impaired in 21 percent of the men for whom sibling rivalry was a problem in contrast to 11 percent for those for whom it was not. The relation with preservice personality has been discussed in chapter XVIII and is largely a reflection of the criteria for the personality pattern; two-thirds of the men with impaired community adjustments were derived from those having pathological personalities of one kind or another, and 29 percent of the men who had pathological personalities were given impaired ratings. No other personality group contained as many as 10 percent with impaired ratings. No association with family history was found.

## Marital Adjustment

Two-thirds of the men with pathological personalities, one-third of the men with overt neuroses, and one-fourth of the men with neurotic traits were classified as having impaired marital adjustments; combined, these three personality groups contribute 90 percent of the cases of impaired marital adjustment although they represent only 70 percent of the entire series known to have been married before entry. No association with the family history was noted in chapter XVII, but marital adjustment has been observed to correlate to some extent with the family and sexual adjustments.

## Overall Summary of Preservice Adjustments

As described in chapter II, men were rated as follows:

1. *Satisfactory* in every area of adjustment.
2. *Questionable* in 1 or 2 areas, but impaired in none.
3. *Impaired* in 1 or more areas or *questionable* in 3 or more.

That is, each specific area was given the same weight, and the summary was made by simply adding areas of questionable or impaired adjustment. A few sociological factors were first studied, i. e., inductee vs. Regular Army or National Guard, age at entry, size of city of residence at induction, perservice occupation, marital status, and educational level. Only the last two were found to be significantly associated with the adjustment summary. The association with education is quite reliable in the statistical sense, but not very strong; high school graduates were the best adjusted of the four educational groups compared. The association with marital status is also reliable statistically (P about .02), but contrary to expectation. Men who were not married prior to entry presented a better overall adjustment picture than men who were. One possible explanation is that men who were married were older and had a greater opportunity to develop maladjustments, being outside the parental family, working, and starting families of their own. In any event the differences are not large or of any particular importance.

The psychiatric history of parents and siblings is rather closely associated with the overall adjustment summary, as discussed in chapter XVII. It was also shown there that parental withdrawal has some relation to overall adjustment, but degree of religious influence none. The latter also characterizes the birth order of the individual in the family. Parental conflict and the summary of psychiatric signs in the family history are both quite strongly associated with the overall preservice adjustment.

The high correlation between overall adjustment and preservice personality, noted in chapter XVIII, is at least partly a matter of definition, the personality groups having been defined largely in terms of behavior. The examiner's estimate of intelligence is also intimately associated with the overall adjustment summary; a satisfactory adjustment was credited to 27 percent of the men with at least average intelligence, and to only 8 per-

cent with below average. Finally, men who described their health at entry in such terms as "fair" or "poor" were somewhat less likely to exhibit satisfactory overall adjustment patterns in the preservice period.

## IN RELATION TO EVENTS OF THE MILITARY PERIOD

Part Three contains an analysis of the military period from the standpoint of major area of stress precipitating breakdown, location at first breakdown, severity of illness at first breakdown, treatment received, and pattern of disposition. To the extent that the discussion of these elements of the military experience includes specific data on their relation to preservice adjustment, it will be necessary here merely to summarize the findings already presented. The analysis of specific areas was confined to the study of their association with major area of stress precipitating breakdown and to location at breakdown, whereas the overall adjustment summary was investigated in relation to most of the elements of the military experience. Accordingly, the following discussion is divided into two parts, one covering the individual adjustment areas, the other the overall summary.

### Individual Adjustment Areas Preservice

It was shown in chapter XIII that the adjustment to the *parental family* is significantly, but not very closely, associated with location at breakdown, the better adjusted men less often breaking down in the Z/I and more often overseas in combat. The apparent association with major area of stress, while insufficiently strong to satisfy the criterion of statistical significance, is of the same general nature: The percentage breaking down under no apparent stress, or at most stress of an essentially civilian character, is 8.5 for men with satisfactory family adjustments and 15 for men with questionable or impaired adjustments.

The *school* adjustment presents a very similar picture, differing only in that it is reliably associated with major area of stress but not with location at breakdown. However, the data on location fall into the same pattern and it cannot be doubted that the relationship extends to both indices of stress; the percentage breaking down in the Z/I prior to any overseas shipment is 31 for men with satisfactory school adjustments and 44 for men with impaired adjustments.

There is less, and less satisfactory, information on the *sexual* adjustment, but reliable evidence of association was noted in chapter XII, dealing with major area of stress precipitating breakdown, and suggestive evidence in chapter XIII, where location at breakdown is discussed; the percentage breaking down in the Z/I prior to any overseas shipment is 32 for men with satisfactory sexual adjustments and 50 for men with impaired.

Maladjustment in the *social and recreational* area, as noted in chapters XII and XIII, bears a moderately strong relation to both indices of stress. For example, the percentage of men whose major area of stress precipitating breakdown was the minimal category of "none or civilian type" is 7 for those whose preservice adjustments were considered satisfactory, and 15 for



those whose adjustments were considered questionable or impaired; parallel percentages for the category of combat stress are 49 and 34.

Maladjustment in the work area before entry into service, as observed earlier, bears a very close relation to both indices of stress. Table 268 provides further detail on the relationship with major area of stress. The pre-service marital adjustment is similarly, but less strongly, related to stress. The community adjustment is not reliably associated with stress, but comparatively few men were given other than a satisfactory rating on this scale and the observed variation certainly falls into the expected pattern. For example, the percentage for whom the major area of stress is "none or civilian type" is 9 for the large group rated as satisfactory, 9 for 34 men rated questionable, and 24 for 67 men rated as impaired.

**TABLE 268**

*Preservice Work Adjustment and Major Area of Stress Precipitating Breakdown in Service*

Work adjustment	Percentage distribution by major area of stress precipitating breakdown							Number of men
	None, or civilian	Military			Military environment	No single area	Total	
		Inherent military	Frustrations	Combat				
Satisfactory . . . . .	8.9	9.1	10.1	45.7	14.8	11.4	100.0	473
Questionable . . . . .	12.4	6.6	17.4	38.8	11.6	13.2	100.0	121
Impaired . . . . .	18.4	6.1	21.9	24.6	7.0	21.9	99.9	114
Total . . . . .	11.0	8.2	13.3	41.1	13.0	13.4	100.0	708

**Overall Preservice Adjustment Summary**

The service which men rendered directly reflects their overall preservice adjustment. Better adjusted men were more likely to serve overseas, and if they were shipped overseas they remained there longer; the mean durations of overseas service for men with such service are 13.8, 12.5, and 9.7 months for the 3 adjustment groups in descending order of excellence. Similar, but smaller, differences were seen in the duration of service prior to first breakdown. Total duration of service ranged from 33.0 months for men with satisfactory ratings to 27.9 months for men with impaired preservice adjustments. Court-martial rates reflect preservice adjustments even more closely; as courts-martial per 1,000 men per year, they vary with preservice adjustment as follows:

<i>Preservice Adjustment</i>	<i>Court-martial Rate</i>
Satisfactory . . . . .	35
Questionable . . . . .	98
Impaired . . . . .	133

Admission rates differ only less widely; as admissions per 1,000 men per year they vary with preservice adjustment as follows:

	<i>Admission Rate</i>		
	<i>Preservice Adjustment</i>	<i>Prior to Breakdown</i>	<i>After Breakdown</i>
Satisfactory . . . . .		746	878
Questionable . . . . .		744	900
Impaired . . . . .		991	1,060

The variation in admission rate is not confined to the period before the first breakdown. Finally, individual awards and decorations tend to reflect the adequacy of the overall preservice adjustment summary.

A variety of indices of stress were studied in the light of the overall preservice adjustment. MOS at time of first breakdown is not, but mission of unit is, related to preservice adjustment; the percentages assigned to combat units at first breakdown are 64, 55, and 45 for the several adjustment groups in order of decreasing adequacy. The major area of stress and actual location at breakdown were discussed in chapters XII and XIII, where it was shown that the percentage breaking down under little or no stress, and in the Z/I prior to overseas shipment, was greatest for men with impaired preservice adjustments, and that the percentage breaking down under the influence of combat was greatest for men with satisfactory preservice adjustments. Duration of ground combat, for men experiencing it, did not vary in association with preservice adjustment.

Once the men in the clinical sample had broken down, there seemed to be no relation between the severity of their illness and their preservice adjustment. There is, however, some slight variation in the pattern of disposition, as already noted in chapter XVI; the percentages ultimately discharged for psychiatric disability are 54, 61, and 69 for the three adjustment groups in order of decreasing adequacy. The quality of any subsequent duty varies much more; among men returned to duty the percentages with good and continuous service following the first breakdown are 35, 23, and 15 for the several preservice adjustment groups in the same order.

## **IN RELATION TO FOLLOW-UP STATUS**

Preservice adjustments in individual areas were examined only in the light of follow-up adjustments in the same or related areas, but the overall preservice adjustment summary was thoroughly investigated in relation to the details of follow-up status. The following discussion is organized around this distinction.

### **Individual Adjustment Areas Preservice**

One must expect at least a moderate degree of correlation between a specific adjustment in the preservice period and at follow-up, and interest centers rather on any suggestion that adjustments in particular areas may have greatly worsened. The family adjustment is of especial interest because, by the time of follow-up, most men had established families of their own. Table 269 exhibits the correlation between preservice adjustment to the parental family and adjustment at follow-up to the man's own, newly

established family. There are changes in both directions, but on the whole the data suggest that, at follow-up, the average man was about as well adjusted to his new family as he had been to his parental family before the war. For men who remained single at follow-up there were also changes in both directions and the percentage with impairment rose from 12 before entry into service to 22 at follow-up.

There is also a moderate degree of correlation between the preservice adjustment to the parental family and marital adjustment at follow-up. The percentages with impaired adjustments in the two periods are about the same; the percentage with impaired marital adjustments at follow-up is 13 for men with satisfactory preservice adjustments to the parental family and 28 for men with questionable or impaired preservice adjustments to the parental family. There is only a small shift in the marital adjustment over the period of study, and it actually favors the later period slightly; there is certainly no evidence that, for men married at entry into service, marital adjustment suffered any considerable deterioration. The conclusion may be applied to the sexual adjustment, although surely the fact that marriage intervened for so many men may well have improved average ratings at follow-up.

**TABLE 269**

*Family Adjustment at Follow-up and Preservice Parental Family Adjustment, Single Men at Follow-up Excluded*

Family adjustment at follow-up	Preservice adjustment to parental family			
	Satisfactory	Questionable	Impaired	Total
	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
Satisfactory.....	75.1	51.8	51.6	68.1
Questionable.....	19.0	30.6	22.6	21.2
Impaired.....	5.9	17.6	25.8	10.7
<b>Total.....</b>	<b>100.0</b>	<b>100.00</b>	<b>100.0</b>	<b>100.0</b>
Number of men.....	421	85	93	599

The work adjustment does appear to have deteriorated somewhat over the period of study; the percentage with satisfactory ratings is the same in both periods, but the percentage with impairment rose from 16 to 26. Although nearly half of the men with preservice impairments no longer appeared to have them at follow-up, 20 percent of the men with satisfactory preservice work adjustments were considered to have impairments at follow-up.

**Overall Preservice Adjustment Summary**

At follow-up so few men did not make some complaint about their health that only academic interest attaches to the association between freedom from such complaints and the overall preservice adjustment summary.

The latter was found to be unrelated to any history of treatment for an emotional disorder during the follow-up period. The apparent change in condition following separation, as already noted in chapter IX, does reflect somewhat the preservice adjustment classification; both for men judged ill at separation and for those not considered ill, the percentage with subsequent improvement was significantly higher in men whose preservice adjustments were rated satisfactory.

About 25 percent of the entire clinical sample exhibited some maladjustment in the work area at follow-up, but the percentage varies quite significantly in relation to the preservice adjustment summary, being 11 for men with adequate adjustments and 35 for those with impaired preservice adjustments. There is also a moderately close association between the preservice adjustment and limitation of employment by illness at follow-up. Illness was judged responsible for unemployment or part-time employment at follow-up in 6 percent of the men with satisfactory preservice adjustments, 14 percent with questionable adjustments, and 18 percent with impaired adjustments. The percentages not employed at follow-up, for any reason whatsoever, are 9, 10, and 20 for the three preservice adjustment groups in the order given above. The economic adjustment at follow-up is, of course, related in parallel fashion to preservice adjustment.

The overall follow-up adjustment was discussed in chapter VII in relation to the overall preservice adjustment summary. The data presented there show, not only that the two ratings are very highly correlated, but that no important shift occurred over the period of the study. If there was any net change at all, according to these data, the follow-up picture seemed slightly better. A further study of the relationship was made by introducing as a third variable the degree of stress apparently required to precipitate breakdown. It was then found that the suggestion of an improvement in the follow-up period was derived from the experience of men who broke down under little or no stress, while for men breaking down only under moderate or severe stress there was no net change. For the men who broke down under at most mild stress the overall adjustment picture seems to have changed over the period of study as shown in table 270.

Psychiatric disability at follow-up also correlates closely with preservice adjustment, as discussed in chapter V; the percentage with at least moderate disability at follow-up rises from 11 for men with no preservice maladjustment, to 26 for those of questionable adjustment, and to 39 for men of impaired adjustment. The first of these figures has some virtue as an estimate of the aggregate influence of the war experience, including breakdown, upon men of minimal predisposition to later illness.

The examiner's psychiatric diagnosis at follow-up was given in chapter VI in relation to preservice adjustment; the percentages with diagnoses less favorable than a mild neurosis are 17, 32, and 53 for the three preservice adjustment groups in order of increasing preservice maladjustment. The examiner's estimate of the need for further psychiatric treatment is associated with preservice adjustment in entirely parallel fashion: The

**TABLE 270**

*Overall Adjustment Ratings Before Military Service and at Follow-up*

Adjustment rating	Percentage distribution	
	Preservice	Follow-up
Satisfactory.....	16.6	28.9
Questionable.....	18.9	15.9
Impaired.....	64.6	55.2
Total.....	100.1	100.0

percentages considered to be in great need of treatment are 9, 10, and 24 for the three preservice adjustment groups in order of increasing preservice maladjustment.

The man's own opinion of the change in his health over the period from entry into service to follow-up seems unrelated to his overall preservice adjustment summary. Also, no association was found between preservice adjustment and either likelihood or amount of VA compensation for psychiatric disability.

Finally, the examiner's prognosis, based on the assumption of no further treatment, reflects the influence of the preservice adjustment, and this is true for the clinical sample as a whole and for each set of men with a different psychiatric diagnosis at follow-up.

**SUMMARY**

Preservice family adjustment correlates fairly well with other areas of preservice adjustment, a fact which suggests that there are common elements underlying all the specific adjustments. If there are common elements in all the specific areas one must suppose either that family adjustment is merely one of those affected or that it plays a moderately active role in shaping other adjustments involving areas external to the family and entered only after the family adjustment has been structured. Of equal importance with its interrelations with other adjustments is the fact that the family adjustment is also associated with such background factors as apparent psychiatric illness in parents or siblings. It is perhaps most closely associated with preservice personality, as indeed are all the specific adjustments.

Sexual adjustment was much less intensively studied but appears, perhaps because the data are less reliable, to be a more isolated characteristic than the adjustments in such areas as the parental family, school, and work. Its association with family and with marital adjustment shows up as statistically reliable but quite weak, and it bears no evident association to the family history. It is, however, correlated with preservice personality, of which it may be but a partial expression.

The preservice school adjustment contains a considerable amount of information about adjustment in other specific areas, and depends inti-

mately upon preservice personality and only somewhat less so upon the family history. The work adjustment is similar; it contains at least as much information as school adjustment.

Adjustments in the areas of the community, marriage, and social and recreational activities are all rather closely associated with preservice personality, much less so or not at all with the family history, and only moderately associated with adjustments in other specific areas.

The preservice adjustment summary was most extensively studied in relation to family history and various characteristics of the individual himself. Whether men were inductees or not, older or younger, of one occupation or another, or from large or small cities, seemed not to be related to their preservice adjustment spectrum. All the elements of the family history which were studied, however, were found to be significantly associated, and rather strong associations were observed with the psychiatric history of parents and siblings, parental withdrawal, and family conflict. The several characteristics of the man himself which were subjected to scrutiny were also found to be related to the adjustment summary, namely intelligence, declared health at entry, psychiatric impairment, and preservice personality. The interrelations among the preservice adjustment summary, personality, and psychiatric impairment are especially strong. For example, 84 percent of the men thought to have overt neuroses were judged to have impaired adjustments.

Adjustments in specific areas are reliably, but usually weakly, associated with major area of stress precipitating breakdown and location at breakdown. Exceptions are the work adjustment and the social and recreational adjustment, for which the relationships are moderately strong. In general, the individual preservice adjustments are much less predictive of military performance than they are related to other aspects of the preservice history. The summary of preservice adjustments, however, is rather more useful, and over a wide range of characteristics of military performance.

In some of its detail follow-up status may be fairly well forecast on the basis of information about adjustments in the preservice period, but more important than the correlations of preservice and follow-up adjustments is an answer to the question: Did military experience, including breakdown, lead to great deterioration in specific adjustments? Insofar as a single answer may be given it must be a qualified no. At follow-up, adjustments in some areas, e. g., family and marriage, seem to be at least as adequate as before service, but notably in the work area there appears to have been some deterioration. Perhaps most important is the fact that no important shift occurred in the overall adjustment summary.

Some of the more important assessments of follow-up status, especially psychiatric disability, psychiatric diagnosis, and the examiner's prognosis, appear to be moderately well correlated with the overall preservice adjustment summary.

## *Part Five*

### IMPLICATIONS FOR INDUCTION, UTILIZATION, AND DISPOSITION POLICIES

The number of men who will be drafted for military service, and therefore the medical standards for induction, will vary with military necessity and the supply of manpower. When the objective is a small, peacetime military establishment or a partial mobilization it is possible to maintain high induction standards. However, in any all-out military effort, standards must be lowered in order to provide a large force from the relatively fixed manpower pool. Medical standards for induction, then, are a way of choosing a force of such size and characteristics as may be dictated by the military situation. If one accepts as necessary a given size of force, then the errors that may be made in establishing standards are as follows: (1) They are set so high that a force of the necessary size is not forthcoming; and (2) they are set so low that too many men of inferior capacity are accepted while there remain better men who have not yet been considered. An individual with a given physical or emotional disability may or may not be needed for military service. The ultimate criterion is: Do the Armed Forces need this man? Specifically psychiatric screening, similarly, must be viewed as a means of furthering the war effort at minimal cost in psychiatric casualties; merely to minimize psychiatric breakdown is not enough. Moreover, only after the requirements for national survival have been met can consideration be given, in formulating psychiatric criteria, to such questions as the probable effect of military service (or, conversely, exclusion from service with the stigma of inferiority) upon the individual and the probable financial burden of his postwar disability upon the community.

Military manpower requirements can be rather precisely stated in terms of size of force, military occupation, and the like, but the number of men who might be used from a given marginal psychiatric category is anyone's guess. Notably lacking is information on what is expected of the men who serve and on how to evaluate their performance in the Armed Forces. It is plain, however, that most men do not fight; probably less than 25 percent of the men who served in the Army in WW II ever saw combat at the divisional level. The Army is chiefly a logistic apparatus, and the bulk of its manpower requirement is to fulfill this function. For medical examiners to select the best set of men for the Armed Forces requires that standards be set on the basis of requirements as to military performance, and yet actually very little is known about such requirements.

At the beginning of WW II the Armed Forces sought to recruit at a very high level of emotional and physical health, and psychiatric screening was viewed as the best guarantee against large numbers of psychiatric casualties. Standards were geared to the requirements for combat. As the supply of such men ran low, standards, especially nonpsychiatric standards, were drastically revised. Psychiatrists who screened selectees had very little to guide them; the written regulations were quite general; opinions differed as to the probable military value of individuals with this or that disorder; staffing, supervision, and workload varied widely at different times and places; and in all, as is well known, psychiatric screening was a very imperfect process. Psychiatric screening was necessarily inadequate because the examining psychiatrists did not know to what stress a man would be subjected, or what supports he would find in his own superior motivation or in the military environment. Today the standards are somewhat better attuned to the probable requirements of military performance. And yet the greatest single difference probably lies not in the new standards but in the changed attitudes that psychiatrists acquired in World War II. Today an examiner with military experience in World War II has a far more realistic notion of military requirements and of probable performance than could have been expected at the outset of the war. Certainly one lesson of that experience is that superficial psychiatric screening can make only a limited contribution to the control of psychiatric disorders during a war. It now seems best to confine psychiatric screening to the elimination of obvious misfits and to supplement it by a trial at military duty to resolve doubtful cases.

## QUANTITATIVE ASPECTS OF MANPOWER POOL IN WORLD WAR II

The size and composition of the entire manpower pool provide the limits for the selection process. Accordingly, an attempt has been made to estimate for World War II the total number of men available, their utilization and their probable psychiatric status. From census population data it is estimated that the World War II manpower pool consisted of about 26,000,000 men in the ages 18-37 in 1941 plus those reaching their 18th birthday in the succeeding 4 years. The utilization of this total appears to have been approximately as follows:

Served in Armed Forces . . . . .	15,000,000
Medically disqualified . . . . .	5,500,000
Deferred, chiefly for essential occupation . . . . .	5,500,000
	<hr/>
Total . . . . .	26,000,000



Selective service data <sup>46, 47</sup> provide a basis for estimating the emotional health of those who were in the IV-F group at the end of the war. A distribution by preservice personality of the entire Army population was arrived at from the clinical estimates of a group of psychiatrists who served with troops during World War II. In their opinion approximately 65 percent of all men in the service were well integrated; 23 percent manifested neurotic traits; 3 percent had suggestive neuroses; 1 percent had overt neuroses; 4 percent had pathologic personalities; and 4 percent had other types of psychiatric disorders. If the last four categories are taken to define a marginal or predisposed group, 12 percent of all men who served in the Army at some time during the war will be so classified. This compares with a figure of 20 percent found by examination of the 1951 Army control group (p. 83, table 78).

In view of the great changes in both psychiatric standards and screening procedures that took place between World War II and 1951, a sample of inductees in 1951 surely includes relatively more, and possibly even twice as many, in the marginal or predisposed group than was true in World War II. However, the authors found no reliable basis for a quantitative revision of the 1951 data and have preferred to employ the clinical estimates previously developed.

From information on the IV-F class and physically disqualified men in the deferred classes, and from the above data on those who served in the Armed Forces, table 271 presents a very rough classification of the entire manpower pool in the ages 18-37 at some time in the period 1941-1945. Among the roughly 15,000,000 males of these ages who served, 88 percent, or about 13,200,000 men, were probably quite free of neuropsychiatric disorders and other disqualifying defects. If these 13,200,000 could have been taken first it would have been quite plain that the next 1,800,000 were men of rather different psychiatric classification, and if even more men had been required it would have been necessary to relax the criteria for deferment or the medical and educational standards for induction, or to have lengthened the age span. Most of the men in the deferred classes were never examined. If it is assumed that the prevalence of defects in the deferred classes was the same as that of the sum of those who served, plus those found physically disqualified—surely a minimum assumption in view of the older age of the deferred groups—then these groups would contribute no more than 3,500,000 clinically normal men, in the psychiatric sense, and with no disqualifying defect. Since World War II the U. S. manpower pool has probably changed very little in size, and the number of men with disqualifying defects is undoubtedly larger because of World War II and the

<sup>46</sup> Selective Service System: Physical Examinations of Selective Service Registrants during Wartime, April 1942-December 1943. Medical Statistics Bulletin No. 3, 1944.

<sup>47</sup> Selective Service System: Physical Examinations of Selective Service Registrants in the Final Months of the War, January 1944-August 1945. Medical Statistics Bulletin No. 4, 1946.

Korean Conflict. Also, the ratio of essential civilian to military manpower requirements in another emergency may be higher than in World War II because of World War II and the Korean Conflict. Also, the ratio of essential civilian to military manpower requirements in another emergency may be higher than in World War II because of the increasingly complex technology of warfare that rests upon civilian production. In such a situation great interest centers upon the possible military utility of the marginal groups (organic as well as psychiatric), and it must be known what contribution these marginal psychiatric groups would be expected to make under various conditions. Another marginal group on which more information is needed is the older-age group since in theory, at least, the manpower pool could be extended by increasing the upper age limit.

**TABLE 271**

*Estimated Composition and Utilization of World War II Manpower Pool, Males of Ages 18-37 in 1941-1945*

Utilization	Medical classification	Millions of men
Served in Armed Forces . . . . .	No apparent psychiatric disorder . . . . .	13.2
	Psychoneurosis, pathological personality, and other psychiatric disorders.	1.8
	<b>Total . . . . .</b>	<b>15.0</b>
Medically disqualified <sup>1</sup> . . . . .	Psychiatric defects, mental or educational deficiency.	1.9
	Organic, including neurological, defects . . . . .	3.6
	<b>Total . . . . .</b>	<b>5.5</b>
Occupational or other deferment (largely unexamined). <sup>2</sup>	No apparent psychiatric disorder . . . . .	3.5
	Psychiatric defects, mental or educational deficiency.	1.0
	Organic, including neurological, defects . . . . .	1.0
	<b>Total . . . . .</b>	<b>5.5</b>
	<b>Grand total . . . . .</b>	<b>26.0</b>

<sup>1</sup> Includes all those in IV-F and in deferred classes with disqualifying defects.

<sup>2</sup> Estimated on the assumption that this group, if examined, would parallel the other two groups combined.

## PSYCHIATRIC BREAKDOWN IN RELATION TO PRESERVICE PERSONALITY

In order to probe further the military usefulness of the marginal psychiatric groups an effort has been made to estimate the percentage of men in the normal and in the predisposed personality groups in the Army who

had at least one admission with a diagnosis of psychoneurosis, behavior disorder, pathological personality of any kind, somatization reaction, or other psychiatric diagnoses except psychosis, mental deficiency, and "for observation only, no disease found." Of the clinically normal group 2.2 percent had at least one admission in contrast to 29 percent of the marginal or predisposed group. If an allowance is made for those who were given administrative discharges for personality disorders, but who were never formally admitted for medical care and given a psychiatric diagnosis, the latter percentage is increased from 29 to 35. Although it is impossible to untangle the web of predisposition and stress, these figures certainly suggest that predisposition remains a major factor in the likelihood of admission to a psychiatric service. In preparing this estimate allowance was made for the fact that the vast majority of Army admissions in 1942 and 1943 involved men with clear-cut, pre-existing emotional disorders, whereas in 1944 and 1945, when combat was the dominant factor, half of the admissions for psychoneurosis were on the part of men who were clinically normal at entry. If induction examiners had rejected the entire marginal psychiatric group which contributed 65 percent of the Army psychiatric admissions (excluding psychoses, mental deficiency and "for observation") during the entire war period, then nearly 1,000,000 additional men would have been excluded who never broke down.

## PERFORMANCE OF MARGINAL GROUPS

It is held by those in favor of careful screening that men who have readily recognizable neuroses or personality disorders, but who are functioning adequately in civilian life, can make a contribution in civilian settings but are apt to become ineffective in a relatively short time as a result of the additional stress of military service and the removal of specific supports that could be found in a highly individualistic existence and in family, friends, and employers. Does evidence support such a generalization? Egan et al.<sup>48</sup> demonstrated that many men who were at first rejected on psychiatric grounds later made good soldiers. They studied a sample of over 2,000 men who had been rejected for neuropsychiatric reasons and were later taken into the service, and found that 79 percent rendered satisfactory service. They concluded that a large number of those who remained in the IV-F category because of psychiatric reasons could have served profitably in some capacity and would have been discharged honorably and without psychiatric disability. Fry<sup>49</sup> reported that many of the men in his series who had been treated for psychiatric disorders in college, and who in his opinion did not meet published induction criteria, and yet were accepted, performed ably in uniform. As an

<sup>48</sup> Egan, J. R., et al.: A study of neuropsychiatric rejectees. *J. A. M. A.*, 145:466-469, Feb. 17, 1951.

<sup>49</sup> Fry, C. C.: Studies of certain psychiatric problems of wartime medical administration and of war medicine. Report to the Committee on Medical Research, Office of Scientific Research and Development, June 1944.

induction examiner, Aita<sup>50</sup> divided a sample of accepted men into 2 groups: those expected to have a successful career, and those of questionable capacity because of neuroses and personality disorders. From his subsequent study of the military careers of these two groups Aita concluded that the psychiatric examiner could not forecast military performance with sufficient accuracy to warrant the exclusion of any but those who were obviously ill. Aita points out something that is often overlooked, namely, that in some instances emotional disorders disappear during military service. Important sustaining forces not present in civilian life are found in military service, most important of which is close identification with a group. Psychiatric screening in World War II was based primarily on individual psychology and little consideration was given to social or group psychology. In some instances entry into service removes specific interpersonal stresses and even in time of war the service is a haven for some; the phenomenon of men breaking down when faced with the prospect of a return to civilian life may be an extreme manifestation of this. As a division psychiatrist Plessset<sup>51</sup> observed that many of the men whom he had labeled as poor risks before the division entered combat were, nevertheless, able to tolerate combat without becoming psychiatric casualties.

The present follow-up study provides additional support for the view that the marginal psychiatric groups, insofar as they were taken into service, undoubtedly made a net contribution to the war effort despite their high rate of psychiatric breakdown, and that many of them broke down only under combat stress. Still others who broke down did so only after an appreciable period of service, and many were returned to duty following treatment.

Whereas on many criteria of military effectiveness those who were overly neurotic prior to entering the service did poorly when compared to those who broke down but had been previously well integrated, the neurotic group was by no means a total loss. All of these men had passed through an induction screening and as such were probably not as sick as, or were differently motivated from, others with overt neuroses who were rejected. Had there been no elimination of men with overt neuroses at induction, the percentage of such men in the clinical sample would undoubtedly have been higher and the general military performance of the sample poorer, but it must be remembered that not all men with pre-existing neuroses did break down in the service. If it is postulated that only 50 percent of them did, as suggested by table 78, and if the performance of those who did not break down could be averaged in with the sample studied, it would be seen that overt neurotics generally did much better than those included in this study sample.

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<sup>50</sup> Aita, J. A.: Efficacy of the brief clinical interview method in predicting adjustments. *Arch. Neurol. and Psychiat.*, 67:170-176, Feb. 1949.

<sup>51</sup> Plessset, M. R.: Psychoneurotics in combat. *Am. J. Psychiat.*, 103:87-90, July 1946.

Thirty-two percent of the men with overt neuroses were able to complete their training and serve overseas for an average of 17 months before breakdown. In 18 percent, breakdown was the result of combat stress. Thirty percent completed their military service and were demobilized (without being medically discharged for psychoneuroses). There seems to be no test which can equal actual trial at duty in differentiating those with good from those with poor prognoses, especially since one man may do well in one situation with a given commanding officer and branch of service and poorly in another, whereas it might be just the reverse with another man. The performance of men with suggestive neuroses and neurotic traits on entry into the service was much better, with the latter group in some respects approximating the normal group.

The proportion of men with pathologic personalities and suggestive neuroses who broke down is undoubtedly smaller than the 50 percent estimated for men with overt neuroses, and thus the performance of the entire group must have been considerably better than would appear from the clinical sample, confined as it is to men who broke down. Any attempt to eliminate at induction all men with neuroses or pathologic personalities would be extremely wasteful, even if possible.

Undoubtedly one reason why superficial psychiatric screening cannot be relied upon to provide accurate forecasts of military performance, except in the more extreme cases, is that strong motivation or environmental supports may counteract the inability of the neurotic to tolerate stress. World War II was for the United States an overseas operation; it lacked the character of a defense of the homeland against strong outside attack. There is now the possibility of something akin to the British experience in the 1940 blitz, with its apparently low rate of psychiatric breakdown.

## RELATIONSHIP BETWEEN INDUCTION AND UTILIZATION POLICIES

Criteria for induction are primarily intended<sup>88</sup> to insure the ability of the individual to perform military service. Elementary as this may be, experience has shown that the intent is not easily realized. Even at present, men are probably being inducted with conditions for which others are being discharged. Induction criteria presuppose the use of personnel with limited capacity whereas there is no such official policy. The question "What are men being inducted for?" must be answered if intelligent induction is to be planned, wastage of manpower avoided, psychological harm prevented, unnecessary compensation burdens avoided, and confusion eliminated. The concern here is not with the small, volunteer, peacetime Army, such as existed between World War I and World War II. Recruitment standards were then geared to the number of men who were volunteering. In a period of economic depression, volunteers are plentiful

<sup>88</sup> The factors of national morale and of productive capacity as they relate to induction policy have not been considered here.

and physical standards are raised, but in times of prosperity, fewer men volunteer and standards must be lowered if authorized strength is to be reached. The interest here lies in large-scale mobilization—partial or complete—in which men are drafted into service. If an enlarged cadre type of force is wanted, composed entirely of general-service men, rigid induction criteria must be established. To accomplish this under the draft would either involve the rejection of many men who could be of use or encourage conscious or unconscious flight into illness in many who feel the need to avoid military service.

By World War II standards, the men in the clinical sample with overt neuroses prior to service should have been rejected and yet they made a significant contribution to the military effort, some even in combat. To the extent that induction screening is directed at the procurement of men having the capacity for adequate military performance, a more rigorous psychiatric screening than prevailed in World War II offers no prospect of gain. This is because, in this study, a much more rigorous psychiatric examination than was given at induction still does not permit the discrimination, in advance, of a sufficiently small set of men whose military performance can be called submarginal. No conceivable psychiatric screening at induction can eliminate more than about half of the admissions for neurosis, and the cost of so doing would be the rejection of about 10 percent of those accepted in World War II. Only 35 percent of the clinical sample had an overt neurosis or a pathologic personality at induction. Another 17 percent had a suggestive neurosis. In the aggregate about 1 million out of 12 million men in the Army had such disorders. Criteria for judging adequacy of military performance seem lacking and it is believed that if marginal military performance were defined in terms of the man whose military contribution just exceeds the cost of training him, a large number of men excluded in World War II would be called useful in this limited sense. Other than narrowly military criteria are involved in the selection of manpower for military service and it is not asserted that these men should be taken, but only that, if a military force larger than that of World War II were required, additional men could be taken without reaching the marginal point of no return.

## UTILIZATION OF MARGINAL MANPOWER

For each man in the clinical sample, his emotional health on discharge from the service was assessed on the basis of his military medical records, his own statements, the course of his illness since discharge, and his condition on follow-up examination. Seven percent were evaluated as normal on discharge, 8 percent had neurotic symptoms short of actual neurosis, and 55 percent had neuroses which were not severe, or a total of about 70 percent with less than severe neuroses on discharge. About 10 percent had various organic illnesses and behavior disorders of varying degree of

severity. Twenty percent were considered to have severe neuroses. This contrasts sharply with the 55 percent of the entire sample who received medical discharges for psychoneuroses.

On follow-up, 7 percent of the entire sample were not working, and an additional 6 percent were working only part time, because of illness. The more severe the illness at follow-up, the higher the proportion of those whose ability to work was affected. In comparison with 13 percent for the entire sample, the percentages are 2 for those with mild neuroses, 26 for those with moderate neuroses, and 79 for those with severe neuroses. If these percentages are applied against the diagnostic breakdown of men discharged for disability at the time they left the service, it may be estimated that about 60 percent of the men who were discharged as incapable of performing any effective military service were able to work according to civilian standards.

The above evidence confirms the fact which became apparent during the last war that the use of limited-capacity personnel has been deficient. For a time in 1943, by War Department directive, limited-service personnel (with but few exceptions) were medically discharged. Men were taken from jobs which they were performing satisfactorily and sent home. At the end of the war medical discharges were again encouraged in many instances because of lack of assignments and, in some instances, because of shortage of hospital beds. It was not unusual to induct men with psychiatric disorders for which others were being discharged. In any group of men inducted, regardless of the rigidity of the standards, a certain percentage will be found unsuitable for general service from the start because of emotional disorders. As time goes on, particularly in wartime, there will be a gradual increase in the number of such men in the Army as a result of emotional disorders which develop in connection with the various stresses inherent in military life, the most obvious one being combat.

If the manpower pool were for practical purposes limitless, it would be possible to maintain a policy of using only those capable of general service and discharging the rest, but this is not the case, and limited as well as general-service personnel must be used. Because it is conceivable that the exigencies of any given military situation may require limited-service personnel to operate beyond their usual capacities (and even in combat), it would seem important to conserve such manpower. Once a man has been discharged from the service as medically disabled, the chance of his ever being used again by the military services is practically nil. Under a liberal discharge policy the natural forces which make men avoid danger drive more and more men in the direction of limited service and discharge.

The use of men with psychoneuroses is just one part of this process. The results of this study would suggest that at least half of those in the clinical sample who were medically discharged could have been used if proper assignments had been found for them. If about 250,000 men were discharged from the Army for psychoneurosis during the last mobilization, it

can be assumed from the above estimate that at least 125,000 were needlessly discharged as disabled. Apart from the loss of manpower that this entailed, and the effect on the morale of the Army, it is possible that the fact of a medical discharge carries with it certain liabilities to both the man and the country. A man who is discharged on psychiatric grounds appears to be twice as apt to be sick on follow-up than an identical man who was returned to duty and eventually discharged for the convenience of the Government. Also, if a man were returned to duty, the chances are 2.5 times as great that he will not be given compensation.

In one experimental project in retraining psychoneurotics after breakdown in the last war, many were rehabilitated for assignments in the service branches in the Z/I and to a large extent any failures which resulted stemmed from inadequacies in the assignment process.<sup>53</sup> It may not be possible to devise a system for using increasing numbers of limited-service personnel within the framework of the Armed Forces. A system of universal mobilization in time of emergency might then provide the answer by permitting interchange between military and nonmilitary assignments. Certainly the disability discharge should not be used as an expedient to solve the problem of no assignment.

Once a man has lost time from duty for a psychoneurosis, are there any criteria to indicate his potential for further service, apart from usual clinical judgment, his response to treatment, et cetera? The fact that a man was overtly neurotic prior to induction is in itself important because only 6 percent of this group rendered any effective service after breakdown. The possibility that insufficient effort was taken to find appropriate assignments for these men following return to duty is partially refuted by the finding that many men in the normal group who broke down were capable of effective service after breakdown. This would appear to indicate a better adjustment potential but many of these cases were the result of combat, so that a totally different military situation and different motivational forces were involved. Even if the adjustment potential of the neurotic group were generally poor, it is possible that through the use of a more careful assignment procedure many more than 6 percent would be capable of rendering effective service after breakdown. For none of the 43 men who had overt neuroses and at least moderate psychiatric impairment prior to service was there positive evidence of good and continued service after he broke down, although 12 apparently served satisfactorily for 2 months or more following breakdown. Of the 6 men among the 43 who, in addition, claimed that their health was poor on entering the service, none ever went overseas. It may be that in the last war such men were induction errors and apart from them it does not seem possible to predict the subsequent performance of those who broke down.

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<sup>53</sup> Menninger, W. C.: *Psychiatry in a Troubled World*. Macmillan Co., New York, N. Y., 1948, p. 313.



It is possible (and according to many psychiatrists even probable, particularly if the experience with combat cases is remembered) that the mere act of taking such a man off duty status and placing him in a hospital or other treatment facility in itself decreases to a large degree his chance of being effective again in the service. Some of the more severe cases will require hospitalization, but it was a common observation that, because of the absence of any other kind of facility, most of the psychoneurotics who were hospitalized in the service would not have been hospitalized for the same difficulty in civil life. In combat areas, barriers had to be set up to control the very great pressure to get into a hospital. In general no such system operated in the Z/I except where outpatient or mental hygiene clinics were established. Unless changes in the assignment and hospitalization systems can be made, it can be postulated that about 50 percent of those who are overtly neurotic before service and who get into the Armed Forces will be hospitalized after about 13 months of service and that, at that point, their military usefulness is, for practical purposes, over. Although many psychiatrists held such convictions, based on their impressions, this study gives these impressions statistical confirmation.

Predisposition and stress combine in various proportions to produce psychiatric breakdown, i. e., admission to a psychiatric service. At one extreme there undoubtedly is a degree of predisposition sufficient to precipitate breakdown in the absence of stress, and at the other extreme great stress suffices to cause breakdown in men with no obvious predisposition. In combat the latter extreme is the more common, but in the great majority of instances it appeared that both predisposition and stress were present. We can observe objective stress fairly well, and we think we understand predisposition. But do we? Are we not overinclined to postulate a generalized predisposition without regard to environmental changes that may provide support and without regard to the possible specificity of a predisposition in relation to a given kind of stress? How else can we explain the superior military performance of individuals whose civilian history is replete with neurotic symptoms or maladjustments? The authors believe that predisposition has been overgeneralized, and that we would do well to think more in terms of vulnerability to specific forms of stress and to the factors that may modify that vulnerability. Possibly the psychiatrists used in World War II screening would have contributed more to the war effort if more of their talents had been devoted to ensuring better utilization of men in the Armed Forces and to efforts at prevention of psychiatric breakdown.

If one views the psychiatric problem of the Armed Forces as primarily one of predisposition, then psychiatric screening appears to be the solution, and one is directed toward the development of superior screening devices. To the extent that stress is also credited with a major role the emphasis is transferred, in part, from screening to methods of manpower utilization and prevention of breakdown.

## THE EFFECT OF MILITARY SERVICE ON PREDISPOSED MEN

If men with neuroses and personality disorders are accepted for service, what effect does service have on them in comparison with clinically normal individuals? It is conceivable that there would be reluctance to accept predisposed men if the fact of military service alone greatly aggravated their condition. In the present study, it will be recalled from chapter V, disability at follow-up was analyzed in relation to predisposition and apparent stress. Clinical experience might have suggested that men who broke down early in service under relatively less objective stress were those who had more emotional difficulty prior to service and consequently would be most disabled at follow-up. The latter, at least, proved not to be the case. As was seen in table 127 (p. 146), the location-at-breakdown groups contribute proportionately to each of the disability groups. In other words, a man who was first admitted for psychoneurosis while he was in basic training was just as likely to be well (or disabled) at follow-up as the one who first broke down in combat.

It was only when the data were analyzed separately for each preservice personality pattern that any evidence was uncovered that location at breakdown was reliably associated with psychiatric disability at follow-up (p. 147). In every group except those with a normal preservice personality the men who broke down in or after combat were somewhat more disabled at follow-up. It appears, then, that the man with a neurosis prior to service is more likely to be adversely affected by combat than the previously normal individual or the man with a pathological personality.

Men with apparently normal preservice personalities less often broke down early and more often only after prolonged combat, and when they did they were apt to be not as sick as those who had some degree of psychoneurosis before. In general the recovery rate of those who were previously normal appeared to be faster, and at follow-up, their health had very nearly returned to its preservice level.

## SUMMARY AND CONCLUSIONS

1. Heretofore it has been assumed that the manpower pool of the country was bottomless and induction screening was to a great extent designed to eliminate the "bad risks" and to minimize the incidence of breakdown. However, the experience of World War II suggests that the size and probable psychiatric composition of the total manpower pool are such that another large-scale mobilization will necessitate interest in marginal psychiatric groups. The evidence presented here favors the utilization of these groups in larger numbers than was the case in World War II, and a continuation of the trend away from reliance upon superficial induction screening and toward more effective utilization and prevention.

2. Since the major requirement of the Armed Forces is for logistic support, there is need for a more careful assessment of manpower requirements in terms of capacity to function at a wide array of particular jobs, rather than just in combat. The type of psychiatric examination that is possible at in-

duction provides an insufficient basis for forecasting military performance and, therefore, cannot be relied upon to choose individuals for service; its value is confined to the elimination of only the more obviously inapt and grossly ill. To have kept out of the Army in World War II all psychiatrically predisposed men would have cost an estimated 1,000,000 men who served without ever having been admitted to psychiatric care.

3. Those who required psychiatric care in the service, even if overtly neurotic at entry, appear to have paid their way as a group.

4. Although there is a high degree of correlation between the chance of breakdown and the degree of emotional impairment present prior to entry into service, this is also true of stress. In only 5 percent of the follow-up sample did breakdown occur without apparent stress, and in more than 80 percent of every personality group the major area of stress was a military one.

5. Groups devoid of significant psychiatric defects at entry contributed about 35 percent of all Army World War II admissions for all psychiatric diagnoses except psychosis, mental deficiency, and "for observation only, no disease found." In 1944 they contributed half of the admissions for psychoneurosis.

6. Within the period of modern psychiatry U. S. military operations have been pre-eminently offensive, overseas actions; in a defensive war at home it is possible that the psychiatric problem would be a smaller one.

7. The net effect of breakdown in service, as seen 5 years later at follow-up, is not as great as might be expected. There is relatively little change in those who were previously normal or overtly neurotic and a moderate worsening of the emotional health of those with personality disorders, neurotic traits, and suggestive neuroses. Except for those who seemed entirely normal at entry, combat seems to produce somewhat more disability than other forms of military stress.

8. Criteria for evaluating military performance seem badly needed.



## *Appendices*

# APPENDIX I

NRC-CVMP 7 Form 1	<b>N-P FOLLOW-UP STUDY, DESCRIPTIVE DATA</b>					NRC Roster No.			
Last Name - First Name - Middle Name			Serial Number		Date of Birth				
			Army ( ) Navy ( ) M.C. ( )						
Reason and Authority for Separation		GCT Score	Grade		Arm or Service				
			At Separation Highest Held						
Main Civilian Occupation and Code	Education Years Completed		Marital Status		Religion				
	Grammar	High School	College	At Entry  At Separation					
MOS or Work Done	Rating	Date	Service Outside Continental U. S.			Wounded, Date			
			Theater	From	To		N-P, Date		
Major Organization Assignments		Battles and Campaigns		Decorations and Citations					
Unit	Dates								
		From	To						
Arms in Which Qualified	Trials by Courts Martial				Days Lost				
	Court and Date	Offense		107 Article of War					
				AWOL _____					
				Confined _____					
				Incapacitated _____					
Physical Defects at Enlistment				Physical Profile					
				P	U	L	H	E	S

## APPENDIX II

CVMP #7 FORM 2		SUMMARY OF MEDICAL HISTORY CVMP PROJECT #7		C-Number
Last Name	First Name	Middle Name	Serial Number Navy Army	
Date of Admission*	Med. Installation of Admission* or Transfer	Diagnoses		

\*Hospital or Quarters (losing time from duty)

## APPENDIX III

### MEMBERS OF COMMITTEE

G. H. PERRY FURCO, Chairman  
WILLIAM HOFF, Chair  
MORRIS S. DEBARRY  
MORRIS FRIEDMAN  
CAROLAN S. KROGER  
FRANK H. LEWIS  
RICHARD H. MARRS  
J. RICHARD MULLAN  
J. S. RAYSON  
JOHN C. WINTERMANT  
EDWARD C. WINTERMANT  
MARION G. WILSON

### MEMBERS OF STAFF

THOMAS S. MILLER,  
Professional Associate  
GRACEY W. BROWN,  
Statistician

## NATIONAL RESEARCH COUNCIL

2101 CONSTITUTION AVENUE, WASHINGTON 25, D. C.

Established in 1916 by the National Academy of Sciences under its Organizational  
Charter and organized with the cooperation of the National Scientific  
and Technical Association of the United States

### DIVISION OF MEDICAL SCIENCES

#### COMMITTEE ON VETERANS' MEDICAL PROBLEMS

This is in reference to the letter I sent you some time ago inviting your cooperation in a follow-up study of psychoneurotic admissions to Army and Navy hospitals. Since your acceptance, we have been devoting a long time to preparing rosters of patients, assembling records, conducting a pre-test, etc. We are now ready to conduct the study on a nation-wide scale. The following material is enclosed for each patient you are to examine.

1. Photostatic copy of the patient's military medical record, or of that part of it which pertains to the psychiatric disorder. This may be incomplete.
2. The **MP FOLLOW-UP STUDY DESCRIPTIVE DATA SHEET (FORM 1)** which has the details concerning the patient's military service, his education, age, type of separation, etc. The address in the box for name in the upper left hand corner is his separation address he gave on leaving the service. (This may be used if he cannot be reached at the address on the **LOCATOR REQUEST** - see paragraph 5 - and if it differs from the address appearing there.) The dates in the box for title of the form at the top of the page refer to time of entry into and separation from service. By mistake, these items were omitted from the printed form. If you find that the information on this form pertaining to education, occupation, marital status, etc. is not consistent with the statements in the clinical records or elicited during the interview, would you please enter any corrections on the form.
3. The **SUMMARY OF MEDICAL HISTORY (FORM 2)** which lists each recorded admission, for any cause, while the man was in the service.



II

4. The booklet (STANDARD HISTORY FORM - FORM 3) which you are to complete after examination of the patient. Parts of the booklet will have to be completed during interview with the patient if all of the answers are to be obtained. Instructions are contained in the booklet. In order for the results of your examination to be anonymous we must not write the veteran's name or serial number on the booklet. Identification will be by a study code number which you will find in the upper right-hand corner of the NATIONAL RESEARCH COUNCIL LOCATOR REQUEST described in the following paragraph.

5. NATIONAL RESEARCH COUNCIL FORM A (LOCATOR REQUEST) giving the man's latest address as reported by the Veterans Administration, or his separation address on leaving the service when no address could be gotten from the VA. If a separation address is given, the words "Separation Address" will be stamped on the card. Otherwise, the address has been furnished by the Veterans Administration and should be current. If the card is stamped "Separation Address", please use registered mail when you write to the veteran with return receipt requested.

6. A form letter from Mr. Carl R. Gray, Jr., the Administrator of Veterans Affairs, inviting your participation in this project. This letter is intended for the man you are to examine. You should have one of these letters for each patient. An extra copy of one of the letters is enclosed for your own files.

7. A form letter (mimeographed) to be typed on your own stationery and sent by you to the veteran asking him to arrange for an appointment with you. The wording of the letter was established with the assistance of some survey experts in the VA, and is believed to be the kind which will obtain the greatest response. In your letter to the patient it is suggested that you give him a specific time, such as seven days, in which to arrange for the appointment. In the event that the veteran does not make the appointment within that time, it is requested that you send a follow-up letter by registered mail with return receipt requested, calling his attention to your original letter and again asking him to get in touch with your office, stressing the importance of his cooperation. If the veteran can be reached by a local telephone call, it is suggested that you try that method if letters fail to bring a response. Arrangements have been made with the American Red Cross whereby that organization will endeavor to help us locate men who are hard to find and to get them to come in for examination. The arrangements for using Red Cross facilities have not yet been settled, so please give us the name and address of any case you wish the Red Cross to locate or visit rather than attempting to make local arrangements. It is expected that you will have completed your examination and forwarded your forms within six weeks if you have only one case, within two months if you have two or three cases, and within three months if you have more.

III

8. A form to be completed by you indicating the amount of time you have spent (up to four hours) in examining each patient. This is to be forwarded to me in order that you may be paid. Payment will be on the basis of \$10 per hour.

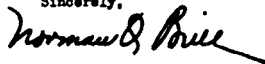
9. A form to be completed in the event the patient has incurred any travel expenses in coming to see you. That is also to be submitted to me and payment will be forwarded to the patient.

When you have completed your follow-up examination and entered your findings on the form, please return all of the above material to me at the Committee on Veterans Medical Problems, National Research Council, 2101 Constitution Avenue, Washington 25, D. C.

I am interested in knowing how difficult patients were eventually brought in. Therefore, if you had any trouble getting the patient to come in to see you, would you let me know how you finally succeeded?

If there are any questions about anything, please do not hesitate to get in touch with me.

Sincerely,



Norman Q. Brill, M. D.  
Project Director

Enclosures

P.S. The chance of completing the examination is better if all of the data are obtained at one visit. In the pre-test, the most successful technique was to set aside an entire evening for the examination.

S.Q.B.

(Written on doctor's stationery)

Dear \_\_\_\_\_:  
(Name of Patient)

The Veterans Administration and the Division of Medical Sciences of the National Research Council, which is a research organization established by Act of Congress, are conducting a study of the present condition of men who were hospitalized during military or naval service for various injuries or illnesses.

They hope to learn through this study many things about these various illnesses, such as the extent to which they improve as time goes on, how effective different kinds of treatment have been, and so on.

This study is a purely medical one and has nothing to do with pensions or any of your relationships with the Veterans Administration.

All of the results will be kept strictly confidential by the National Research Council and no information about any single individual will be released to the Veterans Administration or any other governmental agency.

I have been requested by Mr. Carl R. Gray, Jr., the Administrator of Veterans Affairs, to cooperate in this study. (See enclosed letter to me.)

Your name was selected at random from the Army (Navy) files. These records show that you had been hospitalized at \_\_\_\_\_  
(Identify Station or Medical Unit)  
in \_\_\_\_\_  
(Month and Year)

I have been asked to check thoroughly your present condition to see how you are. This will involve no cost to you.

Would you be kind enough to call my office for an appointment some time before (give 7 days) or write and tell me when it would be convenient for you to come in?

The results of my examination will be as confidential as if it had been done by your family doctor. In fact, if you will let me have the name and address of your family doctor, I will get in touch with him to explain the purpose of this examination.

Sincerely yours,

\_\_\_\_\_  
(Doctor's Signature)



OFFICE OF  
THE ADMINISTRATOR OF  
MEDICINE AFFAIRS

VETERANS ADMINISTRATION  
WASHINGTON 25, D. C.

The Veterans Administration in cooperation with the National Research Council is undertaking a study of the course of various injuries and illnesses for which men were treated during their military and naval service. We hope to obtain through this study information which will greatly benefit medical science and the health of the people of this country.

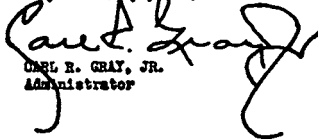
You were recommended to me by some of the outstanding men in your specialty as a highly qualified and ethical physician who would be admirably suited for participation in this study. I hope that you will be willing to cooperate with us in this study.

The names of individuals who are to be included in the study were picked at random from Army and Navy files.

was one of the names selected. Our records indicate that he was treated at  
Would you please get in touch with him and arrange to give him a careful examination? The findings are to be recorded on the enclosed form which should be returned to the National Research Council when completed.

You may assure that the results of your examination will be kept strictly confidential by the National Research Council, and will not be used in connection with any claim he may have for pension or compensation, or in his relationship with the Veterans Administration.

Very sincerely yours,



CARL R. GRAY, JR.  
Administrator

Enclosure

# APPENDIX IV

Page 1

## STANDARD HISTORY FORM

NRC Committee on Veterans Medical Problems

Research Project #7, Form 3

This form and the information it contains will not be available for purposes of adjudicating or reviewing pension claims by the Veterans Administration officials.

Return form to:

Norman Q. Brill, M. D.  
Project Director  
Committee on Veterans Medical Problems  
National Research Council  
2101 Constitution Avenue, N. W..  
Washington 25, D. C.

Signature of Interviewing  
Psychiatrist

\_\_\_\_\_ M. D.

Date of Interview

Day	Month	Year

Code Number Identifying This Case

Please enter code number appearing in upper right-hand corner of man's Locator Request. This is necessary to make certain that the record will not be used for adjudicating or reviewing any claim for pension or compensation.

INSTRUCTIONS

First review the booklet to see what information is wanted. Specific instructions for completing the form appear at the beginning of each section. It is expected that your evaluation will be based not only upon your examination but also upon the man's service records. It is important that all questions on the form be answered, not by allowing the form to direct the interview, but by conducting the interview as you ordinarily would and then filling in the gaps by means of supplementary questioning with the form before you. You will probably want to record some of the answers directly in the booklet.

Since we are taking the initiative in calling men in for examination, since many of them will no longer be ill, and since some may feel that they never had a psychiatric illness, the men should not be approached initially as though they are now psychiatric patients. The purpose of this follow-up examination should be explained without implying that the men are now psychiatrically ill. Even if you feel that the diagnosis of a psychiatric disorder was never warranted, complete your examination and record your findings and your formulation.

We are authorized to pay you for four hours, so please try to use all of this time (which is little enough) so as to get as complete a picture as possible.

It is recognized that the items included in the booklet are arbitrary and necessarily incomplete, so please feel free to enter any comments on any item. The blank opposite pages are provided for this purpose.

A study based on only four hours of interview, and covering a large number of items, must necessarily be fairly superficial. In this first study we are trying to get an idea of the overall picture. It is our hope that more intensive studies of specific problems will be made in the future.

If there are any questions please do not hesitate to communicate with Dr. Norman Q. Brill, the project director (address on first page).

PART I - ETIOLOGICAL FACTORS

PAGE 47

A. PREDISPOSING CAUSES

A 1 FAMILY HISTORY

Your examination should include a fairly detailed review of the patient's past life so that some formulation can be made of: the family constellation when he was a child; the personality of his parents and siblings (were they maladjusted or psychopathically ill); and his relationship with them. Note such specific factors as rigidity of discipline; presence of overprotection; laxness of religious training; unfavorable economic situation; broken home; etc.

Describe:

Handwritten notes in the form are extremely faint and illegible, appearing as light grey smudges and lines across the page.

(Continue on opposite page)

Check appropriate captions:

- 1  POSITIVE HISTORY OF PSYCHIATRIC ILLNESS IN PARENTS OR SIBLINGS
- 2  CLEARCUT PERSONALITY DISORDER IN ONE OR BOTH PARENTS
- 3  DEATH OF ONE OR BOTH PARENTS IN VETERAN'S CHILDHOOD
- 4  DIVORCE OR DESERTION OF PARENTS

- 5  OVERDISCIPLINING
- 6  POVERTY
- 7  OVERPROTECTION
- 8  OVERLY RELIGIOUS FAMILY

- 9  OVERT SIBLING RIVALRY SITUATION
- 10  OTHER SIGNIFICANT INFLUENCES (Specify)
- 11  NEGATIVE
- 12  INSUFFICIENT DATA TO PERMIT ANY OPINION







SUMMARY OF CONTRIBUTING AND PRECIPITATING FACTORS (Check Appropriate Categories)

NOT SPECIFICALLY RELATED TO STRESS OF MILITARY SERVICE 1 <input type="checkbox"/> ECONOMIC HARDSHIP 2 <input type="checkbox"/> DOMESTIC DIFFICULTY 3 <input type="checkbox"/> OVERT SEXUAL CONFLICT 4 <input type="checkbox"/> OTHER (Specify)			11 <input type="checkbox"/> STRESS OF IMPROVING SHIPMENT OVERSEAS 12 <input type="checkbox"/> ISOLATION 13 <input type="checkbox"/> CLIMATE 14 <input type="checkbox"/> HOMEICHOENESS 15 <input type="checkbox"/> LACK OF SEXUAL OUTLETS 16 <input type="checkbox"/> FEELING OF USELESSNESS - OF MAKING NO CONTRIBUTION TO THE WAR 17 <input type="checkbox"/> BRIEF COMBAT 18 <input type="checkbox"/> PROLONGED COMBAT 19 <input type="checkbox"/> ALONE AND CUT OFF 20 <input type="checkbox"/> LARGE NUMBER OF CASUALTIES IN OUTFIT 21 <input type="checkbox"/> NEAR MISS 22 <input type="checkbox"/> BUDDY OR CLOSE ASSOCIATE KILLED 23 <input type="checkbox"/> HARROWING EXPERIENCES			24 <input type="checkbox"/> EXPOSURE TO BAD CLIMATE 25 <input type="checkbox"/> ILLNESS 26 <input type="checkbox"/> INJURY 27 <input type="checkbox"/> WOUND 28 <input type="checkbox"/> PHYSICAL EXHAUSTION 29 <input type="checkbox"/> FOOD DEPRIVATION 30 <input type="checkbox"/> TOO MUCH RESPONSIBILITY		
SPECIFICALLY RELATED TO STRESS OF MILITARY SERVICE 5 <input type="checkbox"/> ANXIETY CONNECTED WITH ENTRY INTO SERVICE AND RELATED SPECIFICALLY TO MILITARY OR NAVAL SERVICE 6 <input type="checkbox"/> REGIMENTATION 7 <input type="checkbox"/> EXCESSIVE PHYSICAL DEMANDS 8 <input type="checkbox"/> LACK OF COMFORT 9 <input type="checkbox"/> CHANGE IN DIET 10 <input type="checkbox"/> FEAR OF FUTURE COMBAT			SPECIFIC FRUSTRATIONS 31 <input type="checkbox"/> MISASSIGNMENT 32 <input type="checkbox"/> POOR LEADERSHIP 33 <input type="checkbox"/> LACK OF PROMOTION 34 <input type="checkbox"/> FREQUENT TRANSFER 35 <input type="checkbox"/> OTHER (Specify)					

**B 2 ESTIMATE OF SEVERITY OF COMBAT SERVICE**  
 No clearcut definition of "mild", "moderate" or "severe" can be given. Estimate the severity as best you can from the patient's description. Ordinarily the Army veteran will be able to give a rough approximation of the number of days he was in combat. This does not mean merely being in an area which was designated as a combat area by the War Department for campaign stars or ribbons. Where veteran was in the Air Corps or Navy, state the number of missions or the names of battles, as indicated. Briefly describe the veteran's estimate of the toughest combat situation he was in.

a) ESTIMATE OF SEVERITY OF COMBAT SERVICE (Check one in all cases which saw combat service - whether or not the psychoneurotic disorder was related to combat service) 1 <input type="checkbox"/> MILD      2 <input type="checkbox"/> MODERATE      3 <input type="checkbox"/> SEVERE		c) WHAT WAS THE TOUGHEST COMBAT SITUATION VETERAN WAS IN (Describe briefly):
b) DURATION OF COMBAT GROUND    NUMBER OF DAYS AIR        NUMBER OF MISSIONS TYPE OF PLANE NAVY      BATTLES ENGAGED IN NAME SHIP TYPE OF SHIP		

**B 3 PSYCHIATRIC DIAGNOSIS RECORDED IN THE SERVICE**  
 In your opinion, was the diagnosis of psychoneurosis justified on the basis of the patient's history and medical record?  
 YES  NO   
 Comment:  
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(Continue on opposite page)

**8. TREATMENT AND DISPOSITION IN SERVICE**

On the basis of the medical record and your examination, indicate:

a) what psychiatric treatment was received -

Lined area for recording psychiatric treatment received.

b) your evaluation of the adequacy of this treatment -

Lined area for evaluating the adequacy of treatment.

c) your evaluation of the disposition made of the case (i.e., to duty (by type) or medical discharge) -

Lined area for evaluating the disposition of the case.

**9. VETERAN'S EVALUATION OF HIS HEALTH UPON DISCHARGE FROM SERVICE AS COMPARED WITH HIS CONDITION UPON ENTERING THE SERVICE**

1 SAME       2 SOMEWHAT WORSE       3 MUCH WORSE       4 BETTER

Does the veteran describe his condition in "physical" or "emotional" terms, or both?  
Comment:

Lined area for providing comments on the veteran's health evaluation.

(Continue on opposite page)

## PART II - FOLLOW-UP EXAMINATION

## A PRESENT PSYCHIATRIC STATUS

Of primary interest is the veteran's present psychiatric status. Outstanding symptoms should be obtained from the veteran's spontaneous account of his symptoms upon asked about how he feels. Indicate the relation of any present symptom to those manifested during service or prior to service. Were there any major psychiatric symptoms evident during service which are no longer present? It is not intended that the check list below will be read to the veteran.

Present symptoms and signs of psychiatric disorder:

SUMMARY OF OUTSTANDING SYMPTOMS (As given by veteran spontaneously) Check appropriate captions: (Continue on opposite page)

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> 1 PERSISTENT ANXIETY  | <input type="checkbox"/> 7 CARDIOVASCULAR SYSTEM (Palpitation<br>symptoms or beats) | <input type="checkbox"/> 15 IRRITABILITY  |
| <input type="checkbox"/> 2 DEPRESSIVE FEELINGS   | <input type="checkbox"/> 8 MUSCULOSKELETAL SYSTEM (Aches, pains, tremor)            | <input type="checkbox"/> 16 DIFFICULTY IN CONCENTRATING                         |
| <input type="checkbox"/> 3 NIGHTMARES  | <input type="checkbox"/> 9 GENITO-URINARY (Erectile or loss<br>of libido)           | <input type="checkbox"/> 17 RESTLESSNESS  |
| <input type="checkbox"/> 4 INSOMNIA  | <input type="checkbox"/> 10 HEADACHES   | <input type="checkbox"/> 18 INABILITY TO HOLD A JOB OR<br>CONTINUE IN SCHOOL    |
| <input type="checkbox"/> 5 EXCESSIVE DRINKING (Alcohol)                                      | <input type="checkbox"/> 11 CONVERSION (Hysteria)<br>SYMPTOMS (Specify)             | <input type="checkbox"/> 19 DISSATISFACTION WITH HOME<br>VOCATIONAL UNCERTAINTY |
| PSYCHOSOMATIC COMPLAINTS<br>REFERABLE TO   | <input type="checkbox"/> 12 PHOBIAS (Specify)                                       | <input type="checkbox"/> 20 DOMESTIC DISCORD                                    |
| <input type="checkbox"/> 6 GASTRO INTESTINAL (Anorexia, nausea,<br>vomiting, pain, diarrhea) | <input type="checkbox"/> 13 OBSESSIONS AND COMPULSIONS (Specify)                    | <input type="checkbox"/> 21 OTHER (Specify)                                     |
|  | <input type="checkbox"/> 14 HYPOCHONDRIACAL REACTION (Specify)                      |   |

**B VETERAN'S ESTIMATE OF COMPARISON BETWEEN HIS PRESENT CONDITION AND CONDITION AT TIME OF ENTRY INTO THE SERVICE**  
 Brief substantiation for his estimate in terms of "how" or "in what way" his condition is different should be included under "Comment". Physical condition should be differentiated from psychiatric condition.  
 (Check one)

 SAME

 SOMEWHAT WORSE

 MUCH WORSE

 BETTER

 Comment:  
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**C PRESENT ADJUSTMENT**

All phases of the veteran's adjustment should be reviewed:- occupational, marital, community adjustment, etc. If there is any readjustment, is it related to military service, to factors which were present prior to service, to overt illness, etc.?  
 Description of veteran's present adjustment:

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(Continue on opposite page)

**SUMMARY OF PRESENT ADJUSTMENT**

<b>B) IS VETERAN WORKING?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO (If "yes", specify full or part time and give occupation)		<input type="checkbox"/> FULL-TIME <input type="checkbox"/> PART-TIME <b>OCCUPATION</b>	
<b>6) IS VETERAN ATTENDING SCHOOL?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO (If "yes", specify full or part time)		<input type="checkbox"/> FULL-TIME <input type="checkbox"/> PART-TIME <b>DID VETERAN ATTEND SCHOOL AFTER DISCHARGE AND QUIT BEFORE COMPLETION OF COURSE?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO	
<b>4) IF NOT WORKING, OR WORKING ONLY PART-TIME, IS THIS BECAUSE OF ILLNESS?</b> <input type="checkbox"/> YES <input type="checkbox"/> NO		<b>8) MARITAL OR FAMILY ADJUSTMENT (Check one)</b> <input type="checkbox"/> EXCELLENT <input type="checkbox"/> FAIR <input type="checkbox"/> POOR	
<b>4) PRESENT MARITAL STATUS (Check one)</b> <input type="checkbox"/> SINGLE <input type="checkbox"/> SEPARATED <input type="checkbox"/> MARRIED <input type="checkbox"/> WIDOWED <input type="checkbox"/> DIVORCED		<b>7) COMMUNITY ADJUSTMENT (Police difficulty, drinking, etc.) (Check one)</b> <input type="checkbox"/> EXCELLENT <input type="checkbox"/> FAIR <input type="checkbox"/> POOR	
		<b>9) SEXUAL ADJUSTMENT (Check one)</b> <input type="checkbox"/> SATISFACTORY <input type="checkbox"/> UNSATISFACTORY	
		<b>10) ECONOMIC ADJUSTMENT (Check one)</b> <input type="checkbox"/> SATISFACTORY <input type="checkbox"/> UNSATISFACTORY	
		<b>11) OCCUPATIONAL ADJUSTMENT (Satisfaction with job, future plans, etc.) (Check one)</b> <input type="checkbox"/> SATISFACTORY <input type="checkbox"/> UNSATISFACTORY	

**D CHANGE IN VETERAN'S CONDITION SINCE DISCHARGE FROM THE SERVICE**

Has there been any change in the veteran's condition since discharge from the service? To what do you attribute the change? What, if any, are the stresses encountered after discharge which tend to perpetuate his symptoms or illness? Are there any specific environmental factors which are helping the veteran in his emotional adjustment?

**E EXAMINER'S EVALUATION OF VETERAN'S CONDITION**

It is realized that there is no clearcut point of separation between psychiatric illness and good health. Your clinical evaluation, such as would be made in daily practice, is what is desired. For the purpose of this study, simplicity as well as symptoms should be used as a criterion in determining whether or not the veteran is ill.

**PRESENT CONDITION (Check one)** NOT ILL ILL**PRESENT STATUS (Check one)** NOT IN HOSPITAL IN HOSPITAL

If veteran is ill, state your diagnostic formulation:

(Continue on opposite page)

**F PSYCHIATRIC TREATMENT**

Comment on patient's attitude toward his need for treatment, toward possibly available facilities, toward his diagnosis in the service and his medical discharge (if he received one). What psychiatric treatment, if any, has he received since discharge from the service? What is your opinion on his need for treatment?

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(Continue on opposite page)

**SUMMARY OF PSYCHIATRIC TREATMENT (Check appropriate captions)**

F1. DOES VETERAN FEEL THE NEED FOR TREATMENT NOW? (Check one) <input type="checkbox"/> VERY MUCH <input type="checkbox"/> A LITTLE <input type="checkbox"/> NO <input type="checkbox"/> HAS NO OPINION		F4. IF VETERAN HAS FELT NEED FOR TREATMENT BUT DID NOT GET ANY, WAS IT BECAUSE <input type="checkbox"/> NO FACILITIES WERE AVAILABLE <input type="checkbox"/> FACILITIES WERE AVAILABLE BUT VETERAN DID NOT KNOW ABOUT THEM <input type="checkbox"/> VETERAN KNEW OF FACILITIES BUT DID NOT THINK HE COULD BE HELPED <input type="checkbox"/> OTHER REASON (Specify)		F3. VETERAN'S ATTITUDE TOWARD NEUROPSYCHIATRIC DIAGNOSIS AND/OR NEUROPSYCHIATRIC DISCHARGE <input type="checkbox"/> DOCTORS MADE A MISTAKE - PROBLEMS NOT REALLY DUE TO EMOTIONAL DIFFICULTY <input type="checkbox"/> DOES NOT CARE ONE WAY OR THE OTHER <input type="checkbox"/> AGREES WITH DOCTORS AND THINKS DIAGNOSIS AND/OR DISCHARGE WAS PROPER RESULTS FACT THAT HE HAS GIVEN N.P. DIAGNOSIS OR DISCHARGE BECAUSE -- <input type="checkbox"/> HE THINKS AN N.P. DIAGNOSIS IS SOMETHING BAD <input type="checkbox"/> FAMILY THINKS AN N.P. DIAGNOSIS IS SOMETHING BAD <input type="checkbox"/> COMMUNITY THINKS THERE "IS SOMETHING WRONG WITH HIM"	
F2. HAS VETERAN HAD ANY TREATMENT FOR HIS NEUROPSYCHIATRIC DISORDER SINCE DISCHARGE? <input type="checkbox"/> YES (If "yes", specify - including hospitalization for treatment) <input type="checkbox"/> NO		F5. DOES EXAMINER THINK THAT VETERAN NEEDS TREATMENT? (Check one) <input type="checkbox"/> NO <input type="checkbox"/> YES, WOULD BENEFIT CONSIDERABLY FROM TREATMENT <input type="checkbox"/> YES, IN GREAT NEED <input type="checkbox"/> YES, TREATMENT WOULD BE DESIRABLE BUT CONTINUED ADJUSTMENT WITHOUT MUCH DIFFICULTY CAN BE EXPECTED WITHOUT TREATMENT			

**B VETERAN**

**B1. IS VETERAN RECEIVING THE FOLLOWING?**

1  COMPENSATION    2  RETIREMENT PAY    3  NEITHER

AMOUNT OF PAYMENT (Pvt. only)

**B2. IF NOT RECEIVING COMPENSATION OR RETIREMENT PAY**

1  THINKS HE SHOULD BE GETTING ONE

2  DOES NOT THINK HE SHOULD BE GETTING ONE

**B3. VETERAN'S ATTITUDE TOWARD HIS PENSION**

If receiving compensation or retirement pay, how does the veteran feel about getting a pension? Does he think it deserved? Does he think he should get more or less; was a pension taken for granted or unexpected?

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<b>B4. VETERAN'S ATTITUDE ABOUT VETERANS' BENEFITS IN GENERAL</b>	<b>DISABILITY BENEFITS</b> (Check one)	<b>OTHER BENEFITS</b> (Education, Housing, Loans, etc.) (Check one)
BY ALL MEANS DESERVED	1 <input type="checkbox"/>	2 <input type="checkbox"/>
ALL RIGHT AS LONG AS "THEY" WANT TO GIVE THEM TO US	3 <input type="checkbox"/>	4 <input type="checkbox"/>
IN THE LONG RUN, NOT A GOOD THING FOR THE COUNTRY	5 <input type="checkbox"/>	6 <input type="checkbox"/>
OTHER (Specify)	7 <input type="checkbox"/>	8 <input type="checkbox"/>

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**B5. EXAMINER'S OPINION OF INFLUENCE OF COMPENSATION, IF RECEIVED BY THE VETERAN, ON THE VETERAN'S CONDITION**

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(Continue on opposite page)



**9 VETERAN'S ATTITUDE TOWARD SEEKING MEDICAL AND PSYCHIATRIC HELP**

What is the veteran's attitude toward seeking medical or psychiatric help in general? What is his attitude toward seeking such help from a Veterans Administration hospital or out-patient facility? Would he seek it whenever in need of it, if it were available; would he never want it; would he want it only if he could not afford private care?

Describe:

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**10 ESTIMATE OF VETERAN'S ATTITUDE TOWARD THE ARMY OR NAVY**

(Check appropriate boxes)

	FAVORABLE	INDIFFERENT	UNFAVORABLE
TOWARD HIS SUPERIORS	1 <input type="checkbox"/>	5 <input type="checkbox"/>	9 <input type="checkbox"/>
TOWARD HIS ASSIGNMENTS	2 <input type="checkbox"/>	7 <input type="checkbox"/>	10 <input type="checkbox"/>
TOWARD THE TRAINING HE RECEIVED IN THE SERVICE IN PREPARATION FOR HIS ASSIGNMENT	3 <input type="checkbox"/>	8 <input type="checkbox"/>	11 <input type="checkbox"/>
TOWARD ARMY OR NAVY DISCIPLINE AND CUSTOMS	4 <input type="checkbox"/>	9 <input type="checkbox"/>	12 <input type="checkbox"/>
OVERALL ATTITUDE TOWARD TIME SPENT IN ARMY OR NAVY	5 <input type="checkbox"/>	10 <input type="checkbox"/>	13 <input type="checkbox"/>

**11 CHANGE IN VETERAN'S ATTITUDE TOWARD COMMUNITY OR COUNTRY AS A RESULT OF MILITARY SERVICE**

Was there any change in the veteran's attitude toward his community or the country as a result of military service? Was there a change while in the service? After discharge from the service? If a change took place, describe it, in the examiner's opinion, how may effect on the continuance of veteran's illness or on his adjustment to civilian life?

Describe:

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(Continue on opposite page)

**SUMMARY OF CASE -- THIS IS VERY IMPORTANT**

**BRIEF SUMMARY OF CASE** (INCLUDE PRESENT DIAGNOSIS, PERSONALITY PRIOR TO ENTRANCE INTO SERVICE, PRESENCE OF OVERT PSYCHIATRIC DIFFICULTY PRIOR TO SERVICE, MAJOR ETIOLOGICAL FACTORS BEFORE AND DURING SERVICE, TREATMENT RECEIVED BEFORE AND AFTER DISCHARGE FROM SERVICE, PRESENT CONDITION AND PRESENT ATTITUDE AND ADJUSTMENT. ATTACH SEPARATE SHEETS, AS REQUIRED.)

**EXAMINER'S PROMISSIS** (Based on all of the factors present and patient's attitude toward treatment.)

Comments:

(Continue on opposite page)

## APPENDIX V

### SAMPLE CASE SUMMARIES, BASED ON PSYCHIATRIC INTERVIEWS

**1045:** NEUROTIC TRAITS PRIOR TO ENTERING SERVICE. WOUNDED IN ACTION. RETURNED TO DUTY. READMITTED TO HOSPITAL WITH ANXIETY STATE AND AGAIN RETURNED TO DUTY WITH REASSIGNMENT. WELL ON FOLLOW-UP. WAS RECEIVING 10 PERCENT DISABILITY COMPENSATION FOR WOUND OF ARM.

White male, age 34 at follow-up, happily married, with two children. Friendly, intelligent, capable, but rather set in his ways. Inclined to be a little intolerant, irritable under pressure, overmoral, overconscientious, with mild but vague hypochondriacal symptoms when under stress.

Third of five children, brought up in respectable middle-class family with limited income. Strict religious family life. Aggressive, hypercritical mother; passive, kind, but rather weak father. Clear-cut neurotic personality disorders in two siblings; one maternal aunt in mental hospital.

Bed-wetting age 10 to 12. Occasional nail biting until age 14. Blushed easily, hands trembled slightly, tendency to feel self-conscious and inadequate. Worried a little more than average, somewhat perfectionistic. Finished high school at age 19, married, and went to work.

In 1941 consulted family physician briefly because under pressure and conflict over his job made him tense, irritable, and unable to sleep and relax.

Although a married man with two children he was drafted and after 6 months was sent overseas in the infantry. Became slightly restless and discontented during long staging period. After a few months overseas, but on first day in combat, was slightly wounded; after 5 weeks returned to his combat unit. Had difficulty in sleeping because damp ground increased pain in previously wounded arm—also at times was required to go as much as 60 hours without sleep. Was made communications sergeant without, in his opinion, proper preparation for the responsibility. With a small group of men pushed ahead of his unit and the Allied armies, became isolated and out of radio contact, under direct shell and sniper fire, had shells fall within 10 feet which killed 2 of his men. His arm bothered him so much that his commanding officer sent him, 2 months after wounding, to a first aid battalion—transferred to an evacuation hospital—and after 10 days to a general hospital with diagnosis of “Psychoneurosis, anxiety state, moderate, manifested by confusion, tremulousness, reaction to noises, sensitivity, aggravated by combat.” Two weeks later reassigned to noncombat duty in base area. While there he had no symptoms, felt useful, happy, and apparently did an excellent job. Re-

turned to U. S. A. after 19 months overseas, discharged on points, in the grade of S/Sgt.

Shortly after discharge from the Army returned to work. He turned down his prewar job at higher salary because of the pressure of the work and conflicts over it. He now feels well, except for a few minor aches and pains. Is successful and happy in his work and is taking an active part in community affairs. "I was an introvert until I got into the Army and now I am an extrovert. I have more self-confidence. I talk and mix with people more easily because evaluation of myself has increased due to mass evaluation of me."

This man received apparently little if any psychotherapy during Army hospitalization, has received none for his psychiatric condition since discharge, and does not feel that he particularly needs any. Does not have psychoneurosis today, but he does have a rather rigid perfectionistic personality.

**1133: CLEAR-CUT HISTORY OF EMOTIONAL DISORDER PRIOR TO SERVICE WITH RECURRENCES IN SERVICE. EVACUATED FROM OVERSEAS AND MEDICALLY DISCHARGED FOR PSYCHONEUROSIS. COMPLETELY WELL AT FOLLOW-UP.**

Was oldest son of a large, poor, very religious family. Was shy, timid, had tendency to keep to himself but very conscientious. Completed eighth grade at 13. Father's imprisonment was a great shock and necessitated that he assume responsibility for family in early adolescence. Mother has history of "a nervous breakdown." At 26 discovered that a syphilitic infection incurred 5 years previously had not been cured. Became socially withdrawn and depressed. He worried about the ultimate consequences of syphilis, and for a few weeks couldn't sleep or eat and had crying spells. Was reassured by successful treatment of the infection but became worried again when he was twice rejected for military service. Inducted into Army at age 30—and had a "mild nervous breakdown" when hospitalized shortly after induction to evaluate the status of his syphilitic infection. Simple reassurance and a negative hospital report served to allay his symptoms and for the next 2 years he was practically symptom-free. In August 1944, when overseas as an operations clerk with the grade of Sgt. in a tactical air unit was hospitalized for a minor infection. Once again became markedly depressed and worried, sobbed frequently, was seclusive and had difficulty in sleeping, eating, and thinking. He was evacuated to a general hospital in the United States, given psychiatric treatment to which he responded well, and eventually medically discharged.

Since his discharge he has continued to improve and at follow-up 4 years later was symptom-free and better adjusted than ever before. He has not been ill or required any form of psychiatric help. He is married, has one child, is working and receiving no compensation. Claims he "doesn't worry about things like I used to."

**1129: SCHIZOID, NEUROTIC PERSONALITY PRIOR TO SERVICE. BROKE DOWN IN COMBAT AND REASSIGNED AFTER HOSPITALIZATION. SUBSEQUENTLY DEMOBILIZED AFTER 4½ YEARS OF SERVICE. RESIDUAL SYMPTOMS HAVE INCREASED SINCE DISCHARGE. AT FOLLOW-UP ADJUSTMENT WAS PRECARIOUS, WAS RECEIVING 10 PERCENT DISABILITY COMPENSATION AND CONSIDERING ENTERING HOSPITAL.**

An obsessive, schizoid, neurotic character who was raised in a poverty-stricken environment, charged with emotional tension. Father was an irresponsible, emotionally unstable individual who changed jobs frequently, moved his family from one community to another, used alcohol to excess, contributed little to the raising of his children, and finally deserted and divorced his wife. The veteran's early life was insecure and characterized by much moving, obtaining of education in several schools, and being forced by environmental circumstances to assume responsibilities at an early age. He was a serious, conscientious, industrious person with strong emotional attachments to his mother and siblings. His adolescence was one of marked emotional turmoil due to the desertion of his father, greater poverty as a result of the depression, and the accidental death of his next younger brother to whom he was strongly attached emotionally. Started work at 14 and neurotic personality characteristics gradually became more marked, but manifested no overt symptoms prior to military service.

Entered service at 23 and made a satisfactory adjustment in the Medical Department. When reassigned to a rifle company, he had difficulty with his CO, felt dominated and powerless to do anything about it. He resented this and began to experience emotional tension. He was sent overseas, with feeling that he had not received sufficient training for combat. He had 30 days of active combat which he found physically and emotionally unbearable. He feared death, was distressed at the sight of casualties, and was emotionally disturbed by the death of a few of his buddies. During one harrowing experience, he broke down, was jittery and crying, and was finally hospitalized. He was treated for combat exhaustion by induced narcosis and later by simple reassurance. He was transferred to an MP outfit, still quite anxious, but by sheer determination and refusal to offer complaints, he made a marginal adjustment to the remainder of his military service and was honorably discharged after his return to the States.

Since his discharge he has gotten worse. He suffers from headaches, dizziness, cardiac palpitation, gastric distress with anorexia and eructation of gas, hyperhidrosis, restlessness, easy fatigability, irritability, difficulty in concentration, and insomnia. He attempted to go to school but had to quit because of his attacks of anxiety. He has consulted numerous private physicians who have treated him with sedatives. He has also received a brief course of outpatient psychotherapy from the VA. He terminated this because he felt no better. Although he is working at present, he has taken considerable sick leave and while at work must lie down and rest frequently. He feels that he has kept this job only because he works as hard as he can

and because he has an understanding boss. He is currently considering seeking hospitalization. Attributes his present difficulty to military service and at time of follow-up was receiving 10 percent disability compensation.

**1002: PERSONALITY DISORDER AND PSYCHOGENIC VOMITING PRIOR TO SERVICE. MEDICALLY DISCHARGED 3 MONTHS AFTER INDUCTION. GRADUAL IMPROVEMENT SINCE DISCHARGE.**

Veteran was born and raised in rural south, the second of six children. He started to school at the age of 6 and graduated from high school at the age of 18. He had 2½ years of technical training in college. Both his parents were extremely strict. His father was a farmer and part-time minister. He was very strict and, at times, would punish the veteran severely for the smallest offense by beating him with a rope to the point of bleeding. He never permitted the children to indulge in the usual boyhood activities, and when the boys became older he demanded of them that they live up to his rigid moral standards. The patient thinks that his father's strictness made him nervous.

He was a nail-biter all his life; was always easily scared by noise, thunder, storms, etc., and easily excitable. He developed into a passive, retiring, withdrawing personality, full of resentment against his father. After 2½ years of working his way through college without a vacation, he left home when threatened with punishment by his father for some minor offense and decided not to study any more. He worked for about a year in a nearby State and while there he met a girl of 16 whom he shortly afterwards married. Two weeks after his marriage he ran away because his in-laws demanded that he work on their farm. He felt it would be foolish for him to work on a farm when he could get a much better job in town because of his technical training. He then returned home, where he started to help his father on the farm. His father paid him only a very little for his work, and both he and his brother, in order to get some money for fun, forged their father's signature to checks for small amounts. His father paid about 10 of such checks, and finally declared he would pay no more.

Patient was arrested and jailed for 27 days. Shortly afterwards he forged two more small checks, and was sentenced to 2 years in the penitentiary. Shortly after he went to the penitentiary he started to vomit after every meal. He vomited all the time he was in the penitentiary and seems to have had considerable stomach distress ever since that time. After his release from the penitentiary he worked continuously until his induction into the service at the age of 27.

Shortly after he started basic training he was hospitalized because of persistent vomiting. He did not improve and was given a medical discharge for psychoneurosis after having spent a total of 3 months in the service.

Upon returning to civilian life he was unable to retain a series of jobs because of continued vomiting. However, as time went on he gradually

improved without any treatment and at follow-up (age 33) was working regularly. He still vomits when he works too hard or eats irregularly. He received 10 percent disability compensation from the time of his discharge in 1944 until 1947. He engages in no recreation, spends hours studying the Bible, and is very active in his church.

**1003: FREE OF PSYCHIATRIC DIFFICULTY PRIOR TO SERVICE. PROLONGED COMBAT IN INFANTRY. DEVELOPED ANXIETY STATE FOLLOWING RETURN TO STATES; SYMPTOMS HAVE PERSISTED SINCE DISCHARGE.**

Veteran is 31 years of age and the oldest of 6 children who were raised in rather poor circumstances. He had to leave school after finishing the eighth grade in order to help support the family. His father was a rather inadequate individual who drank to excess for years and has been in marginal health for the past 20 years with "hemorrhoids and back trouble." Both parents were overly strict and his mother had very strong religious inclinations.

The veteran resents the fact that more was demanded of him than of younger siblings—and especially of his next younger brother who had "stomach trouble" for years.

He had no overt psychiatric difficulty prior to his induction early in 1942. He soon went overseas and served as a rifleman in the infantry in the early Pacific campaigns. While overseas he had one brief period of hospitalization for backache and another for dengue fever. He returned to the U. S. on rotation in 1944 and soon afterwards was hospitalized for 1 week for an attack of malaria. He returned to duty and was assigned to a training cadre. Sometime after he returned to the United States he began to suffer from alternating diarrhea and constipation, headaches, irritability, and excessive perspiration. He was hospitalized for about 10 days and given a diagnosis of anxiety state. He was returned to duty and served until his demobilization late in 1945.

At follow-up he complained that the nervous stomach and irritability which were present since his discharge from the service were worse. He worked (or attended school) until a few weeks before he was examined when he left his job because of poor health and the work being too heavy for him. He is married, has one child, is in debt, and actively seeking other employment. He has received no psychiatric treatment and does not feel in need of any. He does not receive any disability compensation but recently filed a claim. If he were not married he would be inclined to enlist in the Army.

**1009: IMMATURE PERSONALITY AT INDUCTION. MEDICALLY DISCHARGED FOR NEUROTIC SYMPTOMS AFTER 2 MONTHS. SYMPTOM-FREE AND WELL ADJUSTED AT FOLLOW-UP.**

Veteran was an immature 18-year-old who had just graduated from high school, when inducted into the Army. He had been overprotected at home

since an attack of meningitis at the age of 10. He wet the bed until 10 or 12 and had occasional headaches since childhood. His parents insisted that he was too ill to be drafted and attempted to have him deferred. Upon entering the Army in 1944 he was intensely homesick and had a recurrence of bed-wetting on two occasions. He frequently went on sick call with the complaints of headache, earache, and "upset stomach." He was hospitalized after 1 month of service and 1 month later received a medical discharge for psychoneurosis.

At follow-up he was free of symptoms and attending school. He received no treatment and feels he has to a great extent overcome his dependence on his family. He received compensation for 2 years after which it was discontinued.

**1012: PREVIOUSLY WELL. DEVELOPED SEVERE SYMPTOMS AFTER 55 COMBAT MISSIONS AS AERIAL GUNNER. GRADUAL IMPROVEMENT FOLLOWING DISCHARGE. AT FOLLOW-UP ESSENTIALLY WELL.**

Veteran came of a family that was stable and fairly secure. Illness in childhood and frequent change of residence interfered with his progress in school. Graduated from high school at 20. Worked as a student horticulturist and was in good health but somewhat immature emotionally prior to induction in 1942 at the age of 27. He went overseas as an aerial gunner. After 40 missions he started to get tense and develop a "jumpy stomach," and after 50 missions was transferred to another theater. Following his 55th mission he was sent to a rest camp and then returned to the States. He had developed an active fear of flying, vomited frequently, lost weight, and was extremely nervous. He was admitted to a convalescent hospital where he received individual psychotherapy, sedation, and occupational and physical therapy with some improvement. He was returned to duty and discharged (nonmedical) in 1945—still suffering from vomiting, abdominal pains, and alternating diarrhea and constipation. After taking it easy for several months he applied for compensation and was granted 40 percent disability. He sought treatment and repeatedly had medication and diets prescribed. After several odd jobs he completed his horticulturist course and has worked in this field ever since. He got married in 1948 and has continued to improve. At follow-up he was well adjusted and quite happy—but still having occasional mild abdominal pain. His compensation was cut to 10 percent in 1949 and he does not seem in need of any treatment. His prognosis was considered excellent.

**1017: HISTORY OF PSYCHIATRIC TREATMENT FOR A NEUROSIS PRIOR TO SERVICE. HAD ANXIETY REACTION IN THE SERVICE WHICH RESPONDED TO REASSURANCE. LATER PERFORMED WELL IN COMBAT WITHOUT RECURRENCE. WELL ON DISCHARGE AND AT FOLLOW-UP.**

Veteran was youngest of seven children who at the age of 6 was told he had a "heart condition" which would prevent him from ever engaging in



any vigorous physical activity. In school he was excused from all sports. Started work after graduating from elementary school and had an excellent employment record. For 1 year prior to induction in 1943 (at age 29) he had undergone intensive psychiatric treatment because of anxiety and depression that occurred after his father's death and a repeated avoidance of marriage. At no time did he lose time from work.

During first year of service he had several episodes of fatigue, faintness, and nausea and vomiting which did not require hospitalization. In 1944, while overseas in a noncombat area, was hospitalized for an anxiety state with cardiac and other somatic symptoms. He was reassured about his heart, returned to duty and later exposed to arduous ground combat without any recurrence of symptoms. When discharged from the Army in November 1945, felt well and had more confidence in himself. He has worked without interruption and at follow-up in 1949 he was well and planning to get married.

**1032: SOMEWHAT FEARFUL AND TENSE PRIOR TO SERVICE. BROKE DOWN IN COMBAT. REASSIGNED. GRADUAL IMPROVEMENT AND WELL AT FOLLOW-UP.**

Veteran is youngest of three children whose father died when he was quite young. Mother was very strict, extremely religious, and generally overprotective. At her insistence he avoided games for fear of getting hurt. He was high-strung and nervous but attached no particular significance to it. He completed  $3\frac{1}{2}$  years of high school.

He was inducted into the Army at 19 late in 1943. He received basic infantry training and 9 months after induction was sent overseas as a replacement, joining his regiment a short time before it was committed to combat. He broke down after about a month in combat after being pinned down and isolated by enemy artillery and experiencing a near-miss. He developed acute anxiety, uncontrollable tremulousness, hypersensitivity to noise, confusion, palpitation, and shortness of breath.

After 8 days of hospitalization he was returned to rear-echelon duty where he did well. When discharged early in 1946 he still had some residual symptoms which had cleared up by the time of the follow-up examination 3 years later. As before the war, he is still high-strung and easily upset but has more self-assurance. He feels no need for treatment and never received compensation.

**1037: SEVERE PERSONALITY AND BEHAVIOR DISORDER PRIOR TO SERVICE. PSYCHONEUROTIC EPISODE IN SERVICE FOLLOWING EXPOSURE TO COMBAT AS MEDICAL CORPSMAN. PERSONALITY DISORDER AT FOLLOW-UP ESSENTIALLY UNCHANGED.**

Father died when veteran was 4 years of age, and mother, who had been in a mental institution when patient was small, died when he was 10. Veteran was raised in poverty by an older brother who frequently beat him.

He was expelled from high school once for playing hooky and ran away from home after he had smashed up a friend's car, and on several other occasions was arrested for bootlegging (he claims without justification), did some minor stealing, and had numerous other arrests for minor offenses. His work record was spotty; he chiefly did truck driving.

Enlisted in the Army in October 1940 at the age of 32 and served as a medical corpsman in the Tunisian campaign. Nearly 1 year later he became hysterical, moaned, cried, and could not control himself. He was hospitalized for 2 weeks and returned to duty. In addition there were many episodes of admitted "goldbricking," evading work, stomach upset, general tension, and preoccupation with his body and with diet. He had several hospitalizations for malaria and a variety of "physical ailments."

In 1941 he was fined and confined for a week for disrespect to an officer and in 1943 tried for being off limits.

He was discharged from the Army (demobilization) in 1945. From then until follow-up examination he had numerous jobs. He would either quit, or be fired or laid off. At the age of 40 he is still unmarried. He complains of insomnia, irritability, pains in various parts of his body—although for the most part he seems to enjoy himself bowling, playing cards, loafing, or "picking up Janes." He has had no psychiatric treatment and was receiving \$55 disability compensation each month.

**1057: WELL ADJUSTED PRIOR TO ENLISTMENT IN 1933. BROKE DOWN AFTER SEVERE PROLONGED COMBAT. RETURNED TO DUTY AND REMAINED IN THE SERVICE AFTER THE WAR. COMPLETELY WELL AT FOLLOW-UP.**

No emotional disorders or adjustment difficulty prior to service. Family history negative. Enlisted in Army in September 1933 at the age of 23. Participated in the Aleutian Islands, the Naples-Foggia, and Rome-Arno campaigns. Had 157 days of severe combat in the infantry and broke down while undergoing further training for the invasion of Southern France. He was hospitalized for 3 weeks, reassigned, and returned to duty. He was well when separated from the service in October 1945. He immediately re-enlisted and was still in the Army (Master Sergeant in a rifle company) at the time of follow-up in 1950. He is married, has three children, and is well adjusted in all areas. There has been no loss of time for illness since his hospitalization in 1944.

**1132: NEUROTIC PERSONALITY AND POORLY ADJUSTED PRIOR TO SERVICE. BROKE DOWN UNDER THE STRESS OF MILITARY SERVICE IN THE UNITED STATES AND MEDICALLY DISCHARGED. SEVERE NEUROTIC SYMPTOMS AT FOLLOW-UP ASSOCIATED WITH A SERIES OF SERIOUS PHYSICAL AILMENTS.**

Veteran was raised by a passive mother and a domineering father. He was a bed-wetter and nail-biter until early adolescence. His childhood was

unhappy and characterized by fear and resentment of his father, emotional attachment to his mother, overt rivalry with an older brother, difficulty in adjusting at school, and the development of symptoms of irritability and emotional instability.

He had a poor work record prior to service. He held numerous jobs for brief periods and usually left a job because of his inability to make a satisfactory adjustment. He was quick tempered and could not take the joking and teasing of his fellow employees.

The veteran married over the objections of his parents and was disowned by his father. He and his father never spoke from that time. His father died a few years later. His marriage was not too successful. He and his wife argued frequently because both were possessive and wanted their own way.

The veteran was inducted into the Army late in 1942 at the age of 22 but it wasn't long before he was dissatisfied. He felt misassigned, hated his work and the section of the country in which he was stationed. He began to develop overt symptoms of anxiety with a feeling of constant tension, inability to relax, tension headaches, anorexia, insomnia, and depressive feelings. After the onset of these symptoms he had an episode of melena for which he was hospitalized. The inability of the Army to make a definite diagnosis worried him and his neurotic symptoms led to his hospitalization for psychoneurosis. After a brief period of hospital care he was given a CDD in 1944. He had never served outside of the United States.

He returned home but was unable to make a social, marital, economic, or industrial adjustment. Within a year of his discharge from the service the veteran developed a gastric ulcer and had severe hematemesis. He has been hospitalized several times for this and for cirrhosis of the liver, has had three major operations, and has been unable to work, separated from his wife, and has incurred heavy debts by his illness. He has spent the majority of the past 4 years in hospitals and has been close to death on a few occasions.

Beside his physical illness the veteran has continued to manifest symptoms of psychoneurosis, anxiety state, chronic, severe. He has not received psychiatric treatment and at the present time is concerned only with his physical condition and lives in constant fear of dying during his next hemorrhage.

The prognosis in this case is doubtful. It is dependent on two principal factors: (1) the course of his physical illness and (2) whether or not the veteran receives any psychiatric treatment. At the present time he is ill and definitely needs psychiatric help. He is in need of prolonged and intensive psychotherapy. However, he will not seek psychiatric help spontaneously because his principal concern is with his physical condition.

**1159: BREAKDOWN AFTER PROLONGED COMBAT. MEDICAL DISCHARGE AFTER 9 MONTHS' HOSPITALIZATION. STILL ILL AT FOLLOW-UP AND IN GREAT NEED OF TREATMENT.**

Veteran completed eighth grade of school at 15 and went to work to help support the family (his father died when he was small). Was shy and reserved as a boy, tended to avoid girls but otherwise was considered well adjusted and in good health.

Inducted into Army in 1943 at the age of 18. Went overseas in March 1944, and was in combat as a rifleman for 5 months in Italy and southern France. Developed increasing tension and depression, stammering speech, marked tremulousness, tinnitus, and confusion. He was hospitalized for approximately 2 weeks and returned to limited duty. His symptoms continued and several days later he was rehospitalized, later evacuated to the States and after 9 months of continuous hospitalization given a disability discharge late in 1945 with a diagnosis of severe reactive depression.

At follow-up he complained of being confused and was anxious, depressed, restless, and irritable. He was treated by his own physician with various medications which did not help. He got married after leaving the service and had one child. He was working but dissatisfied with his job and his small income. His attitude was one of pessimism. He was receiving 10 percent disability compensation and felt that his condition had gotten worse since he left the service because of his vocational and marital responsibilities. The examining psychiatrist felt that he was in great need of treatment.

## APPENDIX VI

### PURPOSE AND PLAN OF STUDY AND GUIDE FOR PREPARATION OF REPORT BY RED CROSS WORKER

#### I. PURPOSE AND PLAN OF STUDY

National headquarters, American Red Cross, has approved chapter participation in a follow-up study of psychoneurosis cases that is being undertaken by a group of psychiatrists working under the direction of the Committee on Veterans Medical Problems of the National Research Council. The veterans selected for this study represent a random sample of 1,000 psychoneurotic admissions to medical installations during World War II. Some of them had overseas service and others had domestic service only. Some had medical discharges but not all of these were for a psychiatric disorder.

The specific objective of the study is to find out what has happened to this group of wartime psychoneurotic casualties and to obtain as complete a picture as possible of their present adjustment.

When travel for the veteran is involved, he will be reimbursed for one round trip, plus expenses for meals during the trip. No other expenses will be paid.

It is anticipated that in some instances there will be difficulty in getting the men to come in for examination. Therefore, the Red Cross has been asked to contact veterans, who have not responded to letters or telephone calls or telegrams sent to them by the psychiatrist, for the purpose of encouraging them to cooperate in the program by reporting for examination. These cases will be referred to the Red Cross only after the psychiatrist has exhausted all means at his disposal for getting the veterans to come in.

The chapter Home Service worker assigned to assist with the study should first get in touch with the psychiatrist to get information and suggestions for approaching the veteran and to learn when an examination can be made in the event the veteran can be persuaded to participate in the study. Every possible effort should be made to get the veteran to see the psychiatrist who has been authorized to examine him. Only if he refuses to do this should the social history report be prepared. If the veteran cannot be seen and no information about his adjustment can be obtained, a brief report of the situation and the reason for it should be provided.

The chapter Home Service worker should be thoroughly familiar with the Guide for Preparation of the Report (see III) and the Instructions for Use of the Guide (see II) before visiting the veteran so that if it is necessary to prepare a social history report, she will know what information is needed and how to go about getting it in the most desirable and effective way possible.

## II. INSTRUCTIONS FOR USE OF THE GUIDE

The following guide indicates the kinds of information the National Research Council will find most useful, but you are not expected to follow it literally in obtaining information. It should be studied carefully before undertaking an interview and used for the purpose of learning major points to be covered when talking with the veteran. Primary emphasis should be given to what the veteran says about his present adjustment and health, but you should be alert to all significant facts. You should feel free to express your own observations and opinions regarding the veteran's overall adjustment and health, and to evaluate the information given by the veteran and others. However, your observations and opinions should be clearly labeled as such and should be included in Part B of the guide under the heading "Worker's Impressions."

Special care must be taken not to indicate to the veteran that he is thought to be ill or that he needs treatment. Tell the veteran that you have been asked by the doctor to talk with him and to make a report that will help the doctor in learning about the results of treatment given for various injuries and illnesses during the war. Explain that it is important to have this kind of information about men who have fully recovered as well as about those who are disabled, so that the effectiveness of various methods of treatment can be tested. Assure him that the information he gives you will be strictly confidential and that no individual reports will be released to the VA or used in any way in connection with a claim for compensation or pension, unless he specifically requests that this be done.

*The completed social history should be sent to the psychiatrist who was designated to examine the veteran.* He will review it and if possible arrange to discuss it with you. Your letter to him transmitting the social history should indicate whether it will be possible for you to go in to see him and if not, how he can best get in touch with you if he has any questions that he would like to discuss with you before forwarding the social history to the National Research Council.

## III. GUIDE FOR PREPARATION OF REPORT—PSYCHONEUROSIS FOLLOW-UP STUDY

Report information gained and observations made, indicating the source of information.

Whenever possible, talk directly with the veteran, supplementing with information from family members or others, if indicated. If no contact can be established with the veteran, report information supplied by others.

### A. Information Obtained From Veteran

#### 1. *Present Adjustment*

Is he working full time or part time? At what occupation? Is he satisfied with his job?

If not working or working only part time, is this because of illness?

Is he attending school? Full time or part time?

Did he attend school after discharge? If so, did he complete the course or quit before completion? If he quit, why?

Does he consider his economic adjustment satisfactory? If not, why?

What is his present marital status? Single, married, divorced, separated, widowed? If single, does he go out with girls? Does he want to marry?

Does he consider his marital or family adjustment excellent, fair or poor? Explain.

Has he had any difficulty in adjusting to community life? In what way?

Does he think he has changed in any respect as a result of military service?

## 2. *Health*

### a. *Present condition* (describe in full)

How does he feel now? Has he had any treatment since discharge? If so, for what? Is he getting any treatment now? Does he think he needs treatment? Does he feel anxious, depressed, irritable, or does he have other emotional or physical symptoms that bother him? What are they? Are these feelings the same, better or worse than before and during service?

Does he think he had a neuropsychiatric disability or that the doctors made a mistake in diagnosis? Does he think a neuropsychiatric diagnosis is something bad? What does his family think about it? Do people in the community think there is something wrong with him?

How has he felt since discharge—better or worse than before service?

If he has felt the need of treatment but did not get any, was it because no facilities were available, or he did not know about them, or did he think he could not be helped? Were there other reasons why he did not receive treatment?

What is his attitude toward seeking treatment from a VA hospital or outpatient facility? Would he seek it whenever in need of it if it were available? Would he never want it, or would he want it only if he could not afford private care?

### b. *Illness in service*

Under what circumstances did his illness in service develop? What treatment did he have (veteran's statement)? Was he discharged because of it? How did he feel about his discharge? What was he like at time of discharge (as compared with his condition at time of entering service)?

What factors related specifically to military or naval service does he think contributed to his illness during service, such as anxiety connected with entry into service, fear of combat, isolation, climate, homesickness, excessive physical demands, regimentation, large number of casualties in outfit, buddy or close associate killed, harrowing experiences, injury, wounds, physical exhaustion, food deprivation, too much responsibility, misassignment, poor leadership, lack of promotion, frequent transfers?

What other factors does he think contributed to his illness during service, such as economic hardship, domestic difficulty, other personal or family problems?

If the veteran attributes his illness in service to severity of combat service, give duration of combat. If in Air Force, give number of missions and type of plane. If in the Navy, give battles engaged in and name and type of ship. Describe briefly the toughest combat situation he was in.

*c. Health prior to military service*

Was he in good health when he entered service? If not, describe nature of disability, particularly any behavioral or emotional difficulties.

What factors does he think contributed to his illness prior to service, such as economic hardship, domestic difficulty, other personal or family problems?

Was he nervous? Was he treated for a nervous condition prior to military service? If so, when, where, and for what reason?

*3. Attitude Toward Military Service*

Did the veteran want to go into military service? What was his family's attitude toward his service? Was his attitude toward his superiors, his assignments, his training, Army or Navy discipline and customs favorable, unfavorable or indifferent?

*4. Compensation, Pension or Retirement*

Is he receiving compensation, pension or retirement pay? If not, does he think he should be? If receiving benefits, how does he feel about it? Does he think he should get more or less? Was the award taken for granted or unexpected? If receiving benefits, how much per month? Does he think all disabled men should be compensated? What is his attitude toward education, bonuses, loans, etc.?

*5. Personal and Family History*

What has been the occupation of the father or head of the family and the general financial status of the family through the years?

Is there any history of mental illness, undue nervousness, suicide, epilepsy, criminalism, drug addiction, alcoholism, and the like in the immediate family? Describe personality of parents. How do they get along? Are they divorced or separated? To what extent were any of these factors a source of emotional difficulty for the veteran?

If either parent is dead, what age was the man at the time of death and how did he react to it? How many brothers and sisters did he have? What are they like? How did he get along with them? What was his relationship to his parents? Did he consider them strict or easy going? How was he punished? How did he feel about it? Were the parents overly religious?

Was there an overattachment of the man to any member of the family? How much responsibility did he take for his parents or other dependents before entering military service?

How far did he go in school and what kind of adjustment did he make? How well did he do in studies? Did he have any special interests or outstanding difficulties in school subjects? Reasons for leaving, and age?



What was his main occupation prior to service? What other kinds of work has he done? What was the longest period he held a job? How did he get along with his fellow workers?

What were his interests and hobbies? How did he usually spend his leisure time? Were there any marked changes in habits, interest and attitudes at time of adolescence?

What was his reaction to authority? Did he get into fights? Did he ever run away from home? Describe any unusual interest in religion. Did he have girl friends? Boy friends? Older or younger? If married, at what age? What is his adjustment to marriage? Any separations? Does he feel that he and his wife have been happy together? What is his attitude toward his children?

### **B. Worker's Impressions**

On the basis of your observation, do you think the veteran is emotionally or psychiatrically ill? Why? Does he seem to need treatment? What kind of treatment would he accept? Do you have the impression that he was ill before he entered service or that he changed in any respect as a result of his military service? Indicate any points in the report where you feel there is a significant difference between the veteran's statement and your impression.

# APPENDIX VII

## HEALTH QUESTIONNAIRE

### HEALTH QUESTIONNAIRE

Please check some answer to every question. First read all possible answers and then check the one that comes closest to describing how you feel. Write in any and all remarks you care to.

1. How would you say your health was just before entering the service?  
(Put a check in front of your answer ... like this  .)

Good  
 Fair  
 A little sick  
 Very sick

If you did not check "Good", what was the difficulty? \_\_\_\_\_

2. Would you say your health when you were discharged was the same, better or worse than just before you entered the service? (Check one)

About the same when I was discharged as just before I entered the service.  
 Better when I was discharged than just before I entered the service. In what way? \_\_\_\_\_

Somewhat worse when I was discharged than just before I entered the service. In what way? \_\_\_\_\_

Much worse when I was discharged than just before I entered the service. In what way? \_\_\_\_\_

3. Would you say your health now is the same, better or worse than just before you entered the service? (Check one)

About the same now as when I entered the service.  
 Better now than when I entered the service. In what way? \_\_\_\_\_

Somewhat worse now than when I entered the service. In what way? \_\_\_\_\_

Much worse now than when I entered the service. In what way? \_\_\_\_\_

4. If your health is poor in any way now, please tell in what way it is poor. (What symptoms do you have?) \_\_\_\_\_

My health is good now.

5. Are you working now? (Check one)

Yes, I have a full-time job  
 Yes, I have a part-time job  
 No. Why not? \_\_\_\_\_

6. Exactly what kind of work are you doing? (For instance, lathe worker in a shoe factory; clerk in a retail drug store; bookkeeper in an airplane factory; etc.) \_\_\_\_\_  
\_\_\_\_\_

How are you getting along in your job now? (Check one)

- I'm getting along very well.  
 I'm not getting along very well. What is the difficulty? \_\_\_\_\_  
\_\_\_\_\_

I'm not working.

8. Would you say that you are now getting along in your job the same, better or worse, than you were before you entered the service? (Check one)

- About the same as before I entered the service.  
 Better now than before I entered the service. In what way? \_\_\_\_\_  
\_\_\_\_\_

- Worse now than before I entered the service. In what way? \_\_\_\_\_  
\_\_\_\_\_

I wasn't working before I entered the service. Why not?  
\_\_\_\_\_

I'm not working now.

9. If you are not working full-time now, is it in any way on account of your health? (Check one)

- No  
 Yes. Explain how. \_\_\_\_\_  
\_\_\_\_\_

I am working full-time now.

10. Are you married?

- Yes  
 No

11. If you are married, do you have your own home or apartment? (Check one)

- Yes  
 No, we are living with parents, or other relatives.  
 I am not married.

12. If you are not married now, were you ever married? (Check one)

- Yes, I was married and my wife died.  
 Yes, I was married, and have been separated or divorced.  
 No, I was never married.  
 I am married now.

13. If you are not married now, are you living alone? (Check one)

- Yes.  
 No, I live with parents or other relatives.  
 No, I live with friends.  
 I am married.

14. How are you getting along with your wife or family now?

- I'm getting along very well.  
 I'm not getting along very well. What is the difficulty? \_\_\_\_\_

15. Would you say that you are now getting along with your wife or family the same, better or worse, than you were before you entered the service? (Check one)

- About the same now as before I entered the service.  
 Better now than before I entered the service. In what way? \_\_\_\_\_  
 Worse now than before I entered the service. In what way? \_\_\_\_\_

16. How are you getting along with your friends and neighbors now?

- I'm getting along very well.  
 I'm not getting along very well. What is the difficulty? \_\_\_\_\_

17. Would you say that you are now getting along with your friends and neighbors the same, better or worse, than you were before you entered the service? (Check one)

- About the same now as before I entered the service.  
 Better now than before I entered the service. In what way? \_\_\_\_\_  
 Worse now than before I entered the service. In what way? \_\_\_\_\_

18. Since your discharge from the service, have you had any medical treatment for nervousness or for complaints which are thought to be due to nervousness?

- No.  
 Yes. How much treatment did you have? What kind of treatment was it, and where did you get it? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

19. Do you feel the need of treatment for any kind of nervous complaints now?

- Yes, very much  
 Yes, a little  
 No

20. If you felt the need for treatment for nervousness since you were discharged from the service but did not get it, explain why \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
 I didn't feel the need for treatment.  
 I was treated.

21. Are you receiving any pension from the Veterans Administration? (Check one)

Yes. How much? \$ \_\_\_\_\_ per month.

For what condition? \_\_\_\_\_

How do you feel about the amount? \_\_\_\_\_

No. How do you feel about it? \_\_\_\_\_

22. Would you say your health now is the same, better or worse than when you were discharged from the service? (Check one)

About the same now as when I was discharged.

Better now than when I was discharged. In what way? \_\_\_\_\_

Worse now than when I was discharged. In what way? \_\_\_\_\_

23. While in service, did you have a nervous condition or other complaints (such as headache, stomach or back pain, etc.) which the doctors thought came from nervousness?

- Yes  
 No

24. If you had a nervous condition or complaints which were thought to be due to nervousness while you were in the service, what do you think caused it? Please describe all the things which you feel contributed to your illness. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I didn't have a nervous condition.

82. If you had a nervous condition, describe any treatment you had for it while in service.

\_\_\_\_\_

\_\_\_\_\_ I didn't have a nervous condition while in the service.

83. Were you in combat?

\_\_\_\_\_ Yes. About how many days? \_\_\_\_\_ days.

What kind of combat was it? \_\_\_\_\_ ground \_\_\_\_\_ air \_\_\_\_\_ sea

\_\_\_\_\_ No

84. In general, how do you feel about the time you spent in the service? (Check one)

\_\_\_\_\_ Favorable (thought it was worthwhile, necessary, educational, etc.)

\_\_\_\_\_ Unfavorable (thought it was unnecessary, waste of time, harmful, etc.)

\_\_\_\_\_ Favorable and unfavorable. Explain \_\_\_\_\_

\_\_\_\_\_ I don't care, one way or the other.

85. In general, how do you feel about the officers you had in the service? (Check one)

\_\_\_\_\_ Favorable (they were good, helpful, fair, etc.)

\_\_\_\_\_ Unfavorable (they were poor leaders, unfair, etc.)

\_\_\_\_\_ Favorable and unfavorable. Explain \_\_\_\_\_

\_\_\_\_\_ I don't care, one way or the other.

86. In general, how do you feel about the assignments you had in the service? (Check one)

\_\_\_\_\_ Favorable (feel I was given the right assignments, or the only ones that

could have been given to me.)

\_\_\_\_\_ Unfavorable (feel I was given the wrong assignments, etc.)

\_\_\_\_\_ Favorable and unfavorable. Explain \_\_\_\_\_

\_\_\_\_\_ I don't care, one way or the other.

87. In general, how do you feel about the training you had in the service? (Check one)

\_\_\_\_\_ Favorable

\_\_\_\_\_ Unfavorable

\_\_\_\_\_ Favorable and unfavorable. Explain \_\_\_\_\_

\_\_\_\_\_ I don't care, one way or the other.

88. Did you have an "M" diagnosis when you were in the service?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

32. If you had an "MP" diagnosis when you were in the service, how do you feel about it?  
(Check one)

- The doctors made a mistake.  
 I agree with the doctors.  
 I don't care, I have no feeling about it.

I didn't have an "MP" diagnosis while in service.

33. Did you have any kind of nervous difficulty, trouble getting along with people, or physical symptoms which were due to nervousness at any time from childhood until you entered the service?

Yes. Describe the difficulty and any treatment you had for it. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

No

34. Did your mother have any nervous difficulty?

Yes. In what way? \_\_\_\_\_  
\_\_\_\_\_

No

35. Did your father have any nervous difficulty?

Yes. In what way? \_\_\_\_\_  
\_\_\_\_\_

No

36. Did any of your brothers or sisters have any nervous difficulty?

Yes. In what way? \_\_\_\_\_  
\_\_\_\_\_

No

I never had any brothers or sisters.

37. Were your parents ever separated or divorced?

Yes. How old were you at the time? \_\_\_\_\_ years  
 No

38. Are both of your parents living now?

Yes  
 No. How old were you when one or both died? \_\_\_\_\_ years

39. In general, how would you say you got along with your brothers or sisters from childhood until you entered the service? (Check one)

- We got along very well  
 We fought some, but not very much  
 We never got along together. What was the difficulty? \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

I never had any brothers or sisters.

If you have any remarks to make on anything you feel we might be interested in, please write them below as fully as you like. \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NOTE: PLEASE CHECK BACK TO SEE THAT YOU DID NOT SKIP ANY QUESTIONS



## INDEX

	<i>Page</i>
Adjustments at follow-up:	
classification of . . . . .	123-127
descriptive findings . . . . .	123-127
Adjustments, preservice:	
and chance of breakdown . . . . .	85-92
classification of . . . . .	85
descriptive findings . . . . .	85-92
Adjustment summary at follow-up:	
and branch of service . . . . .	20
and compensation . . . . .	207
defined . . . . .	127
descriptive findings . . . . .	126-127
and diagnosis at follow-up . . . . .	167-168
and disposition following breakdown . . . . .	187
and family history . . . . .	188
and health at separation . . . . .	187-188
and parental death, divorce, etc. . . . .	274-275
and personality pattern . . . . .	188-189
and preservice adjustments . . . . .	127, 189
and severity of breakdown . . . . .	253
and stress of military service . . . . .	187, 231, 245, 277-278
and treatment since separation . . . . .	191
Adjustment summary, preservice:	
and adjustment summary at follow-up . . . . .	189, 191
and chance of breakdown . . . . .	92
and change in health after separation . . . . .	197
and change in health, entry to follow-up . . . . .	203
defined . . . . .	92
descriptive findings . . . . .	92
and diagnosis at follow-up . . . . .	180
and disability at follow-up . . . . .	157, 159
and disposition after breakdown . . . . .	265
and events of military period generally . . . . .	315-316
and family adjustment at follow-up . . . . .	185
and family history . . . . .	273-274
and follow-up bias . . . . .	16
and follow-up status generally . . . . .	317-320
and parental death, divorce, etc. . . . .	274-275
and personality pattern . . . . .	283-284, 286, 306-307
and preservice characteristics generally . . . . .	313-314
and severity of breakdown . . . . .	252
and stress of military service . . . . .	228-229, 240
and treatment of breakdown . . . . .	260
Admissions:	
after first breakdown:	
and personality pattern . . . . .	292
in sample and controls . . . . .	48
before first breakdown:	
and personality pattern . . . . .	289
in sample and controls . . . . .	48

	<i>Page</i>
Admissions—Continued	
defined . . . . .	48
for psychoneurosis:	
number per man . . . . .	48-49
rates of, by theater . . . . .	42
in WW II . . . . .	26
throughout military period:	
and follow-up bias . . . . .	14-15
and personality pattern . . . . .	289
in sample and controls . . . . .	37-38
Affection-rejection, parental:	
and chance of breakdown . . . . .	62-64
defined . . . . .	61-62
descriptive findings . . . . .	62-63
and follow-up bias . . . . .	16
and personality pattern . . . . .	281, 304
and stress of military service . . . . .	221
AGCT score ( <i>see also</i> Intelligence):	
and chance of breakdown . . . . .	29-30
descriptive findings . . . . .	29-30
and follow-up bias . . . . .	13
Age at breakdown . . . . .	38-39
Age at entry into service:	
and chance of breakdown . . . . .	27-28
and change in condition after separation . . . . .	197
and change in health, entry to follow-up . . . . .	203
and compensation . . . . .	213
descriptive findings . . . . .	27-28
and disability at follow-up . . . . .	157
and follow-up bias . . . . .	13
and length of service . . . . .	34
and personality pattern . . . . .	284, 287
and stress of military service . . . . .	223-226
American Red Cross . . . . .	vii, 10-12
Arm or service:	
and chance of breakdown . . . . .	41, 44
descriptive findings . . . . .	41, 44
and follow-up bias . . . . .	13
Army. ( <i>See</i> Branch of service.)	
Article of War 107, days lost under:	
descriptive findings . . . . .	41, 43
and follow-up bias . . . . .	14-15
and personality pattern . . . . .	288-289
Assignment:	
and capacity . . . . .	321-333
Associated diagnoses . . . . .	49-50
Attitude toward parents:	
and chance of breakdown . . . . .	68-70
defined . . . . .	68
descriptive findings . . . . .	68-69
and follow-up bias . . . . .	16
and personality pattern . . . . .	281, 305
and stress of military service . . . . .	221, 237-239

	<i>Page</i>
Attitudes at follow-up:	
on medical care . . . . .	133
on military service . . . . .	134-135
on VA benefits . . . . .	133-134
Awards and decorations . . . . .	14, 40-41, 291
AWOL . . . . .	14-15, 40-42, 289
Battles and campaigns ( <i>see also</i> Combat):	
descriptive findings . . . . .	45-47
and follow-up bias . . . . .	14
Bias:	
and compensation for disability . . . . .	8
of follow-up. ( <i>See</i> Follow-up bias.)	
of retrospective histories . . . . .	137
Birth order:	
and chance of breakdown . . . . .	79-81
descriptive findings . . . . .	79-80
and follow-up bias . . . . .	16
and personality pattern . . . . .	282
and stress of military service . . . . .	221
Branch of service:	
Army and Navy cases compared . . . . .	20-21
disposition after breakdown . . . . .	262
and follow-up bias . . . . .	13
and personality pattern . . . . .	288
and sampling plan . . . . .	2-6
Breakdown. ( <i>See</i> Rate of breakdown.)	
Change in health:	
after separation:	
descriptive findings . . . . .	128-129
and disability . . . . .	144
and disposition after breakdown . . . . .	265
and events of military period generally . . . . .	194-196
and family history . . . . .	278
and follow-up status generally . . . . .	193-194
and personality pattern . . . . .	296
and preservice characteristics generally . . . . .	197
and severity of breakdown . . . . .	253
and stress of military service . . . . .	231-232, 244-245
during military service . . . . .	117, 217-218, 236-237
from induction to follow-up:	
descriptive findings . . . . .	122-123
and disability . . . . .	144
and events of military period generally . . . . .	198-202
and family history . . . . .	277
and follow-up status generally . . . . .	198
and parental conflict . . . . .	277
and personality pattern . . . . .	293
and preservice characteristics generally . . . . .	202-203
and stress of military service . . . . .	231, 242-244
Chronic illness, parental:	
and chance of breakdown . . . . .	60-62
descriptive findings . . . . .	60-61
and follow-up bias . . . . .	16-17
Climate:	
as stress . . . . .	109-110

	<i>Page</i>
Combat ( <i>see also</i> Stress of military service):	
and mobilization standards . . . . .	321-322
Combat stress:	
classification of . . . . .	108-109
and compensation at follow-up . . . . .	210-211
descriptive findings . . . . .	108-113
and follow-up bias . . . . .	16
Community adjustment:	
at follow-up:	
descriptive findings . . . . .	126
and disability at follow-up . . . . .	139
and personality pattern . . . . .	295
in relation to other factors generally . . . . .	186
and severity of breakdown . . . . .	253
before service:	
and chance of breakdown . . . . .	90-91
defined . . . . .	90
descriptive findings . . . . .	90-91
and events of military period . . . . .	315
and follow-up bias . . . . .	16
and follow-up status . . . . .	186
and other preservice characteristics generally . . . . .	312
and personality pattern . . . . .	282-283, 285, 306-307
and stress of military period . . . . .	228-229, 240
Compensation status:	
and change in health after separation . . . . .	193-194
descriptive findings . . . . .	133-134
and diagnosis at follow-up . . . . .	168-169
and disability . . . . .	139-141
and disposition after breakdown . . . . .	267
effect on health at follow-up . . . . .	134
and employment status at follow-up . . . . .	184
and events of military period generally . . . . .	209-212
and family history . . . . .	278
and follow-up status generally . . . . .	205-209
and personality pattern . . . . .	298-299
and preservice characteristics generally . . . . .	212-213
and purpose of study . . . . .	vi, 1
and severity of breakdown . . . . .	253-254
as source of bias . . . . .	8
and stress . . . . .	232, 246-248
and treatment since separation . . . . .	191
Component of AUS:	
and chance of breakdown . . . . .	37-38
descriptive findings . . . . .	37-38
and follow-up bias . . . . .	13
and personality pattern . . . . .	288
Confinement or incapacity while in service. ( <i>See</i> Article of War 107 and Courts-martial.)	
Control samples . . . . .	2, 6-7, 56
Courts-martial ( <i>see also</i> Article of War 107 and AWOL):	
descriptive findings . . . . .	40-42
and follow-up bias . . . . .	14-15
and personality pattern . . . . .	289
Criminal behavior . . . . .	6, 120-121

	<i>Page</i>
<b>Cultural origin:</b>	
and chance of breakdown . . . . .	74-75
descriptive findings . . . . .	74
and follow-up bias . . . . .	16
and personality pattern . . . . .	305
and stress of military service . . . . .	222
<b>Death:</b>	
of parents:	
and chance of breakdown . . . . .	60-62
descriptive findings . . . . .	60-61
and diagnosis at follow-up . . . . .	176
and disability at follow-up . . . . .	152
and follow-up bias . . . . .	16
and stress of military service . . . . .	221
in study sample . . . . .	120-121
<b>Desertion by parents. (See Divorce, separation, etc.)</b>	
<b>Diagnosis:</b>	
at follow-up:	
descriptive findings . . . . .	129-130
and disability . . . . .	145
and disposition after breakdown . . . . .	265-266
and events of military period generally . . . . .	171-176
and family history . . . . .	278
and follow-up status generally . . . . .	167-171
and personality pattern . . . . .	296-298
and preservice characteristics generally . . . . .	176-180
and stress of military service . . . . .	232, 246
military:	
sampling of . . . . .	3-4
examiners' evaluation of . . . . .	17-18, 115, 251
<b>Disability:</b>	
before service:	
and chance of breakdown . . . . .	83-85
defined . . . . .	83
descriptive findings . . . . .	83-84
and disability at follow-up . . . . .	154-158
and follow-up bias . . . . .	17-18
and severity of breakdown . . . . .	252
at follow-up:	
and branch of service . . . . .	21
descriptive findings . . . . .	127-128
and events of military period generally . . . . .	145-151
examiner variation in assessing . . . . .	21-24
and family history . . . . .	277
and other follow-up observations . . . . .	138-145
and personality pattern . . . . .	293
and predictive factors generally . . . . .	159-165
and preservice characteristics generally . . . . .	150-159
and severity of breakdown . . . . .	253
and stress of military service . . . . .	232, 245, 293
<b>Disability discharges for psychoneuroses, WW II . . . . .</b>	<b>26-27</b>
<b>Discipline-indulgence, parental:</b>	
and chance of breakdown . . . . .	63-66
defined . . . . .	63
descriptive findings . . . . .	63-65

	<i>Page</i>
<b>Discipline-indulgence, parental—Continued</b>	
and follow-up bias . . . . .	16-19
and personality pattern . . . . .	281, 305
and stress of military service . . . . .	221
<b>Disposition after breakdown:</b>	
and adjustment summary at follow-up . . . . .	187
and branch of service . . . . .	21
classification of . . . . .	116-117
and compensation . . . . .	212
descriptive findings . . . . .	116-117
and diagnosis at follow-up . . . . .	174-175
and disability at follow-up . . . . .	149-150
effect on observations . . . . .	8
and employment at follow-up . . . . .	184
and events of military period generally . . . . .	262-263
and family history . . . . .	276-277
and follow-up bias . . . . .	16
and follow-up status generally . . . . .	265-267
and personality pattern . . . . .	292
and preservice characteristics generally . . . . .	263-265
and stress of military service . . . . .	217-218, 234-236
and time from admission . . . . .	50-51
and treatment of breakdown . . . . .	257-258
<b>Disposition policy for psychoneurosis . . . . .</b>	<b>1, 329-331</b>
<b>Divorce, separation, etc., of parents:</b>	
and chance of breakdown . . . . .	60-62
descriptive findings . . . . .	60-61
and diagnosis at follow-up . . . . .	176
and disability at follow-up . . . . .	152
and follow-up bias . . . . .	16
and stress of military service . . . . .	221
<b>Duration. (<i>See</i> Length of service and Length of stay.)</b>	
<b>Echelon:</b>	
of assignment . . . . .	43-45
of final military treatment . . . . .	50-51, 53
<b>Economic adjustment at follow-up:</b>	
descriptive findings . . . . .	124
and disability at follow-up . . . . .	138
and economic status of parental family . . . . .	277
and events of military service generally . . . . .	183-185
and family history . . . . .	277-278
and personality pattern . . . . .	184-185, 294
and preservice work adjustment . . . . .	185
and work adjustment at follow-up . . . . .	183-184
<b>Economic status, family:</b>	
and chance of breakdown . . . . .	69-71
and compensation . . . . .	212
defined . . . . .	69-70
descriptive findings . . . . .	69-70
and family history . . . . .	272
and follow-up bias . . . . .	17, 18
and personality pattern . . . . .	305
and stress of military service . . . . .	221

	<i>Page</i>
<b>Education at induction:</b>	
and chance of breakdown . . . . .	31, 33
and change in health after separation . . . . .	197
and change in health, entry to follow-up . . . . .	204
and compensation . . . . .	212-213
descriptive findings . . . . .	31-32
and diagnosis at follow-up . . . . .	179-180
and disability at follow-up . . . . .	157
and follow-up bias . . . . .	13
and personality pattern . . . . .	285
and stress of military service . . . . .	225-227, 241
<b>Employment status at follow-up:</b>	
and compensation . . . . .	184
descriptive findings . . . . .	124-126
and disability at follow-up . . . . .	138-139
and disposition after breakdown . . . . .	184, 265
and health at separation . . . . .	183
and personality pattern . . . . .	184, 294-295
and severity of breakdown . . . . .	253
and stress of military service . . . . .	184
and treatment since separation . . . . .	190
<b>Emotional health. (See Health; Change in health; Diagnosis; and Personality pattern.)</b>	
<b>Etiology . . . . .</b>	<b>2</b>
<b>Examination:</b>	
confidential nature of . . . . .	10
procedures . . . . .	8-12, 57
<b>Examining psychiatrists:</b>	
background of . . . . .	21, 24
caseload of each . . . . .	21-22
compensation of . . . . .	8
geographical distribution of . . . . .	4
names of . . . . .	4-5
selection of . . . . .	8
variation introduced by . . . . .	21-24
<b>Family adjustment at follow-up:</b>	
descriptive findings . . . . .	125
and disability at follow-up . . . . .	138-139
and other factors generally . . . . .	185-187
<b>Family adjustment, preservice:</b>	
and chance of breakdown . . . . .	86
defined . . . . .	85-86
descriptive findings . . . . .	86
and events of military period . . . . .	228-229, 240, 314
and family history . . . . .	273
and follow-up bias . . . . .	16
and follow-up status . . . . .	316-317
and other preservice characteristics generally . . . . .	311
and personality pattern . . . . .	282-283, 306-307
<b>Family history:</b>	
and adjustment summary at follow-up . . . . .	188
and chance of breakdown . . . . .	58-60, 77-79
and change in condition after separation . . . . .	197

	<i>Page</i>
Family history—Continued	
and change in health from entry to follow-up . . . . .	203
and compensation . . . . .	212
defined . . . . .	57-58, 76-78
descriptive findings . . . . .	58, 78
and diagnosis at follow-up . . . . .	176-177
and disability at follow-up . . . . .	151-153
and disposition after breakdown . . . . .	263-264
and events of military period generally . . . . .	275-277
and follow-up bias . . . . .	16-19
and follow-up status generally . . . . .	277-278
and other preservice characteristics generally . . . . .	272-275
and personality pattern . . . . .	304-306
and stress of military period . . . . .	219-221, 223-224, 237-238
Follow-up:	
bias in . . . . .	12-21
completeness of . . . . .	12, 21
methods of . . . . .	8-12, 57
Foreign-born. ( <i>See</i> Cultural origin.)	
Geographical region of residence. ( <i>See</i> Residence.)	
Grade (military) at separation . . . . .	14, 38, 40
Health at induction:	
and chance of breakdown . . . . .	93
and change in health, entry to follow-up . . . . .	201-202
and compensation . . . . .	212-213
and death, divorce, etc., of parents . . . . .	274
descriptive findings . . . . .	93
and diagnosis at follow-up . . . . .	177
and disposition after breakdown . . . . .	264-265
and family history . . . . .	274
and follow-up bias . . . . .	16
and personality pattern . . . . .	286-287, 306-307
and severity of breakdown . . . . .	252
and stress of military service . . . . .	227-228, 241-243
Health at separation:	
and adjustment summary at follow-up . . . . .	188
and change in health after separation . . . . .	195
and change in health from induction to follow-up . . . . .	202
and compensation . . . . .	212
descriptive findings . . . . .	117-118
and diagnosis at follow-up . . . . .	175-176
and disposition after breakdown . . . . .	262-263
and employment at follow-up . . . . .	183
and family history . . . . .	277
and follow-up bias . . . . .	17, 19
and personality pattern . . . . .	293-294
and severity of breakdown . . . . .	251-252
and stress of military service . . . . .	236-237
and treatment of breakdown . . . . .	257
Independence of parent. ( <i>See</i> Protection-independence.)	
Inductees. ( <i>See</i> Component, AUS.)	
Induction policy. ( <i>See</i> Mobilization standards.)	
Indulgence, parental. ( <i>See</i> Discipline—indulgence.)	
Insight . . . . .	190



	<i>Page</i>
Intelligence ( <i>see also</i> AGCT):	
and chance of breakdown . . . . .	85
descriptive findings . . . . .	85
and diagnosis at follow-up . . . . .	178
and disability at follow-up . . . . .	153
and follow-up bias . . . . .	16
and personality pattern . . . . .	282, 306
and stress of military service . . . . .	221
Length of service:	
after breakdown:	
descriptive findings . . . . .	35-36
and family history . . . . .	276-277
and personality pattern . . . . .	292
and stress of military service . . . . .	234-235
and treatment of breakdown . . . . .	256-257
before breakdown:	
and chance of breakdown . . . . .	35
and change in health, entry to follow-up . . . . .	198
and compensation . . . . .	209-210
descriptive findings . . . . .	34-35
and family history . . . . .	276-277
and personality pattern . . . . .	289-290
and stress of military service . . . . .	234
throughout military period:	
and change in health, after separation . . . . .	194
descriptive findings . . . . .	34-36
and follow-up bias . . . . .	13
Length of stay for psychoneurosis . . . . .	50-51
Manpower policy, on military induction, utilization, and disposition . . . . .	321-333
Marine Corps. ( <i>See</i> Branch of service.)	
Marital adjustment:	
defined . . . . .	91
at follow-up:	
descriptive findings . . . . .	125
and disability at follow-up . . . . .	138-139
and marital adjustment preservice . . . . .	185-187
and personality pattern . . . . .	294
and severity of breakdown . . . . .	253
in preservice period:	
and chance of breakdown . . . . .	92
descriptive findings . . . . .	91
and events of military period . . . . .	228-229, 240
and follow-up bias . . . . .	16
and follow-up status . . . . .	317
and other preservice characteristics generally . . . . .	313
Marital status:	
at follow-up:	
and change in health after separation . . . . .	194-195
descriptive findings . . . . .	125
at induction:	
and chance of breakdown . . . . .	31, 33
and change in health, entry to follow-up . . . . .	203
descriptive findings . . . . .	31, 33
and disability at follow-up . . . . .	157
and follow-up bias . . . . .	13

Marital status—Continued	
at induction—Continued	<i>Page</i>
and personality pattern . . . . .	284–285, 287
and stress of military service . . . . .	227
Medical records. ( <i>See</i> Follow-up, methods of.)	
Military occupational specialty (MOS):	
and chance of breakdown . . . . .	45–46
descriptive findings . . . . .	45–46
and follow-up bias . . . . .	13
Misassignment as stress . . . . .	107–108
Mission of unit:	
and chance of breakdown . . . . .	44–45
classification of . . . . .	45
descriptive findings . . . . .	44–45
and follow-up bias . . . . .	14
and personality pattern . . . . .	290
and stress of military service . . . . .	234
Mobilization standards . . . . .	1, 94–105, 321–333
National Guard. ( <i>See</i> Component of AUS.)	
Navy. ( <i>See</i> Branch of service.)	
Neurosis, defined . . . . .	3, 58
Noneffectives for psychoneurosis, WW II . . . . .	26–28
Occupation ( <i>see also</i> Military occupational specialty (MOS]):	
at follow-up:	
and change in health after separation . . . . .	193–194
and compensation . . . . .	207
descriptive findings . . . . .	123, 125
and severity of breakdown . . . . .	253
and treatment since separation . . . . .	190
at induction:	
and chance of breakdown . . . . .	29, 32
and compensation . . . . .	212
descriptive findings . . . . .	29, 32
and disability at follow-up . . . . .	157
and follow-up bias . . . . .	13
and personality pattern . . . . .	285
and stress of military service . . . . .	222, 241–242
Occupational adjustment. ( <i>See</i> Work adjustment; Economic adjustment.)	
Overprotection, parental. ( <i>See</i> Protection-independence.)	
Overseas service:	
and chance of breakdown . . . . .	35, 37
descriptive findings . . . . .	35, 37
and follow-up bias . . . . .	13–15
and personality pattern . . . . .	289–290
Overseas theaters, admission rates in . . . . .	42
Parent. ( <i>See</i> Family history; Affection-rejection; Discipline-indulgence; and Protection-independence.)	
Parental conflict:	
and chance of breakdown . . . . .	74, 75
descriptive findings . . . . .	74
and disability . . . . .	152–153
and family history . . . . .	272
and follow-up bias . . . . .	16
and personality pattern . . . . .	274, 305
and stress of military service . . . . .	222

	<i>Page</i>
Parental substitutes:	
and chance of breakdown . . . . .	76-77
descriptive findings . . . . .	76
and follow-up bias . . . . .	16
Pathological personality types. ( <i>See</i> Personality, predominant pattern of.)	
Performance, military:	
forecasts of . . . . .	306-309
of marginal groups . . . . .	325-327, 328-331
Personality:	
factors in breakdown:	
descriptive findings . . . . .	113-114
and diagnosis at follow-up . . . . .	173
and follow-up bias . . . . .	17-19
predominant pattern of:	
and adjustment summary at follow-up . . . . .	188-189
and chance of breakdown . . . . .	82-83, 324-325
and change in health:	
after separation . . . . .	197
from induction to follow-up . . . . .	203
and community adjustment . . . . .	186
and compensation . . . . .	212-213
definitions . . . . .	80-81
descriptive findings . . . . .	82
and diagnosis at follow-up . . . . .	178-179
and disability at follow-up . . . . .	147, 153-158
and disposition after breakdown . . . . .	263-264
and economic adjustment . . . . .	184-185
and employment status . . . . .	184-185
and events of military period generally . . . . .	288-293, 306-309
and family adjustment . . . . .	186-187
and family history . . . . .	273
and follow-up bias . . . . .	17, 18
and follow-up status generally . . . . .	293-299
and mobilization standards . . . . .	321-333
and other preservice characteristics generally . . . . .	280-288, 304-306
and parental death, divorce, etc. . . . .	274
and severity of breakdown . . . . .	252
and sexual adjustment . . . . .	186-187
and stress of military service . . . . .	228, 230, 239-240
and treatment of breakdown . . . . .	260
and work adjustment . . . . .	184-185
Prediction:	
of disability at follow-up . . . . .	159-165
of military performance . . . . .	306-309
of psychiatric breakdown . . . . .	94-105
Predisposition. ( <i>See also</i> Stress; Disability at entry; Personality pattern; Family history; and Adjustment summary, preservice.)	
and effects of military service . . . . .	332
and follow-up bias . . . . .	17
and stress of military service . . . . .	113-114, 331
Prognosis at follow-up:	
and branch of service . . . . .	20
descriptive findings . . . . .	129-131
and diagnosis at follow-up . . . . .	170-171
and disability . . . . .	145

	<i>Page</i>
Prognosis at follow-up—Continued	
and disposition after breakdown . . . . .	267
and family history . . . . .	278
and personality pattern . . . . .	299-300
and stress of military service . . . . .	232, 246-247
Protection-independence, parental:	
and chance of breakdown . . . . .	65-68
defined . . . . .	65
descriptive findings . . . . .	65, 67
and follow-up bias . . . . .	16, 19
and personality pattern . . . . .	281, 305
and stress of military service . . . . .	221
Psychiatric screening. ( <i>See</i> Mobilization standards.)	
Psychopathic personality. ( <i>See</i> Personality, predominant pattern of.)	
Psychotic reactions at follow-up . . . . .	296-298
Purple Heart. ( <i>See</i> Awards and decorations.)	
Questionnaire follow-up . . . . .	11
Race:	
and chance of breakdown . . . . .	33
and sampling considerations . . . . .	3, 33
Rate of breakdown . . . . .	26-105
Recreation. ( <i>See</i> Social and recreational adjustment.)	
Red Cross. ( <i>See</i> American Red Cross.)	
Regimentation, as stress . . . . .	107-108
Regular Army. ( <i>See</i> Component of AUS.)	
Rejection, parental. ( <i>See</i> Affection-rejection.)	
Religion:	
and chance of breakdown . . . . .	31, 34
descriptive findings . . . . .	31, 34
and diagnosis at follow-up . . . . .	180
and disability at follow-up . . . . .	157
and follow-up bias . . . . .	13
and personality pattern . . . . .	282-283
and stress of military service . . . . .	222-223
Religious influence in family:	
and adjustment summary preservice . . . . .	275
and chance of breakdown . . . . .	72
and compensation . . . . .	212
defined . . . . .	70-72
descriptive findings . . . . .	70-72
and disability at follow-up . . . . .	152
and family history . . . . .	272
and follow-up bias . . . . .	17
and personality pattern . . . . .	275
and stress of military service . . . . .	221
Residence:	
at follow-up:	
and change in condition following separation . . . . .	193
and compensation . . . . .	205-206
and follow-up bias . . . . .	13-14
and personality pattern . . . . .	293
at separation:	
and chance of breakdown . . . . .	28-30
descriptive findings . . . . .	28-30
and sampling considerations . . . . .	4-6, 20

	<i>Page</i>
Rural residence. ( <i>See</i> Residence.)	
Sampling considerations . . . . .	2-7, 20-21
School adjustment, preservice:	
and chance of breakdown . . . . .	88
defined . . . . .	87-88
descriptive findings . . . . .	88
and events of military period . . . . .	228-229, 240, 314
and follow-up bias . . . . .	16
and other preservice characteristics . . . . .	306-307, 311-312
Schooling:	
before military service. ( <i>See</i> Education, preservice.)	
under GI bill after separation . . . . .	126, 139
Screening. ( <i>See</i> Mobilization standards.)	
Separation from service. ( <i>See</i> Disposition following breakdown.)	
Severity of breakdown:	
and change in health, entry to follow-up . . . . .	201
and compensation . . . . .	212
descriptive findings . . . . .	115
and disability at follow-up . . . . .	147-149
and events of military period generally . . . . .	251-252
and follow-up bias . . . . .	16
and follow-up status generally . . . . .	253-254
and personality pattern . . . . .	291
and preservice characteristics generally . . . . .	252
and stress of military service . . . . .	234
Sexual adjustment:	
before service:	
and chance of breakdown . . . . .	87
descriptive findings . . . . .	87
and events of military period generally . . . . .	314
and follow-up bias . . . . .	17
and follow-up status . . . . .	317
and other preservice characteristics generally . . . . .	312
and personality pattern . . . . .	282, 306-307
and stress of military service . . . . .	228-229, 240
defined . . . . .	86-87
at follow-up:	
descriptive findings . . . . .	126
and disability at follow-up . . . . .	138, 139
and personality pattern . . . . .	186-187, 294
and severity of breakdown . . . . .	253
and sexual adjustment preservice . . . . .	185
Sibling. ( <i>See</i> Family history; Birth order.)	
Sibling rivalry:	
and chance of breakdown . . . . .	73
and community adjustment, preservice . . . . .	275
defined . . . . .	72
descriptive findings . . . . .	73
and family history . . . . .	272
and follow-up bias . . . . .	16
and personality pattern . . . . .	305
and stress of military service . . . . .	221
Social and recreational adjustment, preservice:	
and chance of breakdown . . . . .	90
definition . . . . .	89-90

<b>Social and recreational adjustment, preservice—Continued</b>	<i>Page</i>
descriptive findings . . . . .	90
and follow-up bias . . . . .	16
and personality pattern . . . . .	282, 306-307
and stress of military service . . . . .	228-229, 240
<b>Stress of military service:</b>	
and adjustment summary at follow-up . . . . .	187
and change in health after separation . . . . .	194-195
and change in health, entry to follow-up . . . . .	198-202
classification of . . . . .	106-114
and compensation . . . . .	209-212
descriptive findings . . . . .	106-114
and diagnosis at follow-up . . . . .	171-174
and disability . . . . .	145-148
and employment at follow-up . . . . .	184
and events of military period generally . . . . .	216-219, 233-237
and family adjustment at follow-up . . . . .	185
and family history . . . . .	275-277
and follow-up bias . . . . .	16-18
and follow-up status generally . . . . .	231-232, 241-248
and personality pattern . . . . .	228-230, 239-240, 276, 290-292
and predisposition . . . . .	331-332
and preservice characteristics generally . . . . .	219-230, 237-243
and religion . . . . .	275
and religious influence of family . . . . .	275
and severity of breakdown . . . . .	251
and treatment of breakdown . . . . .	256
<b>Suicide . . . . .</b>	<b>120-121</b>
<b>Symptoms at follow-up:</b>	
and branch of service . . . . .	20-21
and compensation . . . . .	206-207
descriptive findings as to nature, prevalence, onset . . . . .	121-122
and diagnosis at follow-up . . . . .	167
and disability . . . . .	138-139
and family history . . . . .	277
and personality pattern . . . . .	293
and severity of breakdown . . . . .	253
and stress of military service . . . . .	231, 242, 244
<b>Treatment:</b>	
attitude toward . . . . .	132-133, 169-170, 209
history of:	
before military service:	
and chance of breakdown . . . . .	93-94
and compensation . . . . .	213
descriptive findings . . . . .	93
and diagnosis at follow-up . . . . .	180
and follow-up bias . . . . .	17, 18
and personality pattern . . . . .	286, 288, 306
and stress of military service . . . . .	241, 243
during military service:	
and change in condition after separation . . . . .	195
and change in health, entry to follow-up . . . . .	201
and compensation . . . . .	212
and diagnosis at follow-up . . . . .	174
and disability at follow-up . . . . .	149
effectiveness of . . . . .	257-260

Treatment—Continued

history of—Continued

	<i>Page</i>
during military service—Continued	
and events of military period generally . . . . .	256-260
examiner's evaluation of . . . . .	116
and follow-up bias . . . . .	17, 19
and follow-up status generally . . . . .	260
nature of . . . . .	116
and preservice characteristics . . . . .	260
response to . . . . .	116
and severity of breakdown . . . . .	251
and stress of military service . . . . .	217
since separation:	
and compensation . . . . .	209
descriptive findings . . . . .	131
and diagnosis at follow-up . . . . .	168-169
and disability . . . . .	141-143
and events of military period . . . . .	20-21, 245, 253, 265-266
and follow-up status generally . . . . .	190-192
and preservice characteristics . . . . .	278, 298
need for, at follow-up:	
and compensation . . . . .	208-209
descriptive findings . . . . .	132
and diagnosis at follow-up . . . . .	169-170
and disability . . . . .	142-143
and disposition after breakdown . . . . .	265-267
and family history . . . . .	278
and personality pattern . . . . .	298
and stress of military service . . . . .	245
and treatment since separation . . . . .	192

Urban residence. (*See* Residence.)

Work adjustment (*see also* Economic adjustment; Employment status):

before military service:	
and chance of breakdown . . . . .	89
descriptive findings . . . . .	89
and economic adjustment at follow-up . . . . .	185
and events of military period . . . . .	315
and family history . . . . .	273-274, 275
and follow-up bias . . . . .	16
and follow-up status generally . . . . .	317
and personality pattern . . . . .	282, 284, 306-307
and preservice characteristics generally . . . . .	311-312
and work adjustment at follow-up . . . . .	185
defined . . . . .	88-89
at follow-up:	
descriptive findings . . . . .	124
and disability at follow-up . . . . .	138-139
and other factors generally . . . . .	183-185
and personality pattern . . . . .	294-295

Wounded in action:

and chance of breakdown . . . . .	47
and follow-up bias . . . . .	14
precipitating breakdown . . . . .	109
in sample and controls . . . . .	40-41
WW II totals of . . . . .	26

Year of separation . . . . .	14, 36-37
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RC 550 .B7

Brill, Norman Quintus, 1911-

A follow-up study of war  
neuroses