THE RELATIONSHIP BETWEEN SALUTOGENIC CONSTRUCTS AND INTERPERSONAL STYLE

by

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Declaration

I, the undersigned, hereby declare that this dissertation titled, "The Relationship between Salutogenic Constructs and Interpersonal Style", is my own work, and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Alan Woxholt   **Date**

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Summary

THE RELATIONSHIP BETWEEN SALUTOGENIC CONSTRUCTS AND INTERPERSONAL STYLE

By

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This study aimed at investigating the relationship between Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) and Interpersonal Styles. In addition it sets out to examine whether there are any differences between both aforementioned variables and selected individual and organisational variables, specifically, gender, race, age and tenure. A significant positive relationship was found to exist between Salutogenic constructs and Interpersonal Styles classified as Friendly, while significant negative relationships were found between Salutogenic constructs and Interpersonal Styles classified as Hostile and Hostile-Submissive. Salutogenic constructs were found to have no significant relationships with the remaining five Interpersonal Styles namely Dominant, Dominant-Friendly, Friendly-Submissive, Submissive and Hostile-Dominant. Salutogenic constructs showed no significant differences with regards gender and race, but significant differences with regards age and tenure. Interpersonal Style showed significant differences with regard to race, age and tenure, but not with gender with the exception of the Hostile-Submissive, Hostile and Friendly styles.

KEY TERMS: Salutogenisis, Positive Psychology, Sense of Coherence, Locus of Control, Self-Efficacy, Interpersonal Circumplex, Interpersonal Style, Personality

CHAPTER 1: BACKGROUND AND MOTIVATION FOR THE RESEARCH

This chapter describes the rationale and background to the proposed study, which primarily seeks to find out if there is a relationship between three Salutogenic constructs (namely Sense of Coherence, Self-Efficacy and Locus of Control) and Interpersonal Style. The proposed study seeks to try and solve a primarily theoretical problem which could have practical implications in the handling of mental health as well as worker and managerial effectiveness within the world of work. This chapter also seeks to set out the problem statement and establish the general and specific aims of the study. The paradigm perspective from which this study is conducted is also laid out, as is a brief summary of the research design which will give structure to the study. Finally, the research design and methodology followed in conducting the study are discussed and outlined and a brief description is given of the chapters that are to follow.

1.1   BACKGROUND AND MOTIVATION FOR THE RESEARCH

Traditionally psychology has functioned in a paradigm of Pathogenic thinking, but there is a relatively new perspective, named "Salutogenesis" which has emerged and emphasises the origins of health and wellness (Strümpfer, 2002). The construct of Salutogenesis was introduced by Antonovsky in 1987, and has formed the foundation of Positive Psychology (Antonovsky, 1987; Strümpfer, 2002). Positive Psychology, according to Seligman, Steen, Park and Peterson (2005), has been growing steadily since the year 2000, and is predisposed to understanding what makes people thrive and perform in superior ways. Seligman (2003), states that the study of Positive Psychology focuses on the psychology of mental heath and is based on the pillars of positive emotion, positive traits and individual ability. The field of Health Psychology criticises the emphasis on the Pathogenic model, in that its focus is on who becomes sick and why and how they develop particular diseases. A more specific example of this approach is illustrated by Cox (1995) who asserts that stress impacts on physical health. Strümpfer (2002) states that such examples that illustrate the Pathogenic thinking of the deficit paradigm are not hard to find and that it would also be possible to have a "strengths" view of the same situation. He further

states that normal (and supernormal) functioning cannot be studied purely within a problem-orientated framework.

The field of Industrial and Organisational Psychology concerns itself rather with the optimal functioning of people than the pathological aspects of human functioning and therefore the field of Salutogenesis becomes an aspect worth studying within this discipline.

Another field that is worth studying in Industrial Psychology is interpersonal behaviour of employees and specifically their Interpersonal Styles. In this study it is done from the interpersonal perspective. Much of the literature indicates that Interpersonal Style has strong correlations with psychopathology. In other words, people who present with various pathologies, show correlations with specific Interpersonal Styles which have been characterised as falling into the submissive hostile quadrant of Kiesler's Interpersonal Circumplex (Anderson, 2001; Kiesler, 1996a). Such examples are identified by Anderson (2001) who reports on correlations between Interpersonal Styles amongst sexual offenders, and more specifically correlations in Interpersonal Styles for rapists and child molesters. Kiesler (1996a) cites numerous research where correlations have been found between various psychopathologies and Interpersonal Style; some of these include depressive, narcissistic, dependant, borderline, histrionic, antisocial, compulsive and passive aggressive personality disorders to name a few. There is however no research which seeks to find correlations between Interpersonal Styles and constructs form the Salutogenic paradigm.

Many organisations teach interpersonal skills and study personality using cognitive behavioural and humanistic methods or training modules as opposed to looking at interpersonal interactions of transactions between individuals (Koortzen & Mauer, 2005). This dissertation sets out to establish whether or not there is a correlation between various constructs of wellness and Interpersonal Style, in the same way as studies have been done on the relationship between psychopathologies and Interpersonal Styles, the implication being that interventions in improving the interpersonal skills of individuals in the workplace for employees should focus rather on developing aspects of employee wellness than teaching useful interpersonal

behaviour using cognitive behavioural or humanistic training sessions. The emphasis could, in other words, be on establishing and working on employee wellness as a means of improving interpersonal dynamics, rather than trying to teach behaviour. This statement is based on Koortzen and Mauer's (2005) citation of Leary (1957), where they state that the basic assumption is that all interpersonal behaviours are attempts to avoid anxiety. It could then follow that people who are psychologically well could experience less anxiety and therefore interact in more helpful or constructive and appropriate ways.

According to literature it seems that people with certain Salutogenic traits, such as a strong Sense of Coherence, an internal Locus of Control and high levels of perceived Self-Efficacy, seem to cope better with change, perform better and show higher levels of resilience and adaptability than those who do not present with those specific traits (Coetzee & Cilliers, 2001; Strümpfer, 1995, 2002, 2006). Developing an understanding between Interpersonal Style and Salutogenesis is important because it will mean a change of focus from the cognitive behavioural approach to changing behaviour within organisations whether it relates to leadership, selling skills, handling disciplinary issues or staff motivation. A correlation between wellness and Interpersonal Style could mean a shift to working on the individual wellness of employees, which will in turn affect the interpersonal dynamics between individuals.

It could mean a radical shift in organisational approaches to people development, have implications for recruitment and selection processes, impact on organisational performance and improve the general interpersonal functioning in the organisational context.

If relationships and in particular, directional relationships can be established showing a cause and effect relationship between the variables, this information can be used to develop more effective interpersonal development, self development, self mastery, coping and other development programmes as well as have implications for individual and organisational performance.

Further to this, the fact that no significant body of research could be traced concerning the investigation of Salutogenic constructs and their relationship with Interpersonal Style creates an opportunity for new research in this area. Strümpfer (1995) argues that there are people who survive and cope with hardship and are still found to be well adapted. Baloyi (2000), states that Industrial and Organisational Psychology is essentially positive in nature, with a more Salutogenic than Pathogenic orientation. As work is an integral part of human existence, there is a need to see how people adapt and thrive in this environment (Mickleburgh, 1986; Seligman, 2003; Suls, David & Harvey, 1996). Therefore, it can be argued that there is a need to study Interpersonal Styles from the "wellness" perspective, particularly in the field of Industrial and Organisational Psychology. The following problem statement was developed in the study.

1.2   PROBLEM STATEMENT

South African organisations have undergone changes since the political landscape changed in 1994. This statement refers to changes in technology, cost effectiveness, restructuring, diversity, merges and changes in the socio-political environment. These changes have had many positive spin-offs, but unfortunately have also led to an increase of stress within our organisations, which in turn cause other obstacles to success (Baloyi, 2000). The Salutogenic paradigm, its constructs and the measurement thereof are increasingly being used in explaining how individual employees cope, survive and triumph over various situations and obstacles in the workplace (Strümpfer, 1990, 1995, 2002, 2006). Interactions between individuals within the work environment are inevitable and often determine the difference between positive and negative outcomes. If it is true that interactions are designed to "pull, elicit, draw, evoke or entice certain reactions from persons with whom one interacts" (Kiesler, 1996a), then studying Interpersonal Styles from an organisational point of view has value, particularly when individuals are managing others.

Research reports on many studies that have been done from the Pathogenic paradigm, where relationships are reported between various Interpersonal Styles and pathology (Anderson, 2001; Kiesler, 1996a). However, no significant international or South African research could be located which seeks to find

relationships between Interpersonal Styles and constructs from the Salutogenic paradigm.

From the above, the following research questions can be formulated:

1.2.1 How can three Salutogenic constructs, namely Sense of Coherence, Locus of Control and Self-Efficacy, be conceptualised in the literature?

1.2.2 How can the construct of Interpersonal Style be conceptualised and can a theoretical relationship with Sense of Coherence, Locus of Control and Self-Efficacy be determined?

1.2.3 Can the relationship between three Salutogenic constructs, namely Sense of Coherence, Locus of Control and Self-Efficacy, and Interpersonal Styles be measured empirically?

1.2.4 To what extent do the measures of Salutogenesis and Interpersonal Style differ on the basis of individual and organisational variables (gender, race, age and tenure)?

1.2.5 What conclusions and recommendations can be made on the relationship between these constructs?

1.3 AIMS

1.3.1 General Aim

The general aim of this study is to establish whether there is a relationship between three chosen Salutogenic constructs and Interpersonal Styles.

1.3.2 Theoretical Aims

Specific literature aims are as follows:

- To conceptualise selected Salutogenic constructs, namely Sense of Coherence, Locus of Control and Self-Efficacy, and to indicate how individuals with these Salutogenic dispositions theoretically tend to cope better with work and life stressors.

- To conceptualise the construct of Interpersonal Style, using Kiesler's 1982 Interpersonal Circumplex as a foundation.

- To theoretically describe the relationship between Interpersonal Style and Sense of Coherence, Locus of Control and Self-Efficacy.

1.3.3 Empirical Aims

- To empirically determine the relationship between the three Salutogenic constructs (namely Sense of Coherence, Locus of Control and Self-Efficacy) and Interpersonal Styles.

- To indicate possible differences between individual and organisational variables (gender, race, age and tenure) and three Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy), as well as Interpersonal Style.

- To formulate conclusions and recommendations based on this result for future research and for the future understanding of the relationship between psychological wellness and Interpersonal Styles within organisations.

1.4. RESEARCH MODEL

The study will be conducted in terms of the model of Mouton and Marais (1996) as set out in Figure 1.1.
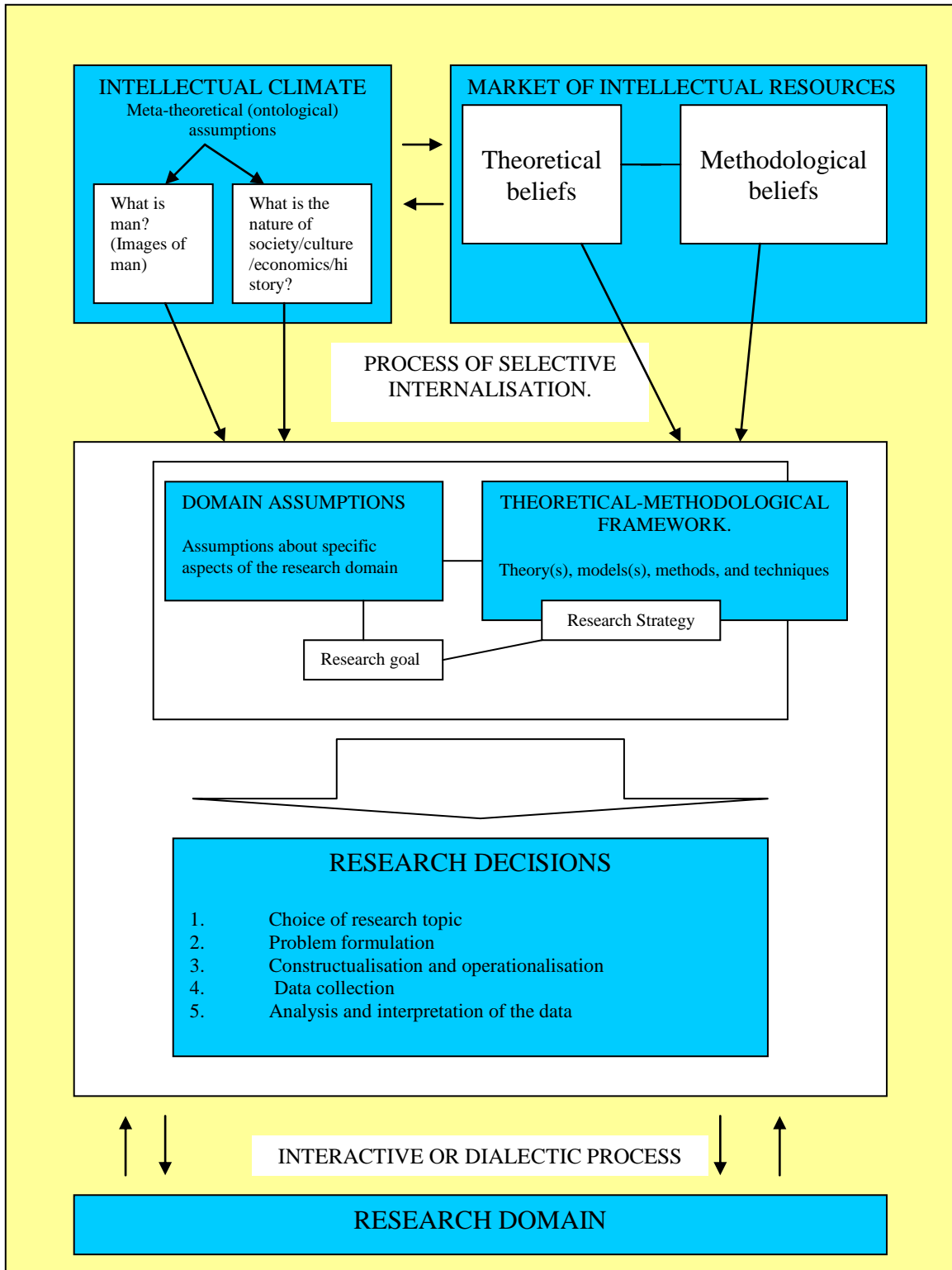
Figure 1.1: Research model (Mouton & Marais, 1996).

1.5   THE PARADIGM PERSPECTIVE

This study makes use of Mouton and Marais' (1996) research model (Fig. 1), as a framework, incorporating the five dimensions of social research, namely the sociological, ontological, teleological, epistemological and methodological dimensions.   These dimensions will be systematised into the framework of the research process.

The paradigm perspective will be discussed in terms of the intellectual climate, market of intellectual resources, disciplinary framework to be followed and the theories and models applicable.

1.5.1 Intellectual Climate

This study is conducted within the field of positive psychology, which focuses on mental health and wellness. Positive psychology can be described as being about "positive subjective experience: well-being and satisfaction (past), flow, joy and the sensual pleasures, and happiness (present), and constructive cognitions about the future – optimism, hope and faith." (Seligman, 2002. p3). Seligman (2002) asserts that at an individual level positive psychology is about positive personal traits, such as the capacity for love and vocation, courage, interpersonal skills, aesthetic sensibilities, perseverance, forgiveness, originality, future-mindedness, high talent, and wisdom. At the group level, it is about civic virtues and the institutions that move people toward better citizenship, which include responsibility, nurturance, altruism, civility, moderation, tolerance, and work ethic.

Within this framework, the study will be done in the disciplinary field of Industrial and Organisational Psychology, as a discipline, which can be defined as the study of human behaviour within the work context, and includes both scientific and professional concerns (McCormick & Ilgen, 1989). The focus of this field of study is in essence positive in nature, and has a more Salutogenic than Pathogenic nature (Baloyi, 2000).

Within this discipline the study is done in the sub-disciplines of Organisational Psychology, Personnel Psychology and Psychometrics. Organisational Psychology is defined by Robbins (1996) as a field of study that investigates the impact that individuals, groups and structures have on behaviour within organisations, for the purpose of applying such knowledge toward improving that organisation's effectiveness.

Personnel Psychology, according to Muchinsky, Kriek and Schreuder (1998), is concerned with all aspects of applied individual differences between people in the workplace. They continue to assert that Personnel Psychology is the overlap between Human Resource Management and Psychology. It is thus the applied discipline which is focussed on individual behavioural differences, job performance and the means of measuring and predicting such performance. Personnel Psychology therefore has a bearing on studying individual personal styles and interpersonal interactions.

The field of psychometrics, according to Huysamen (1994), refers to the psychological measurement of a specific trait or attribute by means of a psychological test and that such measurement takes place against a set of fixed rules and statistical principles. Such testing practices play an important role in professional decisions made in selection, placement, classification, promotion and development initiatives. This study will make use of psychometrics to assist in determining relationships between wellness constructs and Interpersonal Styles though the use of psychometric questionnaires.

1.5.2 Market of Intellectual Resources

Applicable psychological paradigms that are relevant to this study include Positive Psychology and in particular Salutogenesis, which is a relatively new endeavour, and the assumptions of the interpersonal approach to Psychology. Thematically, the study focuses on Sense of Coherence, Locus of Control, Self-Efficacy and Interpersonal Style. This is studied from the Salutogenic and Interpersonal perspectives. The empirical study was conducted from the functionalistic perspective.

The first assumption of Positive Psychology is that stressors, demands and adversity are inherent to the human condition. The second is that there are sources of strength through which this condition can be transcended. Thirdly, the physical, emotional and social trials and tribulations can, for many people, be stimulating, strengthening and a growth experience (Strümpfer, 2002, 2006). Strümpfer (2002) cites Antonovsky's (1979) introduction of the construct of Salutogenesis proposing strongly that what should be investigated are the origins of health and not of disease. Three Salutogenic constructs have been chosen for the purposes of this study due to their general recognition in the field of positive psychology, namely Sense of Coherence, Locus of Control and Self-Efficacy (Bandura, 1986; Breed, Cilliers & Visser, 2006; Coetzee & Cilliers, 2001; Jackson & Rothmann, 2001; Strümpfer & Mlonzi, 2001; Strümpfer, 1990, 1995, 2002, 2006; Wissing, 2000).

Seligman (2003), states that positive psychology basically has three pillars or assumptions that lead to an individual reaching greater potential, and moving beyond simply being well, but functioning at an optimal level. These assumptions can be listed as follows:

- Firstly - that positive emotions of individuals are able to affect behaviour and an individual's ability to better cope with life stressors and even thrive in difficult circumstances.

- Secondly - that positive traits, which include strengths and virtues, but also abilities such as intelligence and athleticism also enhance an individual's coping ability and allow an individual to enjoy life, feel fulfilled and reach higher goals and potential.

- Thirdly - that positive societal institutions, such as democracy, family, freedom of expression, which support the virtues (such as confidence, hope, trust and happiness) in turn, support the positive emotions necessary for personal well-being.

"Positive Psychology aims to help people to live and flourish rather than merely to exist" (Keyes & Haidt, 2003. p3).

According to Kiesler (1996a), contemporary interpersonal theory relies heavily on the contributions made by Harry Stack Sullivan, who made the assertion that human behaviour can only be understood within the context of its historical and current interpersonal contexts, and that in studying interpersonal behaviour, the patterns of transactions between people need to be understood, as opposed to the behaviour of an individual in isolation. Sullivan (1953) made use of the construct of anxiety as the main disruptive force in interpersonal relations and the main factor in the development of serious difficulties in living. Sullivan (1953) described anxiety in terms of its effects, with its origins in the conditions of prolonged and complete human dependency in infancy. He refers to the need for relief from anxiety as the need for interpersonal security.

Also relevant to the study is the view of interpersonal psychology which, according to Kiesler (1987), embraces interpersonal psychiatry, interpersonal communication, interpersonal relations, interpersonal approaches to personality, transactional analysis, psychology of encounter and others. Its disciplinary roots include psychiatry, sociology, personality psychology, social psychology, communication theory and nonverbal communication amongst others. Kiesler (1987, 1996a) cites Sullivan (1953) as the presenter of the first systematic articulation of interpersonal theory. Kiesler's Interpersonal Circumplex will be used as a model within the framework of this study (Anchin & Kiesler, 1987; Kiesler, 1996a, 1996b).

The basic assumptions of this perspective, according to Koortzen and Mauer (2005), are that personality manifests interpersonally and that it is only a hypothetical construct which can be observed when individuals relate to each other. Sullivan (1953) provides the basis for this assertion that personality can only be studied in the context of the interrelations of others. Koortzen and Mauer (2005) contend that personality is characterised by enduring patterns and styles which determine how people view themselves and react to their immediate environment, and can be characterised as either appropriate or inappropriate.

Another basic assumption of this approach states that all interpersonal behaviours are attempts to avoid anxiety and maintain self-esteem within the context of interpersonal interactions (Leary, 1957; Sullivan, 1953). The interpersonal approach is therefore more concerned with interpersonal transactions than individual behaviour, and requires at least two people, or a dyad (Koortzen & Mauer, 2005; Sullivan, 1953). Koortzen and Mauer (2005) argue that this implies that transactions are characterised by self-presentation, which can be described as the automatic, predominantly unaware manner in which people centrally view themselves and in turn present themselves to others based on the kinds of relationships they are looking for, which leads to the recurrent patterns of behaviour that people present with over time.

These recurrent patterns represent a combination of two basic dimensions of interpersonal behaviour, namely control (Dominance vs. Submission) and affiliation (Friendliness vs. Hostility), and behaviour can be studied by identifying the combinations of this controlling and affable behaviour as it manifests within interpersonal transactions (Koortzen & Mauer, 2005; Kiesler, 1987, 1996a, 1996b; Leary, 1957; Sullivan, 1953). Interpersonal transactions are a product of both verbal and nonverbal transactions (Koortzen & Mauer, 2005).

Thematically, the empirical study will be done from the functionalistic paradigm which is one of the theoretical frameworks of empirical investigation in psychology. A quantitative approach will be used during the study and, according to Morgan (1980), the following statements are relevant from the functionalistic point of view:

- The object of the study is observable and/or measurable behaviour.
- Human behaviour is measurable and can be statistically explained and interpreted.
- An objective measurement process is associated with the measurement of behaviour.
- The aim of measuring behaviour is to achieve prediction and control.

The Salutogenic constructs as well as the interpersonal transactions will be quantitatively measured and investigated by means of psychometric instruments. This methodology is derived from the philosophy of empirical science, which implies that a given (observable) event is associated with an inferred or underlying mechanism or structure. This characteristic of scientific theories, which is emphasised in realistic perspectives of explanation, is one of the most noticeable characteristics of scientific research (Mouton & Marais, 1996). For example, a strong Sense of Coherence may be proven to be a function of individual coping.

1.5.3 Theories and Models

The focus of the study is the relationship between selected Salutogenic constructs and their relationship with Interpersonal Style.

The constructs that will form the basis of this study will be the three Salutogenic constructs that have been identified for the purposes of this study, namely Sense of Coherence, Locus of Control and Self-Efficacy. These three constructs have been chosen as they are recognised to be related (Jackson & Rothmann, 2001), and are seen as good indicators of psychological wellness. These constructs will be discussed in Chapter 2.

The following specific model and its underlying theory applicable to Interpersonal Psychology will be discussed in Chapter 3:

- Kiesler's 1982 Interpersonal Circumplex (Kiesler, 1983).

Kiesler's 1982 Interpersonal Circumplex, which is described by Kiesler (1996a) as a key conceptual map that guides both interpersonal assessment and diagnosis, allows us to better understand interpersonal functioning. The Interpersonal Circumplex offers an applicable model, and is supported by applicable evaluation instruments that can assist in the measuring of the predominant Interpersonal Styles used by individuals in their transactions (Koortzen & Mauer, 2005). This model is therefore applicable to this study.

1.5.4 Constructs

The relationship between the three Salutogenic constructs named above and Interpersonal Style as defined by Kiesler's 1982 Interpersonal Circumplex will be evaluated in the study. Salutogenic constructs can be described as a psychology of strengths that allow coping to take place and emphasise the effects of mental health and wellness (Strümpfer, 1990, 1995, 2002, 2006). Interpersonal Style deals with how individuals inter-relate and what they are trying to elicit from each other through behaviour (Kiesler, 1996a, 1996b). However, no current international or South African research could be located that shows a relationship between Salutogenic constructs and Interpersonal Style, although much research shows that there is a relationship between psychopathology and Interpersonal Style, as defined by Kiesler's 1982 Interpersonal Circumplex. The relationship between psychological health and the circumplex will be evaluated in this study.

The constructs used for the purposes of this study can be defined as follows:

- *Sense of Coherence* is defined as 'a global orientation that expresses the extent to which a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable and explicable; (2) the resources are available to meet the demands posed by the stimuli; and (3) these demands are challenges worthy of investment and engagement.' (Antonovsky, 1987, p19).

- *Locus of Control* can be defined as an individual's belief that what happens to them is either a function of their own behaviours or attributes (internal control) or the result of luck, chance, fate or others influence or power (external control) (Rotter, 1966; Rotter & Hochreich, 1975).

- *Self-Efficacy* can be defined as beliefs and the causative capabilities that become the major point of departure. In short, perceived Self-Efficacy is the belief in one's competence to tackle difficult or novel tasks and cope with

adversity in specific demanding situations. (Bandura, 1992, 1997, 1999; Betz, 2004; Biscaro, Boer & Taylor, 2004; Guillon, Dosnon, Esteve & Gosling, 2004; Luszczunska, Guriérrez-Doňa & Schwarzer, 2005; Watson, Brand, Stead & Ellis, 2001).

- *Interpersonal Style* is defined by Kiesler (1996a) as the enduring pattern of interpersonal behaviours enacted by an individual over long periods, which is presumed to demonstrate considerable temporal stability and cross-situational consistency.

1.5.5 Central Hypothesis

The central hypothesis of this study relates to whether or not there is a relationship between the Salutogenic constructs and Interpersonal Style.

As the literature indicates, a positive, statistically significant relationship exists between psychopathologies and interpersonal styles that fall into the Hostile-Submissive and Hostile-Dominant quadrants of the Kiesler's Interpersonal Circumplex (Anderson, 2001; Kiesler, 1996a), the inference being that the converse might be true for people shown to be psychologically well.

The central hypothesis can thus be formulated as follows:

There is a relationship between Salutogenic constructs and Interpersonal Style.

1.6 RESEARCH DESIGN

According to Kerlinger (1994), a research design is the plan and structure given to an investigation, conceived to obtain and answer research questions. The design is the overall scheme or programme of the research. It includes the outline of the investigation, from writing the hypotheses and their operational implications to the final data analysis and interpretation thereof. The research design expresses both the structure of the research problem and the plan of investigation used to obtain empirical evidence. Kerlinger (1994) asserts that it has two basic purposes, namely:

- To provide answers to research questions.
- To control variances and make sure that the research is valid and reliable.

1.6.1 Reliability and Validity of the Research

Reliability and validity are two important components of any research design, the aim of which is not simply to understand but to make sure that the understanding is both reliable and valid (Huysamen, 1994, 1996; Mouton & Marais, 1996). Validity refers to the specific purpose of the literature and measuring instruments used in the study, and reliability refers to the consistency of the data cited or the consistency of the results generated by the measuring instruments over time. Valid and reliable literature describing the Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) as well as Interpersonal Style will be included in the study. The rationale and motivation will be provided for the inclusion of each of the chosen measuring instruments, on the basis of their reliability and validity.

According to Mouton and Marais (1996), the validity and reliability of the literature can be improved by:

- Choosing models that support the literature study.
- Giving conceptual descriptions of the constructs that are relevant to this study.
- Consulting literature that is mostly of a recent and accredited nature.
- Collecting literature through a standardised systematic procedure.
- A verbatim cross-checking of literature findings with experts in the particular research field.

Validity and reliability in the research field can also be improved by:

- Applying measuring instruments that were used for similar purposes and which predict high levels of internal, external and face validity as well as consistency.
- Valid and reliable interpretations of statistical analysis supported by statistical experts and standardised techniques.

- Obtaining data from a representative sample with a magnitude that support statistical and practical significance.

At project level the general methodological approach will be a quantitative approach, with questionnaires being used for the purposes of data collection and statistical methods being used for the data analysis. (Mauton & Marais, 1996).

Research designs are devised to enable the researcher to answer the research questions as validly, objectively, accurately and economically as possible (Kerlinger, 1994).

1.6.2 Ethical Responsibility of the Research

In this particular study, the literature cited will take place without creating an opportunity for plagiarism. All literature cited and consulted will be fully acknowledged and referenced.

With regard to the study, the following ethical issues will be borne in mind:

- Samples will not be drawn without the organisation's and individual's consent.
- Test takers will be informed about their rights and the use to which the assessment information will be put. They will also be informed that they may obtain individual feedback of their individual results without harming the interest of confidential relationship of others.
- Respondents and the organisation's interest and image will be dealt with courteously, respectfully and impartially.
- Confidentiality will be maintained at all times.
- Respondents as well as the organisation will be informed that a final report will be made available for their perusal.

The design will be discussed in terms of the sample and the operationalisation of the objectives.

1.6.3 Sample

The unit of analysis chosen for the investigation of the problem statement is individual employees within one large South African organisation, which was undergoing change. The sample consists of employees within this organisation from various levels. The sample is made up of male, female, black, white, coloured and Asian employees from various age and language groups across the country. The employees participating in the study are selected from the Sales and Logistics divisions of the organisation as a sample of convenience. Participants holding diverse positions within the organisation at different levels were included. Job titles vary from Call Centre Agent to Account Manager and Human Resources Manager.

1.6.4 Operationalisation of the Objectives

This study is explorative in nature. It seeks to describe the three Salutogenic constructs (Sense of Coherence, Self-Efficacy and Locus of Control) as well as Kiesler's 1982 Interpersonal Circumplex from a theoretical viewpoint. Following this, an empirical approach is followed which seeks to establish whether there is a relationship between the Salutogenic constructs and Interpersonal Style.

The Salutogenic constructs are conceptualised in such a way as to reveal how, theoretically, individuals on a variety of levels within changing organisations tend to cope better when they possess greater fortitude.

The Interpersonal Styles of individuals in general and within a changing organisation are conceptualised in terms of Kiesler's 1982 Interpersonal Circumplex.

The first phase of the study is to conceptualise the above-mentioned constructs.

The second phase consists of an empirical study where each of these constructs is measured using reliable and valid questionnaires applicable to measuring the constructs and appropriate to analysing whether a relationship exists between the selected Salutogenic construct and Interpersonal Style. The implications of the

existence or non-existence of a relationship between these constructs are then discussed and evaluated.

1.7 RESEARCH METHOD

In keeping with the principles of research design, and in order to follow an objective and scientific process, the research method will consist of a set of specific phases.

1.7.1 Phase 1: Literature Review

(a) Step 1: Conceptualisation of the Three Salutogenic Constructs

Three Salutogenic constructs have been selected to represent psychological wellness within the context of this study. These three constructs are Sense of Coherence, Self-Efficacy and Locus of Control.

(b) Step 2: Conceptualisation of Interpersonal Style

Interpersonal theory and Kiesler's 1982 Interpersonal Circumplex is conceptualised as a model for the measurement and understanding of interpersonal psychology and interpersonal relationships. A possible empirical link between Kiesler's 1982 circumplex in an organisation and Salutogenic constructs will be outlined and a possible theoretical basis for a relationship between these constructs will be explored.

1.7.2 Phase 2: Empirical Study

(a) Step 1: Analysis and Biographical Variables of the Sample

The population for this empirical study are employees from a specific large organisation in South Africa which has over the past few years undergone many changes, and remained in flux during the course of the study. The sample for this study is made up of employees who hold positions at various levels within various departments within the organisation. They come from a variety of different

departments and regions throughout the country. They are comprised of both male and female individuals, representing different tenure, race and age groupings within the organisation.

(b)   Step 2: Selecting the Measuring Instruments

The following measuring instruments were selected for use in this study to measure and/or gain pertinent information, measure the three Salutogenic constructs and also measure Interpersonal Style according to Kiesler's Interpersonal Circumplex:

- A biographical questionnaire.
- Antonovsky's Orientation to Life Questionnaire (1987).
- Bandura's Self-Efficacy Scale (1982).
- Scheper's Locus of Control Questionnaire (Third edition) (1999).
- Kiesler's Impact Message Inventory – Circumplex (Octant version) (1985).

(c)   Step 3: Data Collection

Data is collected by administering four questionnaires for each participant, three of which the participant answers for him or herself and one which the participant selects a colleague or another individual who knows them very well to answer on their behalf.

(d)   Step 4: Statistical Processing of Data

The statistical processing of the data will be performed by applying quantitative procedures and statistical techniques. The Statistical Package for the Social Sciences or SPSS (1999) will be used for statistical calculations.

(e)   Step 5: Results

The quantitative results of the study will be described in detail.

(f)   Step 6: Conclusions, Recommendations and Limitations

The conclusions, recommendations and limitations of the study will be discussed.

1.8   CHAPTER DIVISION

Chapter 2:   The Salutogenic Constructs of Sense of Coherence, Locus of Control and Self-Efficacy

Chapter 3:   Interpersonal Style and the Theoretical Relationship with Sense of Coherence, Locus of Control and Self-Efficacy

Chapter 4:   Empirical Study

Chapter 5:   Results

Chapter 6:   Conclusions, Recommendations and Limitations

1.9   CHAPTER SUMMARY

This opening chapter has provided a broad overview of the study and the background thereof. The problem statements and aims of the study have been outlined. The model and paradigm perspective as well as the research design and method have all been clarified and described.

The next chapter will consist of a literature review which will provide the support for the theoretical aims outlined in this chapter. The three Salutogenic constructs identified for this study, namely: Sense of Coherence, Self-Efficacy and Locus of Control will be conceptualised in **Chapter 2.**

CHAPTER 2: THE SALUTOGENIC CONSTRUCTS OF SENSE OF COHERENCE, LOCUS OF CONTROL AND SELF-EFFICACY.

"I believe that psychology should be about more than repairing what is wrong.
It should be about identifying and nurturing what is good"

(Seligman, 2003, p1).

This chapter sets out to conceptualise the term Salutogenesis and conduct a literature review of the Salutogenic model. It further sets out to conceptualise each of the three Salutogenic constructs that have been selected for the purposes of this study, namely Sense of Coherence, Locus of Control and Self-Efficacy.

2.1   SALUTOGENESIS

This study is conducted within the field of positive psychology which focuses on mental health and wellness. Positive psychology will thus be used as a point of departure to create a context for the conceptualisation of Salutogenesis. According to Seligman (2003), when individuals or groups of people are under threat, stress or facing any serious social or individual problem, their concern is defence and the repair of damage. He continues to suggest that the greater struggle in times of trouble is maintaining human virtue. He argues that if the focus of societies and individuals is simply repairing what is wrong, then even the best programme can only strive to achieve and attain zero.

Seligman (2003) asserts that a shift occurs when societies and individuals in 'surplus' and not in total turmoil begin to inquire into what makes life worth living, what are the best things in life and how one can move from a zero to a plus two or a plus six.

According to Seligman *et al.* (2005), positive psychology and the study of mental health and wellbeing has been flourishing and growing since the year 2000. Seligman (2003), states that positive psychology has three pillars. The first of which is the study of positive emotion, the second being the study of positive traits, which includes strengths and virtues, but also abilities such as intelligence and athleticism.

The third pillar is broader, and includes the study of societal institutions, such as democracy, family, freedom of expression, which support the virtues (such as confidence, hope, trust and happiness) and in turn support the positive emotions necessary for personal well-being. Positive Psychology is the study of the conditions and processes that contribute to the flourishing or optimal functioning of not only people, but groups and institutions as well (Gable & Haidt, 2005). "Positive Psychology aims to help people to live and flourish rather than merely to exist" (Keyes & Haidt, 2003, p3).

Seligman (2002), states that almost exclusive attention to pathology has neglected the idea of a fulfilled individual and a thriving community, as well as the possibility that building strength is the most potent weapon in the arsenal of therapy. Langeland, Wahl, Kristoffersen and Hanestad (2007) state that psychology and therapy in particular, have given too much attention to the feelings connected with earlier adverse life events, diagnosis and medication and too little to future potential associated with a person's resources and coping skills.

Keyes and Haidt (2003) remind us that although the term Positive Psychology might seem to imply that all other psychology is in some way negative, this is not the case, but rather that the term implies a softer indictment – namely that psychology has become unbalanced. This imbalance has seen the focus of psychology directed mainly to the medical model, or the pathogenic model (Strümpfer , 1990, 1995, 2002). Strümpfer (2006) supports this notion further by arguing that there is, of course, a strong need to understand negative emotions, but compared to the positive emotions there is already a rich and diverse knowledge of negative emotions, and that this imbalance has marginalized positive emotions, such as joy, interest, contentment and love.

The origins of this positive approach to psychology are found in the construct of Salutogenesis (Strümpfer, 2002). Antonovsky (1987) introduced the concept of Salutogenesis from the Latin "salus" meaning health and the Greek "genesis" meaning origin. The term therefore refers to the origins of health, and is aimed at emphasising elements of psychological health. According to Antonovsky (1987), the focus of Salutogenesis is on successful coping, rather than on coping simply with life

stressors. Rather, it is more interested in how psychology can be steered away from the pathogenic model, which endeavours to explain why people fall ill, as well as the risk factors for disease, and moves towards a health orientated model where the emphasis is on strengths and the determinants of health rather than on illness, seeking to promote health by understanding what makes people flourish (Antonovsky, 1987; Datan, Antonovsky & Maoz, 1981; Seligman, 2003). Eriksson and Lindsröm (2005) refer to the model of Salutogenesis as claiming that the way people view their lives directly affects their personal health, and the more positive their view of their life, the greater the propensity towards healthful states.

Nel, Crafford and Roodt (2004) state that Salutogenesis is evidence in psychological literature of the effort to unravel what Antonovsky (1987) refers to as the 'mysteries of health' so as to try and explain how some individuals sustain wellness in the face of their peers who face overload and burnout, despite exposure to the same stressors present in today's fast moving, stressful and challenging working environments.

Ryff and Singer (2003) postulate that human functioning is perhaps at its most remarkable when evident in the contexts of significant life challenges and adversity. It is when individuals are being tested that much becomes known about human strengths and how they come about, what they are and how they are nourished or undermined. In a study, conducted by Datan *et al.* (1981), it was found that the psychological well-being of women who had survived the Holocaust could be attributed to a balance between sorrow and joy, a struggle which was hard to achieve for some individuals. The fact that this was able to be won back by so many survivors begged the question to be answered of whether or not a better coping mechanism, following adversity, could have been within the reach of many more individuals. Antonovsky (1987) puts forward the notion that people could stay healthy based on how they viewed their life and their essence of existence.

Harter, Schmidt and Keyes (2003) argue that due to the fact that the workplace is a significant part of an individual's life, affecting his or her wellbeing and that of the community, the wellbeing of employees is in the best interest of communities and organisations.

Harter *et al.* (2003) postulate that worker quality of life and performance originates with the behavioural, cognitive and health benefits of positive feelings and perceptions. Their argument goes that presence of positive emotional states and positive appraisals of the worker and his or her relationships within the workplace accentuate worker performance and quality of life. When environments provide and people seek out interesting, meaningful and challenging tasks, individuals in these situations are likely to have manageable difficulties and are able to perform at optimal states.

Strümpfer (2002) hails Antonovsky's introduction of the construct of Salutogenesis as the cornerstone of the emergence of a new paradigm which proposes measuring the origins of health and not disease. This approach, according to Strümpfer (2002), searches for the factors that promote movement towards the healthier end of the continuum, not moving people to a zero, which represents normality, but to a plus two or a plus six.

Salutogenesis pushes for a change in approach, from a preoccupation with only repairing the worst things in life to also building the best qualities in life (Seligman, 2002). Seligman (2003) continues to assert that there is a move within psychology towards prevention, and states that what we have learned in the disease model of psychology does not move us any closer to being able to understand how we can prevent psychopathology and build on strengths rather than merely diagnosing already established problems with the intent on finding a cure. If human strengths can act as buffers against mental illness surely it is worth studying. The field of Industrial Psychology deals with individuals who are well and who need to move towards more optimal functioning. Therefore, a positive approach to psychology and human functioning in the workplace is valuable in setting up an optimal workforce and assisting individuals with personal work satisfaction and optimal functioning.

In his attempt to explain how people stay well, notwithstanding adverse conditions, Antonovsky introduced Sense of Coherence as his core construct (Strümpfer, 2002). Antonovsky (1987) identified that other scientists had also done research in the field of stress and coping and had focussed on positive resolutions to stressors in the

restoration and maintenance of health. These individuals had identified constructs such as Self-Efficacy (Bandura, 1986), Locus of Control (Rotter, 1966), and others which had the same sort of rational as his Sense of Coherence construct (Strümpfer, 2002). Antonovsky included these and other constructs in his list of Salutogenic strengths (Antonovsky, 1987; Marais, 1997).

The constructs that have been chosen for this particular study as measures of wellness are Antonovsky's Sense of Coherence, Bandura's concept of Self-Efficacy and Rotter's Locus of Control. These constructs have been specifically chosen as they are commonly known and understood by Industrial and Organisational Psychologists to be good indicators of wellness. (Antonovsky, 1979; Bandura, 1986; Breed *et al.,* 2006; Coetzee & Cilliers, 2001; Jackson & Rothmann, 2001; Rotter, 1966, 1975; Strümpfer, 1995, 2002, 2006). These constructs will be conceptualised in this chapter with particular reference to how individuals with particular Salutogenic dispositions tend to cope better with work and life stressors.

2.2   SENSE OF COHERENCE

2.2.1 Sense of Coherence: Overview

Antonovsky (1987) introduced the concept of Salutogenesis which concerns itself with attempting to explain how people stay well even in adverse conditions. Out of this notion three components emerged: the ability for people to understand what happens around them, to what extent they were able to manage the situation on their own or through significant others in their social network and the ability to find meaning in the situation. These three elements, comprehensibility (cognitive), manageability (instrumental and behavioural) and meaningfulness (motivational) form the concept of sense of coherence, which will be discussed in more detail later (Antonovsky, 1987, 1993; Eriksson and Lindsröm, 2005). This construct can be defined as follows:

> *'Sense of Coherence is a global orientation that expresses the extent to which a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living*

are structured, predictable and explicable; (2) the resources are available to meet the demands posed by the stimuli; and (3) these demands are challenges worthy of investment and engagement'. (Antonovsky, 1987, p19).

His theory assumes that stress-producing experiences are ever-present, and also that individuals have a number of resources which they are able to access which help them to cope with difficult issues and situations (Antonovsky, 1987, 1993; Strümpfer, 2002).

The concepts of comprehensibility, manageability and meaningfulness as stated above can be described or defined as follows:

- **Comprehensibility** - The certainty by which one can anticipate possible events and the degree that perceived stimuli make cognitive sense.
- **Manageability** – The degree to which one believes that one has the available resources to deal with a challenge and that the development of these resources (either one's own or those of a legitimate other) will address the challenge and;
- **Meaningfulness** - The feeling that life makes sense and that it is worthy of investment and commitment and engagement of these resources.

Antonovsky (1997, 1993)

Supporting an individual's Sense of Coherence are the general resistance resources (GRRs), which Antonovsky (1987) names as follows: material, ego identity, knowledge, intelligence, coping strategy, social support, commitment, cultural stability, religion/philosophy, and a preventive health orientation. These GRRs reinforce the Sense of Coherence in individuals. In other words, individuals with a strong Sense of Coherence, tend to have more GRRs at their disposal (Antonovsky, 1987; Eriksson and Lindsröm, 2005). Remembering that Antonovsky (1987) states that Sense of Coherence is a dispositional orientation rather than a personality trait or coping strategy, a GRR can be described as any characteristic of a person, group or subculture that facilitates the avoiding or combating of a wide variety of stressors

(Strümpfer, 1998). Strümpfer (1998) provides examples of GRRs in four different categories, namely:

- Artefactual material GRRs, such as money, shelter, and food.
- Cognitive GRRs, such as intelligence and knowledge.
- Interpersonal GRRs, such as social embeddedness and social support.
- Macrosociocultural GRRs, such as rituals and religion.

When a person experiences the availability of GRRs on a regular basis, a Sense of Coherence develops, and the stronger the Sense of Coherence the more likely the individual is to mobilise those GRRs so as to overcome stressors and obstacles (Antonovsky, 1987; Langeland *et al.*, 2007; Strümpfer, 1995). Antonovsky (1987) uses his Salutogenic model to explain a person's position on what he terms the health ease/disease continuum. He also mentioned that this existed within family relations, social relations and had a link with material resources. Antonovsky (1987) argued that GRRs have an impact on the emergence of a strong Sense of Coherence, health in general and other areas of wellbeing too. He also stated that there should be strong correlations between Sense of Coherence and many facets of wellbeing, since GRRs also directly promote wellbeing and generate good health, and with health in turn having a positive effect on wellbeing.

The relationship between these factors is therefore, according to Antonovsky (1987) cyclical in nature.

Strümpfer (1995) describes the flow of this cycle, stating that, an abundance of GRRs has consequences for the development of a strong Sense of Coherence; this generates good health which in turn has a positive effect on wellbeing. The second route is directly from GRRs to wellbeing. The third is that the Sense of Coherence could be directly related to other aspects of successful living, for example, effective work performance, careers, marriages, parenting and interpersonal relationships in general. It is also expected that a person who has a strong Sense of Coherence would come out of a trying or challenging time strengthened.

On the other end of the scale, Strümpfer (1990) postulates that a person with a low Sense of Coherence will suffer from information overload, making their workload difficult to interpret, and feel like victims of their circumstance which they would perceive to be beyond their control. They would therefore be burdened by having to accept negative outcomes, which would result in potential immobilisation and the inability to excel in a stressful environment.

Antonovsky (1987, 1993) positions the Sense of Coherence construct as a dispositional orientation, rather than a personality trait or coping mechanism.

2.2.2 Sense of Coherence: Benefits

The advantages of a strong Sense of Coherence are salient in that one will interpret his or her existence with a sense of meaning, viewing it as comprehensible and manageable, which in turn postures the individual to handle stress and even turn it into something positive (Nel *et al.*, 2004).

As an individual progresses though life, the exposure experienced towards certain challenges and stressors can either result in the individual being able to handle the situation or being overcome by it (Nel *et al.*, 2004). A strong Sense of Coherence can be said to be present when an individual is able to readily and easily access resistant and coping resources. Longitudinal studies have shown that a weak Sense of Coherence has been associated with indicators of poor health and increased mortality in elderly patients (Kouvonen *et al.*, 2008).

Sense of Coherence refers to the individual's view of the world around him or her, both cognitively and emotionally, and assists the individual with coping effectively with life, enhances health and assists with social adjustment. In effect, it can be said to be referring to an individual's general disposition to life, rather than a coping mechanism. This particular disposition will allow an individual to select appropriate coping strategies which in turn will enable him or her to deal with various stressors that he or she may be confronted with.   An individual with a high Sense of Coherence will be more willing therefore to tackle a difficult problem with the available resources at his or her disposal (Antonovsky, 1987).

People with a strong Sense of Coherence are likely to see stressful situations as less threatening and could contribute to a lower propensity to burnout (Rothmann, Scholtz, Rothmann & Fourie, 2002).

Nel *et al.* (2004) pose the question of how malleable the concept of Sense of Coherence is considering that the primary goal of Industrial Psychology is to optimise work behaviour. They state that although the construct may already be formed within an individual who has started a career, the individual may still be able to utilise the principles embodied in the construct, thereby learning to actively manage daily stressors. Furthermore, they postulate that organisational support for the principles of Sense of Coherence could create at least a temporary Sense of Coherence during times of high stress and therefore assist individuals. In other words, the organisation may be able to manage the environment of an individual, even if it is temporarily, in order to create a buffer against stress.

2.3 LOCUS OF CONTROL

2.3.1 Locus of Control: Overview

The Locus of Control construct evolved out of Rotter's social learning theory (Schepers, 2005; Steel & König, 2006; Twenge, Zhang & Im 2004; Woolley, 1990), which, according to Rotter and Hochreich (1975), holds that the unit of investigation of the study of personality is the interaction of an individual and his or her meaningful environment. These experiences are described as being in constant flux, since individuals are always going though new experiences, and at the same time they are described as stable, since previous experience affects new learning. Rotter uses the empirical law of effect in his theory, which defines reinforcement as any action, condition or event which affects the individual's movement towards a goal (Rotter & Hochreich, 1975). Positive reinforcement is something that increases the likelihood that particular behaviour will reoccur under similar circumstances, while negative reinforcement describes a situation where something will decrease the likelihood of a particular behaviour in the future (Rotter & Hochreich, 1975).

Rotter and Hochreich (1975) acknowledge the psychological differences in every individual's way of handling any given situation, stating that each individual has a very personal subjective internal reaction to the world around him or her which affects how meaning is ascribed internally to outside stimuli. These internal differences include not only the meaning of the external stimuli but also the individual's internal perceptions of how he or she may or may not be able to cope with the external situation. These individual differences and the acknowledgement thereof form the basis of the concept of internal versus external locus of control (Rotter, 1975; Rotter & Hochreich, 1975).

Expectancy theory, according to Rotter (1975), is another major contributor to the development of the concept of Locus of Control. Expectancy theory has its roots in Organisational Psychology and the most popular application has been developed by Vroom (O'Brein, 1984; Steel & König, 2006; Woolley, 1990). Vroom's expectancy theory states that the strength of a tendency to act in a certain way depends on the strength of an expectation that the act will be followed by a given outcome and on the attractiveness of the outcome to the individual (Robbins, 1996). The theory can be represented as follows:

| Individual Effort | → | Individual Performance | → | Organisational Rewards | → | Personal Goals |

1. Effort - performance relationship
2. Performance - reward relationship
3. Rewards - personal goals relationship
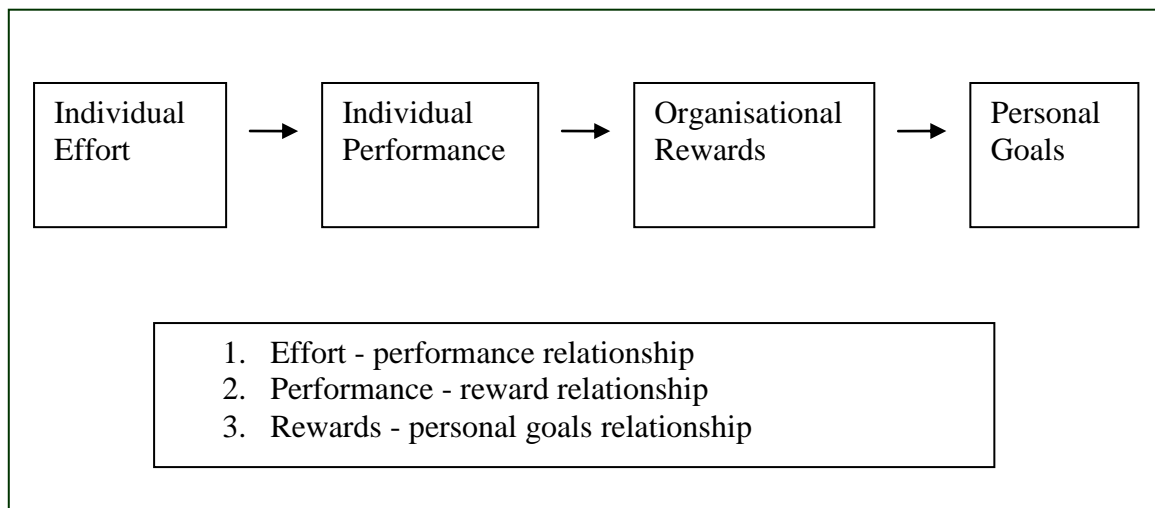
Figure 2.1   Expectancy Theory (Robbins, 1996).

Rotter (1975) noted that his interest in the concept of Locus of Control arose from the idea that increases and decreases in the expectancies of individuals following reinforcement varied as a function of both the nature of the situation and as a

characteristic of the person who was being reinforced. In other words, it was the internal variable within an individual which would enable the prediction of how the individual would react or change expectancies to reinforcements, which of course has implications for how behaviour is understood and predicted.

Rotter and Hochreich (1975) describe expectancy as a function of past experience and reinforcement. They explain that the degree of expectancy depends on the way in which one perceives the relationship between one's behaviour and the outcomes following that behaviour. Rotter (1975), states that expectancy can be described as a function of past experience and reinforcement. This leads to the notion then of internal versus external control of reinforcement, where people are known to differ in their belief that what happens to them is either a function of their own behaviours or attributes (internal control) or the result of luck, chance, fate or others influence or power (Rotter, 1966; Rotter & Hochreich, 1975).

According to Rotter (1966), Locus of Control refers to a person's characteristic attributions regarding events and outcomes in his or her environment. He continues to assert that people who believe that events and reinforcements are contingent upon their own behaviour are said to have a relatively internal Locus of Control. While in contrast a person who attributes events to factors other than their own behaviour are said to have an external Locus of Control, and reinforcement is typically perceived as a result of luck or fate, as a result of the control or influence of powerful others. Life is therefore unpredictable for those with an external Locus of Control who perceive themselves to be at the mercy of forces outside of themselves, with those who are seen as having an internal Locus of Control being in a position to create their own beneficial circumstances (Bothma & Schepers, 1997; Carrim, Basson & Coetzee, 2006; Esterhuysen & Stanz, 2004; Schepers, Gropp & Geldenhuys, 2006; Twenge *et al.*, 2004; Woolley, 1990).

While Rotter (1966) outlines Locus of Control in terms of social learning theory, Schepers (1995) states that social learning theory, in conjunction with attribution theory, explains the way in which a person selects information according to inherently stable or invariant characteristics. According to Schepers (1995), people are constantly seeking causes for their own behaviour and the behaviour of others.

The ascribed causes of that behaviour are called attributions. These causative attributions and the individual's interpretation largely determine the individual's perception of their social world (Schepers, 1995, 2005).

Schepers (2005) states that social learning theory and attribution theory are closely linked, in that social learning theory deals with the nature of reinforcements arising from the social environment and its effect on social behaviour, while attribution theory pertains to the way in which a person gathers information about stable or invariant characteristics of the external world.

The Internal-External Locus of Control Scale (I-E Scale) was developed by Rotter (1966) to measure the construct of Locus of Control, and, according to Schepers (2005), is the most frequently used scale in the USA, being used 69% of the time. Schepers (2005) proposes that while Rotter's (I-E Scale) is promising from a content point of view, it is poorly developed from a psychometric point of view in that its forced choice item-format system leads to ipsative measurement, while the user of the instrument wishes to use it in a normative way. Ipsative measures are measures used to measure the strength of constructs intra-individually, while normative measures are used to measure the strength of constructs inter-individually (Schepers, 2005).

Schepers (2005) explains that ipsative scores are relative and make it possible for individuals who obtain a low ipsative score for a specific construct to actually possess more of the characteristics making up that construct than another individual who obtains a higher score.

The Locus of Control Inventory was developed by Schepers in 1995 to correct these defects which he has described, and construct a normative scale for Locus of Control for use in students and adults (Pretorius, 2004).

Schepers (2005) asserts that the construct of internal Locus of Control is very closely related to the concept of autonomy, and therefore, in addition to internal and external control, has included Autonomy. Autonomy is defined by Schepers (2005) as the tendency to attempt to master or be effective in the environment and to impose one's

wishes or designs upon it. A person high on autonomy would therefore be expected to seek control over a situation, take initiative and offer possibilities for change, preferring to work on their own and structure their own programmes, much like an individual with an internal Locus of Control (Berg, Buys, Schaap & Olckers, 2004; Schepers, 2005).

According to Schepers (2005), three constructs can be identified which make up Locus of Control, namely autonomy, external control and internal control.

- **Autonomy** – The attempt to master or be effective in the environment and impose one's own wishes and designs upon it.
- **External control** – The individual belief that outcomes are independent of his/her own behaviour.
- **Internal control** – The individuals belief that outcomes are a consequence of his/her own behaviour.

(Schepers, 2005)

Locus of Control is a multidimensional construct aimed at capturing the causality of behaviour (Erwee, 1986). According to Esterhuysen and Stanz (2004), it relates to the expected outcome and not to an individual's actions in themselves. It refers specifically to individual beliefs about the source of control over reinforcement (Bothma & Schepers, 1997; Esterhuysen & Stanz, 2004; Rotter, 1966; Steel & König, 2006).

2.3.2 Locus of Control: Benefits

A distinction between an internal and an external Locus of Control has been made. People with an internal Locus of Control are often referred to as internals and those with an external Locus of Control as externals (Esterhuysen & Stanz, 2004). Internals and externals differ in relation to their cognitive activity and environmental mastery, with internals exerting more control over their lives as they are more perceptive of their situations, and will more readily acquire information that will help them cope and reach goals (Bothma & Schepers, 1997; Dollinger, 2000; Schepers, 2005; Esterhuysen & Stanz, 2004; Rotter 1966).

According to O'Brien (1984), people with an internal Locus of Control perceive and seek greater control and are expected to hold higher values for both the expectancies of gaining rewards and attaining personal goals. O'Brein (1984), states that several studies have validated expectancy theory in terms of these hypotheses.

2.4 SELF-EFFICACY

2.4.1 Self-Efficacy: Overview

According to Bandura (1999), people strive to exercise control over events that affect their lives by exerting influence in spheres over which they can command some control. They are better able to realize their desired futures and to forestall undesired ones. This striving for control over their life circumstances permeates almost everything people do because it serves to secure them innumerable personal and social benefits. Bandura (1999) continues to assert that the ability to affect outcomes makes them predictable, which in turn fosters adoptive preparedness. The inability to exert such influence that adversely affect an individual's life breeds apprehension, apathy or despair. "The capability to produce valued outcomes and to prevent undesired ones, therefore, provides powerful incentives for the development exercise of personal control" (Bandura, 1999, p1).

Bandura (1999) asserts that due to the centrality of control in human lives, many theories about it have been proposed over the years. Individual motivational levels, affective states, and actions are based more on what they believe than on what is objectively the case (Bandura, 1999). It is thus people's beliefs and the causal capabilities that become the major point of departure. People make casual contributions to their own psychosocial functioning through mechanisms of agency. Among the mechanisms of agency, none is more central, according to Bandura (1999), than people's beliefs of personal Self-Efficacy.

In short, perceived Self-Efficacy is the belief in one's competence to tackle difficult or novel tasks and cope with adversity in specific demanding situations. (Bandura, 1992, 1997, 1999; Betz, 2004; Biscaro *et al.*, 2004; Guillon, Dosnon, Esteve, &

Gosling, 2004; Luszczunska *et al.*, 2005; Watson *et al.*, 2001). According to Biscaro *et al.* (2004), an individual's Self-Efficacy not only serves as a predictor for completing and tackling difficult or novel tasks, but also predicts an individual's propensity to recover from and prevent relapse after rehabilitation from various mental illnesses and dependency illnesses, such as alcoholism. Guillon *et al.* (2004) point out that perceived Self-Efficacy stems from learning experiences, and Watson *et al.* (2001) state that Self-Efficacy has less to do with an individual's actual capabilities than it does with his or her perceived capabilities. It thus determines what individuals do with the skills that they have and which tasks and challenges they are prepared to tackle, and affects their general approach to that task or challenge.

People's beliefs concerning their efficacy can be developed by four main forms of influence, namely *Mastery experience, vicarious experiences, social persuasion, and sociological and emotional states* (Bandura, 1999; Betz, 2004). Bandura (1999) describes these four forms of influence as follows:

Mastery experiences refer to instances where an individual faces obstacles or difficult tasks and succeeds despite the obstacles placed in his or her way. It is seen as the "most authentic evidence of whether one can muster whatever it takes to succeed" (Bandura, 1999, p3). These successes build a robust belief in an individual's personal efficacy. Failures, on the other hand, undermine it, especially if these failures occur before a sense of efficacy is firmly established. This implies that developing a sense of efficacy involves acquiring the cognitive, behavioural, and self regulatory tools for creating and executing appropriate courses of action to manage ever changing life circumstances. A resilient sense of efficacy therefore requires experience in overcoming obstacles through perseverant efforts.

Vicarious experiences refer to instances where an individual sees other people who are perceived to be similar to themselves succeed by perseverant effort. Their beliefs are raised in this process to the level of feeling that they, too, possess the capabilities to master comparable activities. The greater the assumed similarity between the individuals, the more persuasive the models' successes and failures will

be. Where people see models as very different from themselves, their beliefs of personal efficacy are not much influenced by the model's behaviour.

Social persuasion refers to situations where people are persuaded verbally that they possess the capabilities to master given activities and are likely to show greater motivation and sustain greater effort than if they were harbouring self doubts and dwelling on personal deficiencies should difficulties arise. "It is more difficult to instil high beliefs of personal efficacy by social persuasion alone than to undermine them" (Bandura, 1999, p4), with unrealistic boosts in efficacy leading to great disappointment. People who have been persuaded that they lack capabilities tend to avoid challenging activities that could cultivate their potentialities. Successful efficacy builders tend therefore to encourage individuals to measure their success in terms of gradual self-improvement rather than by triumphs over others or in leaps and bounds.

Physiological and emotional states are also relied upon when people judge their capabilities. They interpret their stress reactions and tension as signs of vulnerability to poor performance. In activities involving strength and stamina, people judge their fatigue, aches, and pains as signs of physical debility. Mood also affects people's judgments of their perceived Self-Efficacy. Enhancing efficacy beliefs can be done effectively by enhancing physical status, reducing stress and negative emotional states, and correcting misinterpretations of body states.
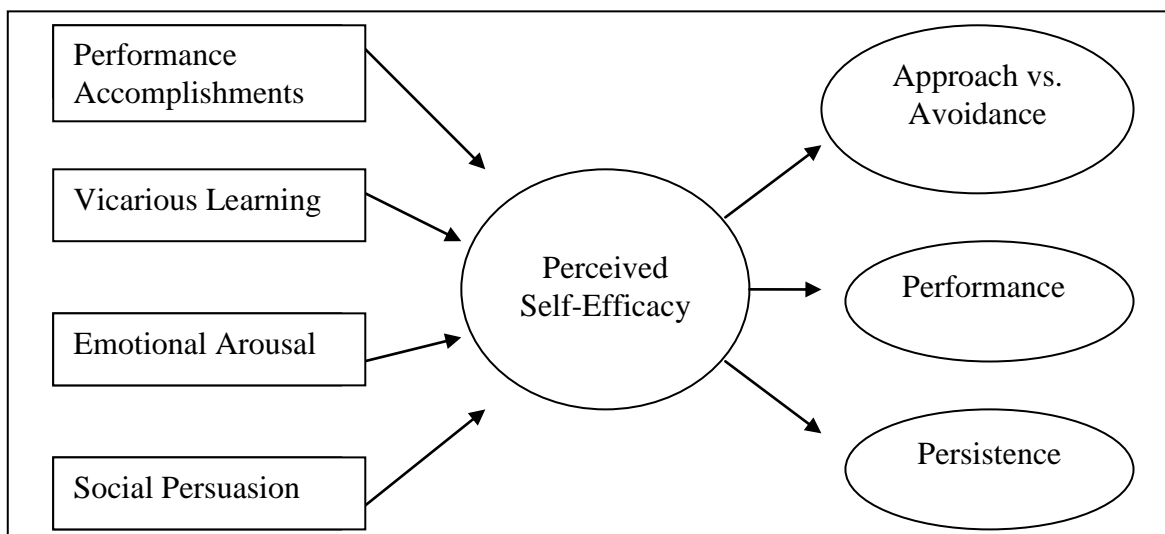
FIGURE 2.2 Graphic Description of Bandura's (1997) Model of Self-Efficacy Expectations (Bandura, 1997).

Bandura (1999) states that it is not the sheer intensity of emotional and physical reactions that is important but rather how they are perceived and interpreted. For example – people who have a high sense of efficacy are likely to view their state of affective arousal as an energising facilitator of performance, whereas those who tend towards self-doubt regard their arousal a debilitator. Physiological indicators of efficacy play an especially influential role in health functioning and in activities requiring physical strength and stamina. Affective states can have widely generalised effects on beliefs of personal efficacy in diverse spheres of functioning.

2.4.2 Self-Efficacy: Benefits

Bandura (1992) states that the findings of diverse causal tests, in which efficacy beliefs are systematically varied, are consistent in showing that such beliefs contribute significantly to human motivation and attainments. Betz (2004) points out that because Self-Efficacy expectations are behaviourally specific rather than general, the concept must have a behavioural referent to be meaningful. One could thus refer to perceived Self-Efficacy with regard to mathematics or mechanics or handling investments. Betz (2004) states that because each type of Self-Efficacy is discussed in reference to a specific behavioural domain, the number of different kinds of Self-Efficacy expectations is limited only by the possible number of behavioural domains that can be defined.

Research done by Luszczunska *et al.* (2005), however, argues for a General Self-Efficacy (GSE). They state that perceived Self-Efficacy is not only task-specific, but that it can also be identified at a more general level of functioning. GSE deals with an individual's ability to cope with a broad range of stressful or challenging encounters as opposed to *specific* Self-Efficacy which is constrained to a particular task at hand. The research conducted across five countries showed evidence for associations between GSE and the selected variables. The findings also showed evidence that GSE appears to be a universal construct that yields meaningful relations with other psychological constructs.

Betz (2004) asserts that the concept of Self-Efficacy expectations is particularly useful for both understanding and modifying behaviour, and in particular, career behaviour. The consequences of Self-Efficacy are; *approach versus avoidant behaviour*, quality of *performance* of behaviours in the target domain, and *persistence* in the face of obstacles or disconfirming experiences (Bandura, 1999; Betz, 2004). (These three consequences of Self-Efficacy can be seen on the right hand side of Figure 2.2). Thus, low Self-Efficacy expectations regarding a behaviour or behavioural domain are postulated, according to Betz (2004), to lead to avoidance of those behaviours, poorer performance and a tendency to give up when faced with discouragement, with the opposite being true for high Self-Efficacy expectations.

2.5 INTEGRATION

Antonovsky (1987), on introducing the concept of Salutogenesis which emphasises the elements of psychological health and wellbeing, recognised that other scientists had done research which also focussed on the origins and maintenance of health. In so doing, Antonovsky (1987) identified constructs such as Locus of Control and Self-Efficacy which had the same rational as his own Sense of Coherence. These and other constructs were therefore included in his list of Salutogenic constructs (Antonovsky, 1987; Marais, 1997).

These three constructs (Sense of Coherence, Self-Efficacy and Locus of Control) in particular have been recognised to be related, and are seen as good Salutogenic constructs contributing to an individual's ability to cope in a variety of stressful situations and contribute to an individual's general sense of wellbeing and mental health (Jackson & Rothmann, 2001). Jackson and Rothmann (2001), furthermore, state that these three constructs are linked. Literature provides evidence for the linking of these three constructs.

Rotter (1966) asserted that individuals with an external Locus of Control tend to doubt their personal efficacy, thus claiming a link between Self-Efficacy and Locus of Control, which he stated are both cognitive constructs related to personal control. Judge, Erez, Bono and Thoresen (2002) name Self-Efficacy and Locus of Control as two of the most researched constructs in psychology and state that they may be the

basis of the same higher order construct. Using the data from 13 studies addressing the relationship between these two constructs Judge *et al.* (2002) reported a correlation coefficient of 0.56 between Self-Efficacy and Locus of Control.

Jackson and Rothmann (2001) assert that Sense of Coherence is also related to issues found in Locus of Control theory, in that Sense of Coherence refers to an internalised sense of control, which guides the orientation of an individual towards future events. Further to this, Sense of Coherence helps individuals understand the various facets of control and their consequences through how the individual experiences his or her environment (Antonovsky, 1987; Jackson & Rothmann, 2001; Rothmann *et al.*, 2002). In support of this, Antonovsky (1987) reports correlation coefficients between Sense of Coherence and Locus of Control of between 0.38 and 0.44.

Langius, Bjorvell and Antonovsky (1992), state that there are clear affinities between Sense of Coherence and Self-Efficacy. Jackson and Rothmann (2001) point out that Sense of Coherence is concerned with an individual's experience of forcefulness in his or her environment, as is the construct of Self-Efficacy. In support of these statements, research conducted by Breed (1997), showed a correlation coefficient of 0.53 between Generalised Self-Efficacy and Sense of coherence and Jackson and Rothmann (2001) report a correlation coefficient of 0,41.

Due to the acceptance of Sense of Coherence, Locus of Control and Self-Efficacy as good Salutogenic measures and the fact that they have been shown to be related constructs, they were chosen for the purposes of this study.

2.6 CHAPTER SUMMARY

This chapter has provided an overview of the literature in order to conceptualise Salutogenesis and the three constructs that are identified for use in this study. These include Sense of Coherence, Locus of Control and Self-Efficacy.

The next chapter will provide a literature review in order to conceptualise Interpersonal Psychology and Interpersonal Style. It will also lay out the hypothesis for this study.

CHAPTER 3: INTERPERSONAL STYLE AND THE THEORETICAL RELATIONSHIP WITH SENSE OF COHERENCE, LOCUS OF CONTROL AND SELF-EFFICACY

"You are responsible for your life situation. You have created your own world. Your own interpersonal behaviour has, more than any other factor, determined the reception you get from others. Your slowly developing pattern of reflexes has trained others and yourself to accept you as this sort of person – to be treated in this sort of way. You are the manager of your own destiny".

(Leary, 1957, p.117).

This chapter seeks to provide a literature review of interpersonal psychological theory from a circumplex perspective and specifically to conceptualise Kiesler's ideas on interpersonal psychology and, in particular, his 1982 Interpersonal Circumplex and the octant version thereof, which is used as the basis for the study. The chapter is thus aimed at providing a theoretical background to Interpersonal Psychology.

This chapter also serves to look at the Interpersonal Circumplex in relation to the concept of psychological wellness, and briefly explores other research that touches on this relationship.

3.1 THE INTERPERSONAL APPROACH TO PSYCHOLOGY

3.1.1 Background to the Interpersonal Approach to Psychology

According to Forgas (1985) we spend most of our waking hours in the company of others. It is thus of great importance to all of us that our interactions and personal relationships should be rewarding and successful. Interpersonal behaviour, asserts Forgas (1985), is an important aspect of our private lives. Increasing numbers of people work in fields where interacting with others is perhaps the main working skill required. The possession of what has come to be termed "people skills" is therefore significant and important in the working lives of people from all backgrounds. When applied to the interpersonal realm, personality is seen as a combination of

interpersonal behaviours that are consistent and enduring across different situations and circumstances, with interpersonal traits seen as an index of typical or average interpersonal behaviour (Hofsess & Tracey, 2005).

The interpersonal movement embraces interpersonal psychiatry, interpersonal communication, interpersonal relations, interpersonal approaches to personality, transactional analysis, psychology of encounter, as well as other fields of psychology (Kiesler, 1987).

Kiesler (1987, 1996a) credits Sullivan with the first systematic articulation of interpersonal theory. Sullivan (1953) made use of the concept of anxiety as the main force in interpersonal relations and the main factor which contributes to the serious difficulties that people experience in their interpersonal relationships. He states that this anxiety has its origins in the prolonged interpersonal dependency people experience with their parents in their infancy. Sullivan (1953) speaks of the need for individuals to gain relief from this anxiety which he terms, the need for interpersonal security. Sullivan (1953) felt that it was important to bear in mind where the flow of communication was being interfered with by the threat of anxiety, and that this approach would allow the therapist to diagnose and understand individuals better.

Leary (1957) stated that the most important aspects of human behaviour seem to be interpersonal and that to understand an individual is to have information about his or her relationships, and the durable ongoing interpersonal techniques that people use to ward off and cope with anxiety, as well as the reciprocal responses that these pull from others. He continued to state that these recurrent, durable patterns or reciprocity between two individuals, whether covert or overt, studied over time will give an accurate picture of their interpersonal behaviour.

It was therefore felt that it was important to study interpersonal situations through which individuals manifest mental health or mental disorder, and that human behaviour could therefore, only be understood in relation to its historical and current interpersonal contexts (Kiesler, 1996a, 2006). Kiesler (1996a) asserts that it would then follow that what needs to be studied and understood within this context is the pattern of transactions between the individual and all other relevant individuals,

including the therapist. According to Markey and Markey (2006), interpersonal theory postulates that one's personality is created through ongoing interpersonal interactions.

Hafkenscheid (2003) helps to give some insight into this idea by explaining that the therapeutic relationship is often characterised as unidirectional, and as a process of mutual influence. He asserts that it is not only the therapist that impacts on the responses of the patient, but the patient also affects the therapist's feelings and behaviours, to the extent that the therapist becomes a significant person to the patient and will inevitably experience the cumulative impact of the patient's recurrent command or relationship messages. In his research done with 131 psychiatric outpatients, Hafkenscheid (2003) showed that patients' interpersonal impacts on one therapist generalised to other therapists. Kiesler and Van Denburg (1993) reported on this notion 10 years earlier by stating that a therapist's humanity enters the room with the clients, and that therapy for the client is in some way inevitably therapy for the therapist as well. Every aspect of the therapist's experience – feelings, thoughts, fantasies, action, tendencies – is engaged in the therapy encounter and cannot *not* be impacted.

It is for this reason that behaviour is not viewed as being driven solely by situational factors of intra-psychic motivations, but rather the individual's relationships, which are framed as two person dyads, in which individuals exert influence on each other. This implies a circular rather than linear approach to relationships (Markey & Markey, 2006).

Understanding human behaviour therefore requires evidence about the relationships that an individual has with others, and specifically regarding the consistent interpersonal techniques used by an individual to ward off anxiety (Kiesler, 1996a). Kiesler (1996a) suggested the following working principles for interpersonal theory of personality, namely:

- All interpersonal behaviour is an attempt by an individual to avoid anxiety or to establish and maintain self-esteem.

- Any personality measure should be able to assess, on the same continuum, the whole range of behaviour from normal adjustive to abnormal extreme.

- Assessment of interpersonal behaviour requires a broad collection of specific behavioural measures that are systematically related to each other.

- For valid assessment of interpersonal behaviour, the same measures (at the corresponding levels) used to characterise the behaviour of person A need to be applied equivalently to the interactant, person B.

- To be precise, any statement about personality must indicate the level of personality to which it refers.

- The theoretical levels of personality must be specifically listed, defined, and measured.

- The same system of variables should be used to measure interpersonal behaviour at each level of personality.

- Measurements of interpersonal behaviours must be public and verifiable operations, which permit conclusions presented, not as absolute facts, but as probability statements.

- A system of personality should be able to measure behaviour in a specific functional context.

- Interpersonal study should focus on *human transactions*, not on the behaviour of individuals. Activity is to be understood and explained as interpersonal, which necessitates the focus on at least a dyad or two person group.

- A central theoretical position is accorded to the *construct of self* that is interpersonal and transactional and its development and functioning throughout life.

- A person's recurrent pattern of interpersonal situations represents the *basic dimensions of interpersonal behaviour,* which is either as controlling (dominance vs. submission) or need for affiliation (hostility vs. friendliness).

- Interpersonal transactions consist of two person *mutual influence*.

- At a minimum, interpersonal theory incorporates an *interactionist position* in which, a person's behaviours are the interactive product of both predispositions towards transactions with another person and the situational environment.

- The vehicle for human transactions is communication (both verbal and non-verbal) exchanged between individuals over the course of their transactions, with non-verbal transactions predominating in emotional and relational communication.

Based on the above principles, Kiesler (1996a) asserts that interpersonal behaviour refers to, at least, our actions in the presence of others and our social behaviour. He also contends that interpersonal behaviour is not simply a response to others or stimuli, but rather tends also to elicit responses and specific reactions from other people. It thus focuses on the interpersonal transactions, and not simply on the behaviour of individuals. Kiesler (1996a) contends that, if this is the case, then interpersonal behaviour requires at least two persons to be measured, with assessment focussing on what person A and person B do reciprocally to each other during their transactions. What needs to be studied is therefore interaction and not reaction. Lillie (2007) states that these transactions are made up of both verbal and non-verbal elements, with non-verbal elements including tempo, volume pitch of voice, gaze, facial expressions, posture, interpersonal distance or touch.

These interactions are made up chiefly of two dimensions, needs or basic motivations, namely: the need for control or power and the need for affiliation (Kiesler, 1987, 1996a, 1996b, 2004; Kiesler & Schmidt, 2006). Individuals are constantly trying to negotiate these two major relationship issues, by deciding how friendly or hostile they will be with each other in their encounters, and how much charge or control each of the individuals will take in their encounters (Kiesler, 1996a, 1996b, 2004; Kiesler & Schmidt, 2006; Lillie, 2007). Carlson (1969) explains that each individual has a "plan" or strategy for interacting with the other. This plan may vary depending on the relationship between two individuals. For example, a student may have a very different strategy for impressing a professor and for wooing a romantic partner. If the strategy is not successful, anxiety results and may possibly

lead to changes in future strategy, so as to reduce or avoid the anxiety (Carlson, 1969; Kiesler, 1996a, 1996b, 2004; Kiesler & Schmidt, 2006).

According to Kiesler (1996a, 2004), these two dimensions (dominance-submission and hostility-affect) incorporate a set of sixteen interpersonal variables on an interpersonal circle. Interpersonal behaviour takes place on five levels as follows:

- **Level 1, Public Communication** – concerns the interpersonal impact of the subject on others, and how stimulating he or she is in social settings.
- **Level 2, Conscious Descriptions** – refers to the subject's view of him or herself, and the world.
- **Level 3, Pre-conscious symbolisation** – taps the subject's projective fantasies.
- **Level 4**, **Unexpressed Unconscious** – defined by two criteria, namely the interpersonal themes significantly omitted at the top three levels and significantly avoided on tests of subliminal perceptions and selective forgetting (methods of measuring this were not yet developed at the time).
- **Level 5, Ego Ideal** – consists of the subject's statements about his or her interpersonal ideas, standards, conceptions of good and evil as obtained in an interview, questionnaire or check list.

All of these five levels of interpersonal behaviour, except for level four, are able to be scientifically measured, using a variety of interview and psychometric techniques. These behaviours can be coded according to a circular continuum of the 16 interpersonal variables. Each variable is defined along an intensity dimension so that there is an adaptive and maladaptive aspect to each of the sixteen interpersonal dimensions (Kiesler, 1996a; Kiesler & Schmidt, 2006). Criticisms of the circumplex model will be discussed below in 3.5.

According to Kiesler (2006), the two dimensions (dominance-submission and hostility-affect) form the basis for understanding interpersonal transactions as well as the basis for all circumplex models with these two dimensions represented on two

independent axes demonstrating a range of possible interactions on a circular continuum. Interpersonal Circumplex models will be discussed in 3.1.2 and 3.1.3.

3.1.2 The Circumplex Approach to Interpersonal Theory

There are two major systems that have been employed to structure personality traits, emotions and interpersonal interactions, namely the use of factor analytic techniques which aim at identifying a relatively small number of basic underlying dimensions, such as Cattell's 16 Personality Factors or Eyesneck's Five Factor Model. The second method is the circumplex approach, which focuses on determining the similarity structure of all traits and emotions. The underlying assumption of this approach is that a relatively seamless circular ordering (circumplex) is a parsimonious description of relations among the traits and emotions that they evoke (Hofsess & Tracey, 2005; Markey & Markey, 2006; Plutchick & Conte, 1997).

The factor analytic and circumplex models of personality were, according to Trapnell and Wiggins (1990), developed in different contexts and have tended to be used by different groups of investigators. Trapnell and Wiggins (1990) state, for example, that Eyesneck's Five Factor Model was developed in the factor analytic tradition and has been implemented mainly by psychometricians and personality psychologists. The circumplex model was developed in a clinical context and within a neo-Freudian framework, with its applications being predominantly focussed on clinical problems (Wiggins, 1980, 1982).

Plutchick and Conte (1997) contend that the circumplex models have three main areas of application in psychology. The first application is the application of the circumplex idea to personality theory and description. The second tends to relate the circumplex model to emotions and interpersonal interactions. The third is concerned with the application of the circumplex model to clinical issues, such as the diagnosis of personality disorders and the role of the circumplex in psychotherapy. Circumplex models have become widely adopted for conceptualising, ordering and assessing interpersonal dispositions (Lock & Sadler, 2007; Lock & Christensen, 2007). According to Lock & Sadler (2007), circumplex approaches do not appear to

be spoken of with regards to the fields of health psychology, mental wellness or Salutogenesis.

This study focuses on the circumplex approach to interpersonal interactions, and although there is much research in the application of the circumplex model to clinical problems and psychopathology, and its application to diagnosis and treatment of personality disorders (Benjamin, 1987; Kiesler, 1996a, 2000), this study seeks to make an effort to see if there are any grounds for application of the circumplex model for understanding and enhancing personal wellness in the work context.

3.1.3 Circumplex Models for Understanding Interpersonal Behaviour

Hakelind (2007) explains that the first interpersonal circle, later termed the Interpersonal Circumplex, was developed in 1951. This model illustrated a range of possible interpersonal tendencies in a circular continuum, with each point describing the interaction between two independent axes representing the constructs of dominance and love. This model was also marked by what was termed intensity values which increased from the centre outwards, with contrasting variables on opposite points (Hakelind, 2007; Pincus, 1994).

A second variation of circumplex models developed was the circumplex of interpersonal problems, developed to measure interpersonal distress and evaluate clinical change in patients (Hakelind, 2007). As with other circumplex models, two dimensions are used to classify behaviour, these being the dominant-submissive dimension and the nurturance-coldness dimension, each of which is represented on an independent axis (Alden, Wiggins & Pincus, 1990). This model was and is useful for both research and diagnostic purposes as the two dimensions used as the basis for this model are often found to be the basis of interpersonal problems (Alden *et al.,* 1990; Hakelind, 2007). The model is depicted below in Figure 3.1.
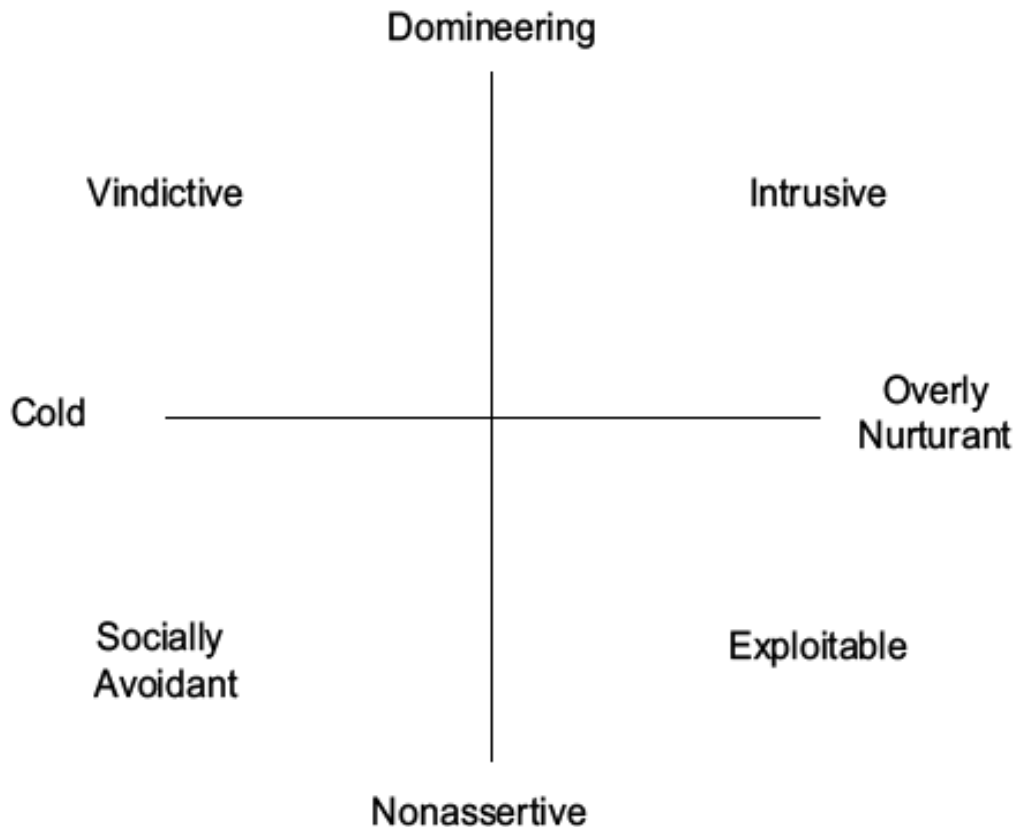
Figure 3.1 Circumplex Model of Interpersonal Problems (Hakelind, 2007, p.5).

Yet another circumplex model is the Structural Analysis of Social Behaviour Model (SASB), developed by Benjamin in 1971, which is structured along three dimensions, known as affiliation, interdependence and affirmation, representing active and passive behaviours (Benjamin, 1987, 1996; Hakelind, 2007; Östgård-Ybrandt, 2004). Benjamin (1996) explains that the first dimension, affiliation, is represented by the horizontal axis, and is defined by affirmation, love and protection. The second, interdependence, is represented by the vertical axis and defined as perceived control. The third dimension is the attentional focus, which refers to actions directed towards others (transitive), reactions to others (intransitive) or actions directed towards oneself (introjected) (Benjamin, 1987, 1996; Östgård-Ybrandt, 2004; Östgård-Ybrandt & Armelius, 2004).

The transitive and intransitive focus within the SASB model are used to define interpersonal behaviour and the introject focus refers to the intrapsychic internalisation of interpersonal experience (Benjamin, 1996; Östgård-Ybrandt, 2004).

In the model, opposing styles are located directly opposite one another (Östgård-Ybrandt, 2004). The SASB model is presented in Figure 3.2.
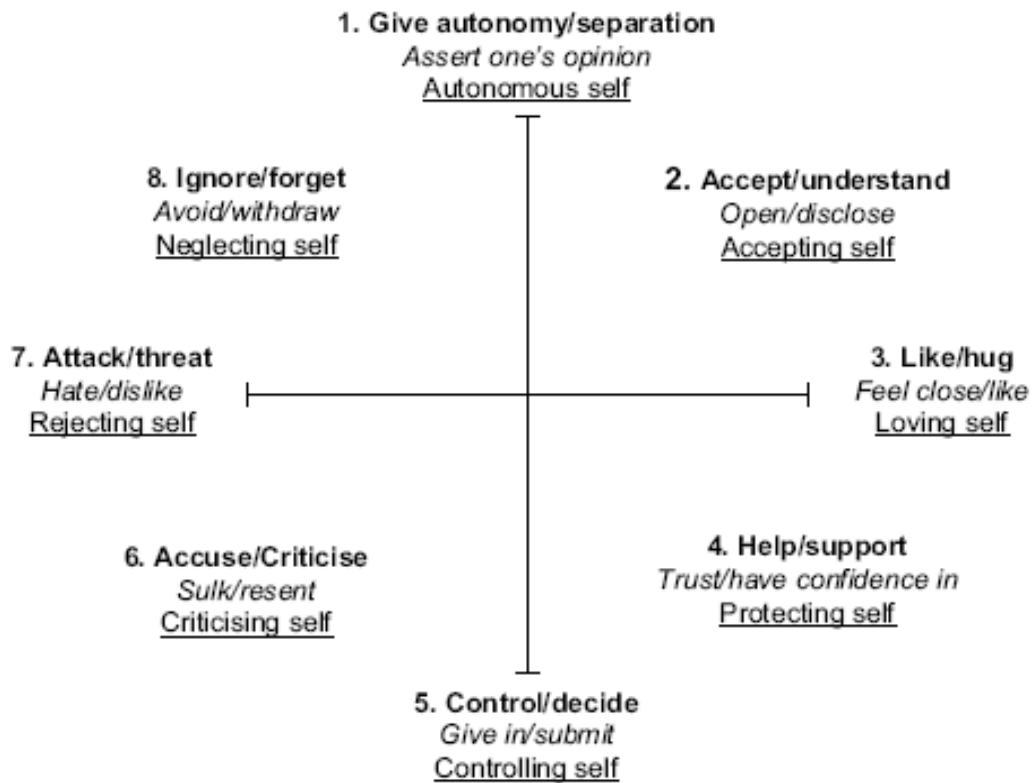
Figure 3.2: The Structural Analysis of Behaviour Model – Eight cluster version with the focus in each cluster presented in the order of transitive (action toward other), intransitive (reaction to other) and introject (self-concept) (Hakelind, 2007, p. 7).

Kiesler's 1982 Interpersonal Circumplex shows many similarities to other circumplex models of understanding interpersonal behaviour and will be discussed in Section 3.4.

3.2   KIESLER'S INTERPERSONAL CIRCUMPLEX

3.2.1 Overview of Kiesler's Interpersonal Circumplex

Kiesler (1983) asserts that interpersonal theory is a theory of interpersonal reflexes on didactic interactions and on a person's general well-being, accompanied by a measurement theory of the interrelations of variables in the interpersonal domain. Kiesler (1996b) states that his own original thinking on the circumplex model involved the presence of an "evoking" message, and an "impact" message, where the major operationalisations of both these messages were important.   This extension represented his initial merging of communications and interpersonal traditions which made it possible to observe individual differences in interpersonal behaviour.   His thinking therefore concentrated on the relationship message-exchange occurring during ongoing dyadic interpersonal transactions, with the two central constructs being the "evoking" message sent or encoded by one participant in the dyad, and the "impact" message which was what the other participant received and decoded. He anchored the evoking message on the encoder's verbal and non-verbal behaviours as representing the encoder-to-decoder (ED) relationship. He thus defined the impact message as denoting the receiving end of this process with it referring to the covert affective and cognitive behaviours elicited in the decoder as a result of the encoder's evoking message (Anchen & Kiesler, 1987; Kiesler, 1996a; Kiesler, 1996b; Kiesler & Schmidt, 2006). Kiesler (2006) states therefore that the interpersonal (evoking style) of "person A" can be validly defined and measured by assessing the covert responses or impact messages evoked within "person B" who has interacted with or observed "person A".

Kiesler (1996b) asserts that a major assumption is that although the decoders are not ordinarily aware of the affective cognitive reactions constituting their impact messages, their reactions are potentially available to awareness. He continues to assert that some introspection (aided or unaided) by a decoder can provide an invaluable source of information about the interpersonal pattern of an interactant, and the generalisable interpersonal consequences an interactant has on his or her

life. His theory specified further that individuals encounter emotional problems when, as a relatively consistent consequence of their interpersonal communications, they experience (a) more or less enduring unaccountable aversive feelings such as anxiety, depression or self derogation (b) that their interpersonal communications lead to unaccountable aversive counter-communications and/or (c) that abnormal behaviour stems from their inability to detect the self defeating, unsuccessful aspects of their communication.

Kiesler and Schmidt (2006, p48) sum up Kiesler's 1982 Interpersonal Circumplex model as follows:

"A person's interpersonal behaviours are designed to evoke reactions ("complementary responses") from interactants that confirm, reinforce, or validates the person's self-presentation and that enable the person to continue to enact favoured interpersonal acts. At the core of this bidirectional influencing process we find individuals negotiating two major relationship issues, control and affiliation. Transaction partners continually negotiate who is to be more or less in control of their interactions and the level of friendliness or hostility that will predominate. These two basic dimensions fall on the vertical and horizontal axes of what is called the Interpersonal Circle or Interpersonal Circumplex.'

A key tennant of interpersonal theory is that behaviours are evenly distributed around the two axes of control (characterised by a relationship between dominance and submission) and affiliation (characterised by a relationship between friendliness and hostility) (Gallo, Smith & Cox, 2006; Lillie, 2007; Kiesler & Schmidt, 2006; Van Denburg & Kiesler, 2002). Various categories of behaviour are found around the circumference of the circle, and are made up of blends or combinations of the two basic behaviours. Kiesler's 1982 Interpersonal Circumplex has sixteen categories identified and placed equidistantly around the circumference of the circle. These sixteen categories can be seen represented below in Figure 3.3. The 16 interpersonal behaviour segments are labelled A to P and are positioned in the centre of the model, with mild to moderate levels of behaviours being marked A1 to P1, and extreme levels A2 to P2. (Koortzen & Mauer, 2005).
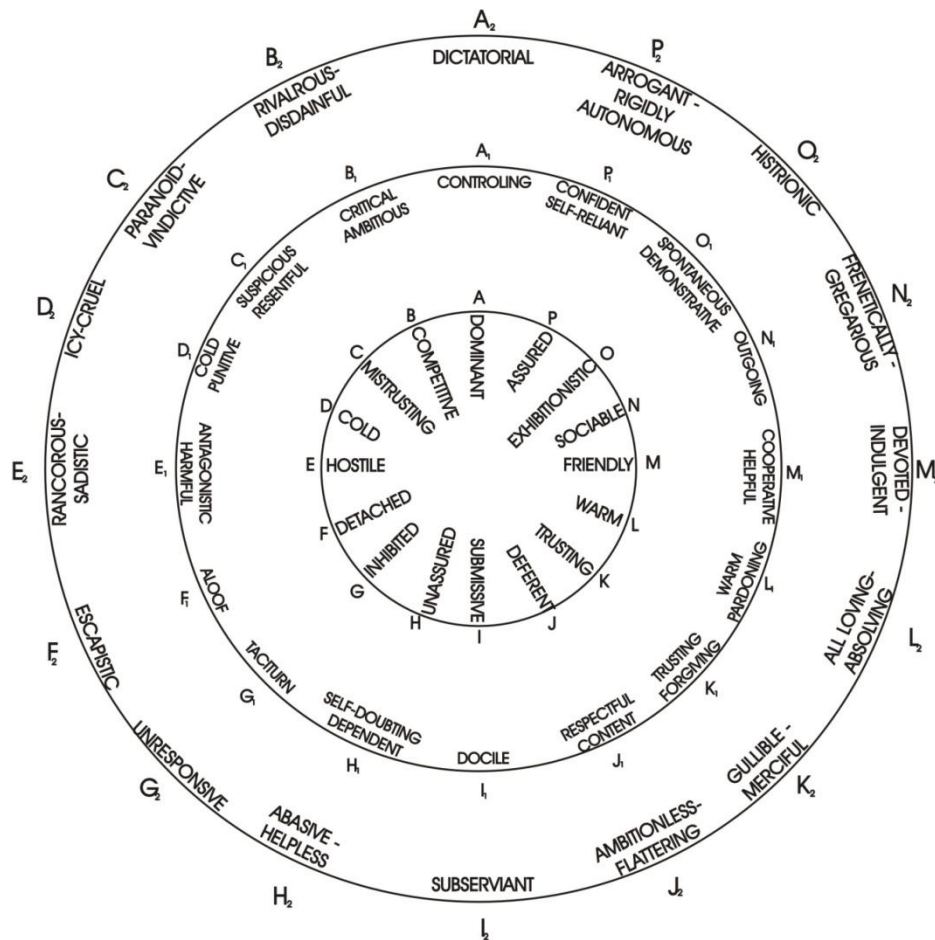
Figure 3.3 Kiesler's 1982 Interpersonal Circumplex. (Kiesler & Schmidt, 2006 p. 48).

3.2.1.1 The principle of complementarity

A central construct of interpersonal theory is the reciprocity or complementarity which governs exchanges of human interactants, in the context of human relationships (Kiesler, 1996a, 2004; Kiesler & Schmidt, 2006). The interpersonal principle of complementarity specifies ways in which a person's interpersonal behaviour evokes or elicits restricted and specific classes of behaviour from an interactional partner, and vice versa, leading to a self-sustaining and reinforcing system (Acton, 1998; Kiesler, 1996a; Lillie, 2007; Lock & Sadler, 2007; Markey & Markey, 2006). Acton (1998) contends that the principle of complementarity can be defined on the interpersonal circumplex, so that reciprocity tends to occur on the control of power axis and correspondence tends to occur on the affiliation axis.

Kiesler (1983) states, that a person's interpersonal actions tend to initiate or evoke from an interactant complementary responses, which can be defined as a two dimensional interpersonal space. A particular behaviour and the reaction evoked by it are said to be complimentary if they are (a) similar with respect to affiliation (hostility evokes responses of hostility and friendliness evokes responses of friendliness) and (b) reciprocal with respect to control (dominance evokes responses of submission and submission evokes responses of dominance) (Kiesler, 1983, 1996a). Put more simply, agreeable behaviours probably cause extraverted behaviours in others and vice versa, while disagreeable behaviours probably cause introverted behaviours in others and vice versa (Acton, 2004).

Kiesler (1996a) states that a person's expectancies regarding the reactions of an interactant to his or her interpersonal behaviours are defined and described by the specific content of his 1982 Interpersonal Circumplex, complementary on the circle to the person's preferred segment of interpersonal behaviour. Complementarity is specifically defined in terms of interpersonal behaviour as operationalised by the two-dimensional interpersonal circle and occurs on the basis of reciprocity (Kiesler, 1996a). Complementarity can be graphically represented on the interpersonal circumplex as seen in Figure 3.4 below:
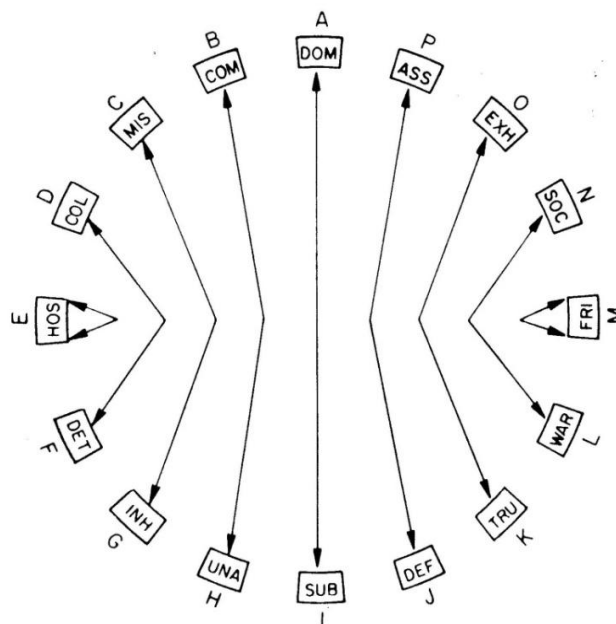
FIGURE 3.4 Complementarity Quadrants and Segments of the (1982) Interpersonal Circumplex. (Kiesler, 1996a, p. 92).

Horowitz *et al.* (2006) state that while the principle of complementarity has been confirmed empirically for behaviours on the friendly side of the interpersonal space, the same is not always true for the behaviours on the hostile side of the interpersonal space. They state that hostile– dominant behaviour frequently leads to more hostile-dominant behaviour, rather than hostile-submissive behaviour as hypothesised, and that hostile-submissive behaviour frequently leads to friendly-dominant behaviour, rather than the supposed hostile-dominant behaviour. For this reason they argue firstly, that a given behaviour invites (not evokes) a desired reaction from the partner. Secondly, that the complement of a behaviour is a reaction that would satisfy the motive behind that behaviour. Thirdly, non-complementary reactions induce negative affect, in that, if the motive is unclear, the meaning of the behaviour is ambiguous. This ambiguity helps explain failures in social support, miscommunications in everyday life, and features of most personality disorders (Horowitz *et al.*, 2006).

3.2.1.2 Acomplementarity and anticomplementarity

An acomplementary response is when an individual reacts to another with behaviour which corresponds with the behaviour of that other individual (Kiesler, 1996a). This could lead to a crisis in the relationship and one of the individuals will need to change his or her style in order for the relationship to continue. Acomplementarity can be seen below in Figure 3.5.
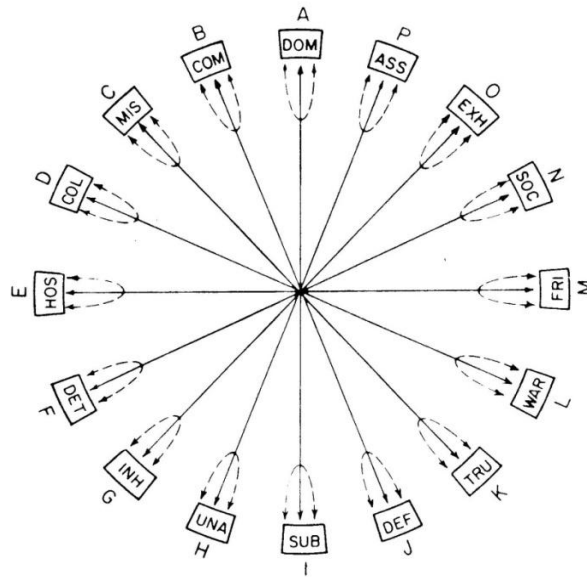
FIGURE 3.5 Acomplementary Quadrants and Segments of the 1982 Interpersonal Circle (Kiesler, 1996a, p. 95).

In contrast to complementarity, anticomplementarity, or rather the antidote can be defined as the opposite of the complement (Acton, 2004). Anticomplementary relationships tend to be devalued more than complementary ones, with people enacting anticomplementary behaviours being likely to be avoided or ignored by the other person (Kiesler, 1996a). Anticomplementarity is represented in Figure 3.6.
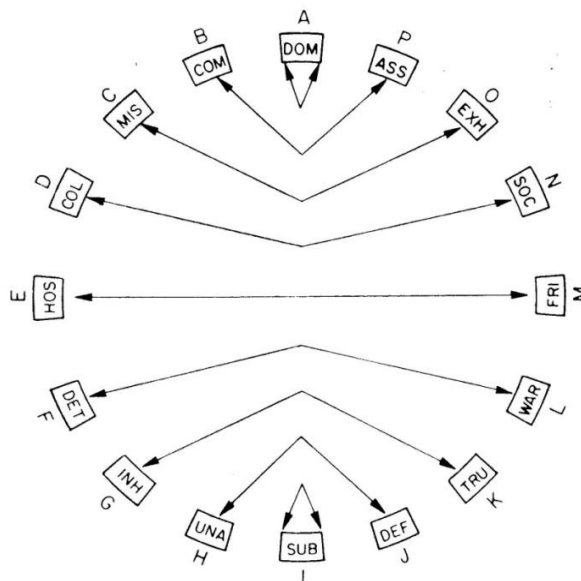
FIGURE 3.6 Anticomplementary Quadrants and Segments of the 1982 Interpersonal Circle (Kiesler, 1996a, p. 96).

Dyads characterised by complementary interactions tend to form stable relationships, while dyads characterised by anticomplementary interactions are unstable and tend to terminate further interaction. Dyads which are characterised by acomplementarity are unstable and conducive to change either towards greater complementarity and thus stability, or toward greater anticomplementarity and termination (Kiesler, 1996a).

3.2.2 The Octant Version of the Interpersonal Circumplex

Although there are sixteen categories on Kiesler's 1982 Interpersonal Circumplex, most available circle inventories are scored as octant scales, with the circumplex being divided into eight "slices" rather than sixteen (Kiesler, 1996a, 2004; Kiesler & Schmidt, 2006; Lock 2005). These eight Interpersonal Styles arranged around the circumplex represent different 'blends' of the two-dimensions of dominance and affiliation, and make up what is referred to as the octant version of the Interpersonal Circumplex (Kiesler, 2004; Markey & Markey, 2006).

The octants are evaluated by combining the scores of adjacent segments in the model (Kiesler, 1996a; Koortzen & Mauer, 2005). Koortzen and Mauer (2005) explain that the octant approach is often useful when doing empirical research, and state that the distinctions between the adjacent segments with 16 categories are sometimes difficult to define. The octant model therefore allows for more clear distinction between behaviours. Kiesler (1996a) describes the octant version as a representation of enduring patterns of interpersonal behaviour enacted by individuals over long periods and is presumed to demonstrate temporal stability and cross situational consistency.

Kiesler (2004) describes the eight categories in the octant version as follows, and is represented in Figure 3.7 below:
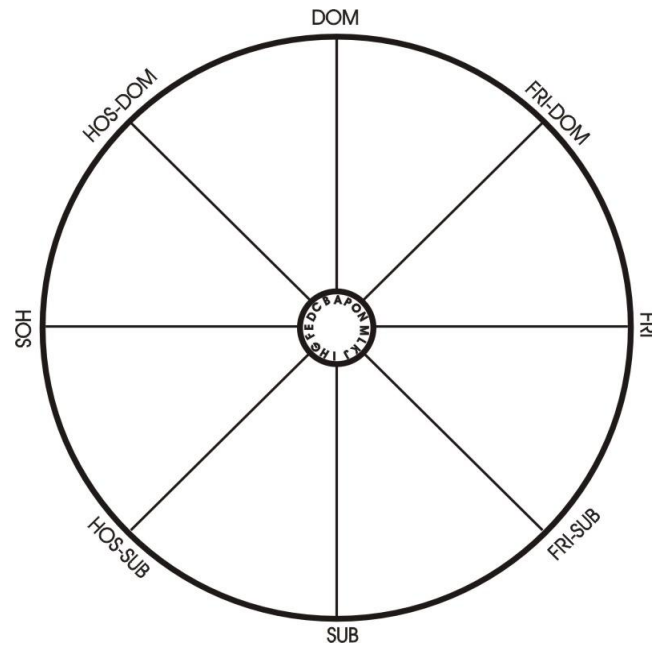
FIGURE 3.7 The Octant Version of the Interpersonal Circumplex (Kiesler, 2004).

Markey and Markey (2006) state that the eight Interpersonal Styles arranged around the circumplex represent different 'blends' of the two dimensions of dominance and affiliation and are labelled as follows:

- Dominant (DOM),
- Hostile-Dominant (HOS-DOM),
- Hostile (HOS),
- Hostile-Submissive (HOS-SUB),
- Submissive (SUB),
- Friendly-Submissive (FRI-SUB),
- Friendly (FRI) and
- Friendly-Dominant (FRI-DOM).

As Kiesler's (1982) interpersonal circumplex represents one of the most sophisticated elaborations of interpersonal classification (Hafkenscheid, 2005), and makes it easier to define the distinct behaviours in a way that avoids some of the confusion that emerges from the circumplex with the 16 categories (Acton & Revelle,

2002; Koortzen & Mauer, 2005), the octant version was chosen for this study. To support the octant version of the interpersonal circumplex, the Impact Message Inventory – Circumplex was designed to describe persons distinctive interpersonal evoking behaviour by means of measuring the impacts reported by interpersonal partners and decoders, and is thus completed by a person who has interacted with or observed the individual being assessed (Kiesler & Schmidt, 2006).

3.3   CRITICISM OF THE INTERPERSONAL CIRCUMPLEX

Acton and Revelle (2002) acknowledge that one advantage of the Interpersonal Circumplex is that it provides an explicit structural model of the domain and an integrative framework specifying the relations of variables to each other. Thus, the Interpersonal Circumplex does provide a taxonomy of interpersonal variables.

However, the Interpersonal Circumplex model is criticised for allowing the mapping of fuzzy or unclear concepts, defined as classes of behaviour, but without sharp boundaries. (Acton & Revelle, 2002; Horowitz *et al.,* 2006).

Acton and Revelle (2002) contend that two kinds of fuzziness can be distinguished. Firstly, fuzziness in which a variable is an imperfect measure of one particular dimension (where the vector length indicates the level or degree of the behaviour). Secondly, fuzziness in which a variable measures more than one dimension (measured by the angular location of the variable).

Further criticism of the circumplex structure is made on the grounds that it is optimally represented by only two dimensions, that there is always assumed to be equal spacing between the variables, and that these variables also are assumed to have a constant radius from the centre of the circle, implying that all variables have equal communality on the two circumplex dimensions. (Acton & Revelle, 2004; Plutchick & Conte, 1997).

A further criticism lodged by Plutchick and Conte (1997) is that the most common method of assessing the circumplex structure has been the "eyeball-test" where variables are plotted in a two dimensional space using their factor loadings as

coordinates and are said to comprise a circumplex if they appear to form a circle. This method has intuitive appeal but may often be considered unsystematic.

Markey and Markey (2006) criticise the circumplex model, by stating that although these models facilitate how we think and analyse interpersonal relationships and styles, it also limits the view and complexity of interpersonal relationships and personality. They state that it only considers two dimensions of personality. In terms of the big five personality factors, Markey and Markey (2006) argue that it covers extroversion and agreeableness, but ignores neuroticism, conscientiousness and openness to experience, which also play a role in interpersonal relationships.

Despite the above criticisms, the interpersonal circumplex has become the most widely adopted model for conceptualising, organising, describing and assessing interpersonal dispositions (Lock, 2000; Lock & Sadler, 2007). Kiesler's 1982 Interpersonal Circumplex also represents one of the most sophisticated elaborations of interpersonal classification (Hafkenscheid, 2005).

INTEGRATION: ESTABLISHING THE LINK BETWEEN INTERPERSONAL STYLE AND SALUTOGENIC CONSTRUCTS

As stated earlier in this paper, no significant body of research could be located dealing with a relationship between Kiesler's Interpersonal Styles as defined in the circumplex and constructs of wellness. Although Kiesler (2000) appears to subscribe to the medical or disease orientated model of psychology, he acknowledges dissatisfaction with this approach and acknowledges the challenge of holistic medicine, which postulates that "although a disorder may present as primarily physical or as primarily mental, it always constitutes a disorder of the whole person" (Kiesler, 2000, p52).

Kiesler (2000) further advocates reformulating our approaches to human functioning by developing a "positive wellness" approach, which will focus attention on the ongoing living process rather than on categories of disease.

According to Hafkenscheid (2005), Kiesler's interpersonal communication theory represents one of the most sophisticated elaborations of interpersonal and communication based psychopathology. He postulates that interpersonal communication theory distinguished between adjusted and maladjusted individuals in terms of the rigidity and the extremity of the impact messages that maladjusted individuals elicit in others. Psychologically healthy individuals, he contends, affect people with a specific set of psychological behaviours which elicit appropriate responses, while maladjusted individuals (including psychiatric patients) typically affect others by applying inflexible and strong interpersonal pressures (Hafkenscheid, 2005).

Lock and Sadler (2007) have done research which studied the effect of Self-Efficacy behaviour on the domain of interpersonal interactions (particularly with regards to the Friendliness subscale of the Interpersonal Circumplex). They state that interpersonal and social cognitive approaches are highly compatible. In their research they use the key construct of interpersonal theory to organise and measure key constructs of efficacy expectations (Self-Efficacy), to predict and understand the

interpersonal behaviours expressed and satisfaction experienced in unscripted, didactic interactions.

Lock and Sadler (2007) state that interpersonal Self-Efficacy is a person's confidence in his or her ability to perform a specific type of interpersonal behaviour, whether it is, by way of example, giving or receiving orders. They state that people are most likely to do what they believe they can do. They emphasise that significant research exists around the concept of Self-Efficacy, but not in the interpersonal domain, in accordance with interpersonal theory. In their findings they state that dominance efficacy and values predict dominant behaviours, and that partners of behaviour show reciprocity with respect to expressed dominance.

Other studies which look at wellness and interpersonal behaviour include studies focussing on interpersonal behaviours between patients and medical practitioners (Campbell, Auerbach & Kiesler, 2007). In particular, studies done tend to often focus on how much responsibility and participation patients are able to exercise in their own treatment or recovery programmes. Campbell, *et al.* (2007) state that the salutary effects of giving patients more responsibility have not been definitively established and there is increasing recognition that more responsibility may not be suitable for all patients. They initiated a study which evaluated both patients and health care providers. The findings indicated that while patients desired and experienced friendly submissive providers, in reality this lowered patient satisfaction. While patients were more satisfied with health providers who were friendlier, rather than hostile, there was no apparent difference in satisfaction with regard to dominant or submissive qualities.

Lillie (2007) states that Interpersonal Styles used by a psychologist may impact on the wellness of the client, and in particular impact on the clients feelings of Self-Efficacy. This, according to Lillie (2007), implies a link between the Interpersonal Circumplex and wellness, but from the perspective of how the client is treated by the therapist. The therapist might therefore make the client feel unsure if he or she is too dominant and somewhat competitive. Lillie (2007) proposes that a more collaborative style, using the styles categorised on the circumplex, may lead to improved Self-Efficacy.

Given the prevalence of the pathogenic approach to studying psychology, it has been argued that there is a place for the study of a more Salutogenic approach, which emphasises the origins of psychological wellness and strength (Strümpfer, 1990, 1995, 2002, 2006). Strümpfer, (2002) further postulates that normal (and supernormal) functioning cannot be studied purely within a problem-orientated framework which the medical model offers. As the field of Industrial and Organisational Psychology concerns itself with optimal human functioning in the world of work rather than the pathological aspects, the field of Salutogenesis is worth studying. Kiesler (2000) states that there is not enough understanding of why certain people, given the same set of circumstances, cope better and are less susceptible to developing pathologies. He therefore acknowledges the need to study human functioning from the Salutogenic paradigm as advocated by Antonovsky (1987), Seligman (2003), and Strümpfer (1990, 1995, 2002, 2006).

At the same time, the literature related to Interpersonal Psychology is characterised by a strong bias towards psychopathology (Anderson, 2001; Kiesler, 1996a). In particular, much research has been done which shows that various pathologies show strong correlations with Interpersonal Styles which have been characterised as falling into the submissive hostile quadrant of Kiesler's Interpersonal Circumplex (Anderson, 2001). At the same time, the literature dealing with certain Salutogenic traits indicates that people who show a strong propensity to these traits cope better with life (Antonovsky, 1979; Bandura, 1986; Breed, *et al.,* 2006; Coetzee & Cilliers, 2001; Jackson & Rothmann, 2001; Rotter, 1966, 1975; Strümpfer, 1995, 2002, 2006). The limited research done in this area does seem to indicate or imply that there is a likely relationship between Interpersonal Styles, as categorised in circumplex models, and Salutogenic constructs (Campbell, *et al.*, 2007; Hafkenscheid, 2005; Lock & Sadler, 2007). Lock and Sadler (2007) further contend that circumplex approaches do not appear even to be spoken of with regards to the fields of health psychology, mental wellness or Salutogenesis.

Koortzen and Mauer (2005), assert that interpersonal behaviours which fall into the Dominant-Friendly quadrant of Kiesler's 1982 Interpersonal Circumplex are the most appropriate, relevant and effective styles adopted by managers in the work

environment. The question could therefore be asked as to whether there is a relationship between psychological wellness, or Salutogenic constructs, such as Sense of Coherence, Locus of Control and Self-Efficacy and Dominant-Friendly Interpersonal Styles. With this in mind, this study tries to establish whether there is a relationship between the "positive" constructs discussed in Chapter 2 and Kiesler's 1982 Interpersonal Circumplex.

3.4   CHAPTER SUMMARY

This chapter gives a literature review of interpersonal psychology and in specific Kiesler's 1982 Interpersonal Circumplex as a theoretical basis for the study. The background to interpersonal psychology was discussed from a historical perspective. Further to this, Kiesler's 1982 Interpersonal Circumplex was discussed and explained. The octant version of the circumplex was also discussed and criticisms of the circumplex approach to studying personality were briefly examined. Finally, the literature was discussed in the light of the lack of research which looks at interpersonal psychology from the wellness paradigm, which lays the foundation for the study which will be described in Chapter 4 hereafter.

The empirical study will be discussed in Chapter 4.

CHAPTER 4: EMPIRICAL STUDY

The purpose of this chapter is to provide an outline or the empirical methodology used in this study. The population and sample will be discussed first. Thereafter, the measuring instruments employed in the study will be discussed and the choice for each will be justified. The gathering of the data will be discussed next followed by the processing thereof. A formulation of the hypotheses will then be given followed by a short chapter summary.

4.1   POPULATION AND SAMPLE

This study was conducted within a large manufacturing organisation which produces perishable food and beverage products. It is the largest of its kind in South Africa and is the market leader for the products that it manufactures, sells and distributes through hypermarkets, supermarkets, convenience stores, superettes, wholesalers and catering and hospitality institutions throughout the Republic. It also distributes and exports its products into other countries in Sub-Saharan Africa and South America. It had a total of 5986 employees at the time of the questionnaires being sent out but was in the process of restructuring and downsizing during the same period. That process is now complete.

The survey was done exclusively in the Logistics and Commercial Divisions as a matter of convenience as the researcher did not have adequate access to the Production Division within the organisation. A total of 3876 employees were employed within these two divisions at the time of the survey. The study was done exclusively among admin staff from Patterson Grading B2 and upwards for the purposes of ensuring that all who partook had the adequate level of literacy needed to complete the questionnaires. Workers excluded consisted of lower level staff in the organisation, such as warehousing personnel, drivers, van assistants, merchandisers and general workers to name a few.

There were 1645 individuals who fell into the category of B2 and upwards within the Logistics and Commercial Divisions. Therefore, the population for this study is made

up of (N=1645) who vary in terms of job context, age, ethnic group, gender and experience. A random sample of 275 of these staff members was selected for the study. A total of 223 sets of questionnaires (81%) were returned of which 207 (75.2%) were usable for the study and the remainder had to be discarded as they were not fully completed or they were incorrectly completed. The final sample used in the study was therefore N=207.

At project level the general methodological approach was a quantitative approach, with questionnaires being used for the purposes of data collection, and statistical methods being used for the data analysis (Mauton & Marais, 1996).

4.2 MEASURING INSTRUMENTS

Four measuring instruments were used in total for this study, as well as a biographical questionnaire. These will all be discussed in terms of their aim, rationale, administration, interpretation, validity, reliability and the justification for the inclusion for each instrument in the study.

4.2.1 Sense of Coherence

The Orientation to Life Questionnaire (Antonovsky, 1987) was used to measure the Sense of Coherence construct.

4.2.1.1   Aim and rationale

This questionnaire sets out to measure Sense of Coherence which is shown by means of one total score made up of thee dimensions, as mentioned in the literature review. Namely: Comprehensibility, manageability and meaningfulness as stated above can be described or defined as follows:

- **Comprehensibility** - The certainty by which one can anticipate possible events and the degree that perceived stimuli make cognitive sense.

- **Manageability** – The degree to which one believes that one has the available resources to deal with a challenge and the development of these resources (either one's own or those of a legitimate other) will address the challenge and;

- **Meaningfulness** - the feeling that life makes sense and that it is worthy of investment and commitment and engagement of these resources.

Antonovsky (1987)

The instrument measures all three dimensions, with scores in each of the dimensions being seen as supportive of the total score. The Orientation to Life Questionnaire is likely to produce a single factor solution which will not reflect the three components of comprehensibility, manageability and meaningfulness as separate (Antonovsky, 1993). A high total score represents a strong Sense of Coherence.

The instrument aims to operationalise the Sense of Coherence construct as developed by Antonovsky (1987).

4.2.1.2   Administration

The questionnaire is a self-completion, paper based questionnaire, made up of 29 questions which the respondent has to answer. The items are set up using a seven point Likert scale. Thirteen of the items (1, 4, 5, 6, 7, 11, 13, 14, 16, 20, 23, 25, and 27) are formulated in the negative and therefore have to be reverse scored. The items comprise eleven measuring comprehensibility, ten measuring manageability and eight measuring meaningfulness (Antonovsky, 1987).

All the items are then added to form a total score, which is the sum of the three subscales with Sense of Coherence being reported as a single score.

A high score indicates a strong Sense of Coherence. The three sub-components provide a profile of the respondent's Sense of Coherence.

4.2.1.3   Reliability

Evidence from 26 studies conducted in 20 countries for the reliability of this questionnaire shows Cronbach Alpha measures for internal consistency ranging from 0.82 to 0.95 (Antonovsky, 1993). In a South African study, Strümpfer and Wissing (1998) reported Cronbach Alpha's ranging from 0.74 to 0.94.   The Orientation to life questionnaire also shows high test-retest reliability (Basson & Rothmann, 2002; Cilliers & Kossuth, 2004).

4.2.1.4   Validity

The face and content validity of each item was scrutinised by three of Antonovsky's colleagues who were familiar with the field of study and his theory (Antonovsky, 1993). Each item was evaluated to refer clearly to one, and had to exclude any of the other Sense of Coherence dimensions. Construct validity was reported to vary between 0.38 and 0.72 (Antonovsky, 1993). According to Cilliers and Coetzee (2003), Sense of Coherence has been established to be one of the best indicators of wellbeing and provides reliable results across cultures in the South African context. Studies have shown evidence for convergent validity, with negative correlations being found between anxiety and Sense of Coherence, and positive correlations between health variables and Sense of Coherence (Breed *et al.,* 2006).

4.2.1.5   Validation for the inclusion of the assessment instrument

The instrument is well accepted in the field of psychology as a valid and reliable instrument for measuring Sense of coherence (Antonovsky, 1993; Cilliers & Coetzee, 2003; Cilliers & Kossuth, 2004). The Orientation to Life Questionnaire is also culturally non-specific and can be used effectively for cross-cultural measurement and research (Cilliers & Coetzee, 2003). The questionnaire is also based on a solid theoretical foundation and is used in research worldwide. In addition, it is firmly based on Salutogenic theory (Antonovsky, 1987, 1993). The scale is thus seen as suitable for this study.

4.2.2 Locus of Control

Scheper's (1999) Locus of Control Questionnaire (Third edition) was used to measure this construct.

4.2.2.1   Aim and rational

This instrument measures the three factors Schepers (2005) identifies, namely autonomy, external control and internal control.

- **Autonomy** – The attempt to master or be effective in the environment and impose one's own wishes and designs upon it.
- **External control** – The individual's belief that outcomes are independent of his/her own behaviour
- **Internal control** – The individual's belief that outcomes are a consequence of his/her own behaviour.

(Schepers, 2005)

The instrument measures all three dimensions, with scores in each of the dimensions seen as supportive of the total score (Schepers *et al.*, 2006). Schepers *et al.* (2006) assert that autonomy and internal control are closely correlated in that it is expected that a person high on autonomy would seek control of situations that offer possibilities of change and take initiative. By the same token, there is an inverse correlation between external control and the other two variables.

4.2.2.2   Administration

This paper based, self completion questionnaire consists of 88 questions which the respondent has to answer. The questionnaire measures the three subscales, with 28 items measuring internal control, 26 items measuring external control and 34 items measuring autonomy (Schepers, 2005). Each item is judged on a seven point Likert scale which ranges from one (1) denoting "not at all" to seven (7) denoting "to

a great extent" (Bothma & Schepers, 1997). The three scales give a comprehensive view of Locus of Control.

4.2.2.3   Reliability

In a study by Schepers *et al.* (2006) applied to a sample of 2091 first-year university students, highly acceptable reliabilities were obtained. Cronbach alphas of 0.88, 0.87 and 0.82 were obtained in respect of Autonomy, External Control and Internal Control respectively. No international studies using the Locus of Control Inventory could be found in the literature.

4.2.2.4   Validity

Schepers, Gopp and Geldenhuys (2006) confirm the construct validity of the scale through a factor analysis, which confirmed the three factor structure. It was found that external control and internal control were essentially uncorrelated (r=-0.160), and not merely opposites (Schepers, 2005). It was further found that Autonomy and Internal control are substantially correlated (r=0.563) and share 31.7% common variance.

4.2.2.5   Validation for the inclusion of the assessment instrument

According to Schepers (2005), there are a number of instruments measuring Locus of Control. He states that the Health Locus of Control Scale, the Multidimensional Health Locus of Control Scale and the Economic Locus of Control Scale are well developed scales with acceptable reliabilities, but that they are too specific for general use.

Schepers (2005) continues to assert that the scales of Rotter and Duttweiler are promising from a content viewpoint, but are poorly developed from a psychometric viewpoint. He states that, in the final analysis, there is not a Locus of Control Scale that is not contestable.

Scheper's Locus of Control Inventory (Third Edition) (1999) is a reliable and valid instrument suitable for general use in the South African environment and was therefore selected for this study.

4.2.3 Self-Efficacy

Bandura's (1977) Self-Efficacy scale was used to measure the Self-Efficacy construct.

4.2.3.1   Aim and rational

 Bandura's (1977) scale is used to measure Self-Efficacy. A low score on the scale indicates the respondent's self belief in his or her abilities and a high score indicates the absence of the belief. It is important to note that while the other questionnaires used in this study indicate a strong presence of the construct being measured with a high corresponding score, Bandura's Self-Efficacy scale makes use of a low score to indicate high efficacy beliefs.

4.2.3.2   Administration

The self efficacy scale consists of 27 statements, and makes use of a seven point Likert scale. The items are based on the respondent's feelings about and attitude to a variety of tasks, and he or she is required to indicate the extent to which he or she agrees or disagrees with each of the 27 statements on the scale. One (1) gives an indication that the respondent strongly agrees and seven (7) that the respondent strongly disagrees. All the items are added and the score is totalled to give one score. As the questions are stated in the negative, a low score indicates a strong personal belief in the respondents Self-Efficacy.

The total score indicates the respondent's level of Self-Efficacy. According to Bandura (1989), the stronger the sense of Self-Efficacy, the more confident the individual will be, and the more likely to take risks. Hackett and Betz (1981) found that subjects who were successful increased their feelings of Self-Efficacy and their ratings with regard to that specific task, whereas the opposite was true for subjects

who perceived themselves as failures. Bandura (1977) also stated that performance accomplishments are an influential source of information regarding an individual's levels of Self-Efficacy.

4.2.3.3   Reliability

Kossuth (1998) reported Cronbach Alpha coefficients for internal reliability of between 0.71 and 0.86. A study by Marais (1997) obtained Alpha coefficients of 0.71 and 0.83. More recently, studies by Baloyi (2000) and Mtsweni (2007) yielded Cronbach Alpha coefficients of 0.70 and 0.72 respectively. These findings are supported by international research such as that conducted by Stanley and Murphey (1997) where Cronbach Alpha coefficients of between 0.71 and 0.86 were reported. These findings validate the reliability of this instrument.

4.2.3.4   Validity

Bandura (1977) cites studies that have provided evidence of validity of this instrument, and states that Self-Efficacy is a valid predictor of performance. He suggests that Self-Efficacy beliefs may be reciprocally related to performance, and that they may be both the cause and effect of performance, as performance accomplishments tend to affect feelings of Self-Efficacy and well formed beliefs in one's ability (Self-Efficacy), which in turn affects performance (Bandura, 1977; Bandura, 1982; Feltz, 1982).

4.2.3.5   Validation for the inclusion of the assessment instrument

Bandura's (1977) Self-Efficacy scale is seen as both valid and reliable, and is used extensively in research. Its underlying theory has been effectively generalised to many domains within the field of psychology and has been used in such diverse areas as the workplace and psychotherapy. Rosenbaum (1980) showed that the instrument showed low, but statistically significant correlations with Rotter's (1966) Locus of Control scale. In South Africa, Bandura's (1977) Self-Efficacy scales have been found to be valid and reliable by researchers such as Kossuth (1998), Marais (1997) and Mtsweni (2007).

4.2.4 Interpersonal Style

The Impact Message Inventory (Octant Version) - (IMI-C) (Kiesler, 2006) was used to measure interpersonal style using the octant version of the interpersonal circumplex.

4.2.4.1   Aim and rational

According to Kiesler (2006), people tend to show varying degrees of repetitiveness in the kinds of interactions they attempt with others, and psychologists tend to disagree with the consistency of these interactions. The conceptual underpinnings of the IMI-C derive from contemporary interpersonal theory and focus on the underlying relationship negotiations between individuals during their social interactions (Kiesler, 2006).   The IMI-C is based on the major constructs in Kiesler's interpersonal communication theory for personality.

The IMI-C was designed to describe a person's distinctive interpersonal evoking behaviour by measuring impacts reported by interpersonal partners (decoders). It serves to tap into the automatic, relatively unconscious sets of emotional and other covert reactions we have to other persons, and is therefore completed by a person who either interacts with or observes the subject. The IMI-C is both a transactional and a self report inventory (Kiesler, 2004; Kiesler & Schmidt, 2006).

4.2.4.2   Administration

The IMI-C measures eight categories or subscales of interpersonal behaviour arranged equidistantly around the circumference of Kiesler's 1983 interpersonal circle (Kiesler & Schmidt, 2006).   The eight subscales are dominant, hostile-dominant, hostile, hostile-submissive, friendly-submissive, friendly, and friendly-dominant. Each of the scales is measured by seven items, yielding a total of 56 IMI-C items. The seven items for each scale consist of variations of content measuring direct feelings, action tendencies, and perceived evoking messages.   The IMI-C takes the form of a paper based questionnaire, which requires the respondent to

answer each of the 56 questions using a four point Likert scale (Kiesler & Schmidt, 2006).

4.2.4.3 Reliability

According to Kiesler and Schmidt (2006), internal reliability coefficients were calculated for the IMI-C on 16 different samples embedded within the different IMI-C studies. They summarise the findings by stating that the median alpha coefficients obtained for each of the octant scales ranged from 0.69 to 0.85 indicating strong to excellent reliabilities. Of the 128 individual coefficients presented for the 16 samples, 75% are above 0.70 and only 8.6 are below 0.60. Friendly, Hostile, and Hostile-Dominant octants had median coefficients above 0.80; Dominant, Submissive, Hostile-Submissive and Friendly-Submissive octants had median alpha coefficients in the mid 0.70s; for Friendly-Dominant median alphas anchored the low end at 0.69. These coefficients indicate strong internal reliabilities for the IMI-C scales (Kiesler & Schmidt, 2006). No South African studies utilising the IMI-C could be located in the literature.

4.2.4.4 Validity

According to Kiesler and Schmidt (2006), it is essential that circle measures such as the IMI-C conform to circumplex structures where scales are evenly distributed around the circle to allow for valid tests. Schmidt, Wagner and Kiesler (1999) used three analytic strategies to evaluate the complexity of the IMI-C scale. These three strategies, the principal components analysis (PCA), multidimensional scaling analysis (MDS) and confirmatory factor analysis (CFA), have become the standard for interpersonal circle measures (Kiesler & Schmidt, 2006).

Schmidt *et al.* (1999) report that the IMI-C conforms to circumplex structures, being ordered in a roughly circular fashion, within an average of 9 degrees from their predicted locations, around the dimensions of control and affiliation. Furthermore, the MDS showed that the location of the IMI-C octants, relative to control and affiliation, are stable from sample to sample confirming that the scales relate to each

other across highly heterogeneous samples. Schmidt *et al.* (1999) therefore concluded that the IMI-C demonstrated adequate structural validity.

According to Conoley and Impara (1995), gender differences may affect correspondent scores, with males responding more strongly to Submissive and abrasive subscales than female respondents. Males also tended to score higher on mistrust when rating female targets, whereas female respondents tended to have greater mistrust when responding to male targets. Males also score higher on friendliness when rating male targets than when rating female targets.

4.2.4.5   Validation for the inclusion of the assessment instrument

The IMI-C was chosen as it is unique amongst interpersonal circumplex inventories found within contemporary interpersonal theory of personality (Kiesler & Schmidt, 2006). The IMI-C scale also has highly acceptable reliability coefficients and is thus selected for this study. Schmidt *et al.* (1999) showed through their application of three analytic strategies, which have become the standard for interpersonal measures, that the IMI-C demonstrates adequate structural validity.

4.2.5 Biographical Questionnaire

Information on gender, race, age and tenure were gathered using the biographical questionnaire (See Appendix A).

4.3   DATA GATHERING

A covering letter and written permission from the CEO and the HR Director of the organisation were obtained in order to get permission to do the study. The three Salutogenic questionnaires and the IMI questionnaire were put together in a booklet form and a separate answer sheet pack, with the biographical questionnaire and the four answer sheets in the corresponding order to the booklet were hand delivered to all 275 prospective respondents.

The researcher explained the procedure to each of the candidates and asked if there were any questions before giving the candidate a time frame to complete the questionnaire. The researcher personally followed up and collected each questionnaire from each candidate. In some of the outlying branches the candidate appointed staff members to follow the procedure on his behalf.

The questionnaires took 2 months to hand out, retrieve and check for correctness. In the end there were 207 usable, fully completed questionnaires and it was decided that those 207 questionnaires would suffice to make up the sample, for the purposes of this study.

4.4 DATA PROCESSING

The statistical processing of the data will be presented in terms of quantitative procedures and statistical techniques. The Statistical Package for the Social Sciences or SPSS (1999) was used for the statistical calculations.

The processing of the data for the study consisted of the following stages:

1. Biographical data was coded.
2. The reverse coding and scoring of the instruments was done.
3. The reliability analysis for instruments was done.
4. Comparisons of groups were done using a t-test.
5. Comparisons of the mean scores of sub groups were done by means of a one-way analysis of variance.
6. A Pearson product moment correlation was done in order to establish the correlations between each of the three Salutogenic constructs, and each of the eight interpersonal styles indicated the octant variation of the interpersonal circumplex.

4.4.1 Biographical Data

Calculations for 4 of the biographical variables were done, namely gender, race, age and tenure (These results are reported in Chapter 5).

4.4.2 Reliability Analysis of the Measuring Instruments

Cronbach's alpha was calculated for each of the scales used as part of the reliability test, to assess how valid the results would be if the sample size were to be increased. Coakes and Steed (2003), state that there are a number of different reliability coefficients. One of the most commonly used is the Cronbach's alpha which is based on the average correlation of items within a test if the items are standardised. If the items are not standardised, it is based on the average covariance among the items. The Cronbach's alpha can range form 0 to 1.

Cronbach Alpha coefficients of between 0.50 and 0.59 are sufficient for research purposes, while coefficients between 0.60 to 0.69 indicate acceptable levels of internal reliability, those falling between 0.70 and 0.79 indicate high levels of internal reliability and 0.80 and higher are considered ideal (Nunnally, 1978; Nunnally & Burnstein, 1994; Stevens, 1992). In this study, a cut off of 0.6 has been applied as an indicator of acceptable levels of internal reliability.

4.4.3 Scoring and Scaling of the Measuring Instruments

Five questionnaires (the biographical questionnaire, Locus of Control questionnaire, Self-Efficacy questionnaire, Orientation to Life Questionnaire and Impact Message Inventory – Circumplex) were marked separately. A reverse coding and scoring of the instruments was done in order to bring uniformity in the analysis of results.

4.4.4 Comparisons of Groups by Means of a T-test

The t-test is commonly used to determine whether there is a statistically significant difference between two sample means (Howell, 2007). In this study, groups were compared in terms of a t-test, in order to assess if there is a difference between the means of two groups with regard to either Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) or Interpersonal Style and the biographical variables utilised in this study (e.g. Males vs. Females with respect to average Locus of Control score).

4.4.5 Comparisons of Groups by Means of Analysis of Variance

Coakes and Steed (2003), state that the one-way analysis of variance (ANOVA) is the notion of variance. The basic procedure is to derive two different estimates of population variance from the data, and then calculate a statistic from the ratio of these two estimates. One of these estimates (between group's variance) is a measure of the effect of the independent variable combined with error variance. The other estimate (within group's variance) is of error variance itself. The F-ratio is the ratio of the between groups variance to within groups variance. A significant F-value tells us that the population means are not equal. Basically the ANOVA deals with the differences between the sample means, but is not restricted to two means (Howell, 2007).

In this study, differences in biographical variables (e.g. gender, race, age and tenure) were compared with Salutogenic constructs and Interpersonal Styles by means of a one way ANOVA in order to assess whether there is a difference in at least one pair of the means of several groups; this is done to verify the strength of relationships between two or more variables. While the ANOVA is used to prove whether two or more variables differ from one another, it does not provide any information as to the cause or reason for the differences between variables, as the technique is based on the assumption that all observations are independent of each other (Howell, 2007).

4.4.6 Pearson Product Moment Correlations

A Pearson product moment correlation (Person's r) indicates the linear correlation between two variables and is represented by a value between -1 and +1. A calculated r of -0.80 indicates a strong positive relationship, whereas a calculated r of -0.10 indicates a weak negative relationship (Bless & Higson-Smith, 2000). The correlation thus indicates the intensity of the two variables being measured (Winer, 1971).

Kerlinger (1994) describes this as being based on the related variation of parts of an ordered pair set. If these covary or vary together (e.g. high values with high values

and low values with low values) a positive relationship is said to exist, whereas high values which covary with low values and vice versa create a negative relationship. In other words, if there is a negative correlation between two variables it indicates that the higher a score is on the one scale the lower it will be on the other, and vice versa. If however there is a positive correlation between the variables then, a high score on the one scale will mean a high score on the other, and vice versa.

For the sake of this study, the Pearson product moment correlation coefficient was used to test the hypothesis related to the relationship between Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) and Interpersonal Styles as measured by the Impact Message Inventory – Circumplex.

4.5 FORMULATION OF THE HYPOTHESES

The hypotheses will now be discussed in terms of the biographical questionnaire, Antonovsky's Orientation to Life Questionnaire, Scheper's Locus of Control questionnaire, Bandura's Self-Efficacy scale and Kiesler's Impact Message Inventory – Circumplex (IMI-C).

4.5.1 Hypotheses Related to Relationships between Salutogenic Constructs and Interpersonal Style

The first set of hypotheses is related to the central hypothesis which is formulated as follows:

There is a relationship between Salutogenic constructs and Interpersonal Style.

This set of hypotheses is related to each of the eight interpersonal style subscales as measured by the Kiesler's Impact message Inventory – Circumplex (IMI-C) and three Salutogenic constructs (Sense of Coherence (SOC), Locus of Control (LOC) and Self-Efficacy (S-E) as measured by each of the measuring instruments respectively to achieve the general objectives of this study.

The hypotheses are as follows:

H1: There is a statistically significant positive relationship between the Dominant subscale of the IMI-C and Salutogenic constructs (SOC, internal LOC and S-E).

H2: There is a statistically significant negative relationship between the Hostile-Dominant subscale of the IMI-C and Salutogenic constructs (SOC, internal LOC and S-E).

H3: There is a statistically significant negative relationship between the Hostile subscale of the IMI-C and Salutogenic constructs (SOC, internal LOC and S-E).

H4: There is a statistically significant negative relationship between the Hostile-Submissive subscale of the IMI-C and Salutogenic constructs (SOC, internal LOC and S-E).

H5: There is a statistically significant negative relationship between the Submissive subscale of the IMI-C and Salutogenic constructs (SOC, internal LOC and S-E).

H6: There is a statistically significant positive relationship between the Friendly-Submissive subscale of the IMI-C and Salutogenic constructs (SOC, internal LOC and S-E).

H7: There is a statistically significant positive relationship between the Friendly subscale of the IMI-C and Salutogenic constructs (SOC, internal LOC and S-E).

H8: There is a statistically significant positive relationship between the Friendly-Dominant subscale of the IMI-C and Salutogenic constructs (SOC, internal LOC and S-E).

4.5.2 Hypotheses Related to Biographical Variables

The second set of hypotheses relates to individual and organisational demographics specific to this study in order to verify trends in emerging research in the South African context. The hypotheses are as follows:

H9:   There is no statistically significant difference between males and females with respect to Antonovsky's (1987) Orientation to Life Questionnaire, Scheper's (1999) Locus of Control Questionnaire and Bandura's (1982) Self-Efficacy scale.

H10:   There is no statistically significant difference between males and females with respect to Kiesler's (1985) Impact Message Inventory - Circumplex.

H11:   There is no statistically significant difference between race groups with respect to Antonovsky's (1987) Orientation to Life Questionnaire, Scheper's (1999) Locus of Control Questionnaire and Bandura's (1982) Self-Efficacy scale.

H12:   There is no statistically significant difference between race groups with respect to Kiesler's Impact Message Inventory - Circumplex.

H13:   There is no statistically significant difference between age groups with respect to Antonovsky's Orientation to Life Questionnaire, Scheper's Locus of Control Questionnaire and Bandura's Self-Efficacy scale.

H14:   There is no statistically significant difference between age groups with respect to Kiesler's Impact Message Inventory - Circumplex.

H15:   There is no statistically significant difference between tenure groupings with respect to Antonovsky's Orientation to Life Questionnaire, Scheper's Locus of Control Questionnaire and Bandura's Self-Efficacy scale.

H16:   There is no statistically significant difference between tenure groupings with respect to Kiesler's Impact Message Inventory - Circumplex.

4.6 CHAPTER SUMMARY

This chapter identified the population and described the sample used in the research. It proceeded to discuss the chosen measuring instruments and justify their inclusion in the study. The methods and procedures for the data gathering were discussed as well as the processing thereof in the form of the relevant steps that were taken. Finally the chapter concluded with the formulation of the hypotheses.

In Chapter 5, the results of the empirical study will be reported and interpreted.

CHAPTER 5: RESULTS

In this chapter, the results of the study are presented. Quantitative research methods are used in this study. The quantitative results are described in terms of the first empirical aim of the study, namely to empirically explain the relationship between three Salutogenic constructs and interpersonal style. These aforementioned constructs are Sense of Coherence, Locus of Control and Self-Efficacy. The descriptive statistics obtained by means of the biographical questionnaire, and the four rating scales are analysed by considering the mode, the mean, the sample variance and the sample standard deviation.

A further analysis of the results is done by inferential statistics utilising t-tests and Analysis of Variance to assess differences between groups and correlation statistics in terms of the Pearson correlation coefficients between each of the three Salutogenic constructs and each of the eight interpersonal styles indicated on the octant version of the interpersonal circumplex. The statistical analysis involves reporting and interpreting the results of the statistical analysis generated by the (SPSS Inc., 1999) statistical software programme. This chapter is concluded with a summary of the results and a chapter summary.

5.1   BIOGRAPHICAL DATA

Biographical details were obtained for each respondent. This includes gender, race, tenure and age. The biographical information will be presented and interpreted in this section.

5.1.1 Reporting of Data

The biographical variables are presented and reported on in Table 5.1. These variables include gender, race, age and tenure. The biographical variables are further analysed in terms of their mean, maximum, minimum and standard deviation in Table 5.2.

Table 5.1

Biographical Variables

N=207

Biographical Item	Category	Frequency	Percentage
Gender	Male	110	53.1
	Female	97	46.9
	Total	207	100
Race	Asian	26	12.6
	Black	39	18.8
	Coloured	14	6.8
	White	128	61.8
	Total	207	100
Age	18-29yrs	86	41.5
	30-39yrs	52	25.1
	40-49yrs	42	20.3
	>50yrs	25	12.1
	Missing Data	2	1.0
	Total	207	100
Tenure	0-5yrs	114	55.1
	6-10yrs	59	28.5
	11-15yrs	8	3.8
	16-20yrs	7	3.4
	>20yrs	18	8.7
	Missing Data	1	0.5
	Total	207	100

Table 5.2

Descriptive Statistics for the Biographical Data

N=207

	Mean	Min	Max	Std. Deviation
Gender	1.5	1	2	0.50
Race	3.2	1	4	1.13
Age Category	2.0	1	4	1.06
Age	34.7	20	60	11.19
Tenure	7.3	0	38	8.27

5.1.2 Interpretation of Data

The descriptive statistics indicate that there were more males (53.1%) than females (46.9%) that participated in this study. The modal race group was Whites (61.8%)

followed by Blacks (18.8%), Asians (12.6%) and then Coloureds (6.8%). The average number of years of experience in the organisation was 7.3 years. The average age of the respondents was 34.7years. The modal age group was 18-29 years (41.5%) followed by 30-39 years (25.1%) and 40-49 years (20.3%).

5.2   UNIVARIATE PRESENTATION OF VARIABLES

The descriptive statistics for each of the measuring instruments and the biographic variables will be discussed below. The statistics will consider the mean, the mode, the median, the sample variance and the sample standard deviation. The mean or the arithmetic mean is the sum of all the values divided by the sample size, the mode is the most frequent response given by the respondents and the median is the middle most value when the data (per variable/question) is arranged from highest to lowest. The sample variance is the degree or quantity by which each observation varies one from another. The sample standard deviation is the square root of the sample variance. The standard deviation gives insight into the consistency with which respondents provide answers on the questionnaire (Howell, 2007).

5.2.1   Descriptive Statistics for the Four Measuring Instruments

The descriptive statistics for each of the items and sub-scales of the measuring battery are discussed in turn. The measuring battery consists of the following questionnaires:

- Antonovsky's Orientation to Life Questionnaire (1987).
- Scheper's Locus of Control Questionnaire (Third edition) (1999).
- Bandura's Self-Efficacy Scale (1982).
- Kiesler's Impact Message Inventory – Circumplex (Octant version) (1985).

5.2.1.1 Reporting and interpretation of data

(a) Antonovsky's Orientation to Life Questionnaire

The descriptive statistics for Antonovsky's (1987) Orientation to Life Questionnaire are provided in Table 5.3 below.

Table 5.3

Descriptive Statistics for the Orientation to Life Questionnaire

N=207

	Mean	Minimum	Maximum	Std. Deviation
Comprehensibility	3.97	1.73	5.82	0.88
Manageability	4.67	1.90	6.70	0.88
Meaningfulness	5.24	2.38	7.00	1.00
OLQ mean	4.62	2.24	6.59	0.78
OLQ added total	133.96	65	191	22.53

The total Sense of Coherence was measured on a scale of 29 to 203, with the scores of participants in this study ranging from 65 to 191. The added total Sense of Coherence score was 133.96 which falls within the range of results shown in previous studies in South Africa which indicate a range of between 131.20 and 154.08 (Cilliers & Coetzee, 2003; Jackson & Rothmann, 2001; Ortlepp & Friedman, 2001; Strümpfer & Mlonzi, 2001). This result shows that the participants scored 4.62 out of a possible 7, indicating an above average Sense of Coherence. The fact that the score falls within the lower end of the range of other studies conducted in South Africa may indicate that the high levels of change taking place in the organisation may have some impact on the Sense of Coherence of employees.

Respondents scored highest on the meaningfulness subscale with an average score of 5.24 out of a possible 7 and lowest on the comprehension subscale with an average score of 3.97. This indicates that this particular sample interprets environmental stimuli as being meaningful and worth engaging with. Relatively low

comprehension scores may indicate that individuals have some trouble anticipating possible events and making cognitive sense of environmental stimuli. As stated above, this may be an indication of the significant changes being made and resulting uncertainty in the organisation at the time of the study.

(b) Scheper's Locus of Control Questionnaire

The descriptive statistics for Schepers' (1999) Locus of Control Questionnaire are provided in Table 5.4 below.

Table 5.4

Descriptive Statistics for the Locus of Control Questionnaire

N=207

	Mean	Minimum	Maximum	Std. Deviation
Autonomy	5.30	3.56	6.82	0.60
External LOC	4.04	1.19	5.69	0.92
Internal LOC	5.88	2.89	6.82	0.64

Respondents scored highest on the internal Locus of Control subscale with an average score of 5.88 out of a possible 7, indicating that the respondents in general have an Internal Locus of Control. Further to this the respondent's average score was relatively high on the Autonomy subscale at 5.30. This supports the assertion by Schepers *et al.* (2006) that autonomy and internal Locus of Control are closely linked. The respondents showed the lowest mean score for the external Locus of Control subscale with 4.04, giving support to the contention that there is an inverse relationship between this and the other two variables (internal Locus of Control and Autonomy) (Schepers *et al.*, 2006).

(c) Bandura's Self-Efficacy Scale

The descriptive statistics for Bandura's (1982) Self-Efficacy Scale are provided in Table 5.5 below.

Table 5.5

Descriptive Statistics for the Self-Efficacy Scale

N=207

	Mean	Minimum	Maximum	Std. Deviation
Self-Efficacy	2.79	1.26	5.44	0.60

A low score on the Self-Efficacy Scale indicates a higher level of Self-Efficacy for the respondent. The mean score for the Self-Efficacy Scale is 2.79, with 7 indicating a low level of Self-Efficacy and 1 high levels of Self-Efficacy. This indicates that the respondents have a relatively high perceived level of Self-Efficacy, meaning that they have a general belief in their own competence to tackle difficult or novel tasks and cope with adversity (Bandura, 1999; Betz, 2004). This is in line with a study conducted by Mtsweni (2007) where a mean score of 3.06 was reported.

(d) Kiesler's Impact Message Inventory - Circumplex

The descriptive statistics for Kiesler's (1985) Impact Message Inventory – Circumplex (Octant Version) are provided in Table 5.6 below.

Table 5.6

Descriptive Statistics for the Impact Message Inventory - Circumplex

N=207

	Mean	Min	Max	Std. Deviation
Dominant	1.80	1.00	3.43	0.50
Hostile-Dominant	1.41	1.00	3.86	0.49
Hostile	1.49	1.00	4.00	0.49
Hostile-Submissive	1.51	1.00	3.43	0.52
Submissive	2.11	1.00	3.86	0.54
Friendly-Submissive	2.75	1.29	3.86	0.42
Friendly	3.29	1.29	4.00	0.55
Friendly-Dominant	2.61	1.29	4.00	0.47

The instrument measures each of the 8 dimensions on a scale of 1 to 4, 1 indicating that the individual does not use the style and 4 indicating that the individual uses the style a great deal (Kiesler & Schmidt, 2006). The lowest mean score is 1.41 for the Hostile-Dominant subscale and the highest is 3.29 for the Friendly subscale. This gives some indication that the respondents, for the most part, utilise a friendly style in their interpersonal exchanges more often and a Hostile-Dominant Interpersonal Style less often.

Respondents in the study scored below average scores for the Dominant (1.80), Hostile-Dominant (1.41), Hostile (1.49) and Hostile-Submissive (1.51) subscales, indicating that they are less likely to make use of these styles when interacting with others. While above average scores were scored for the Submissive (2.11), Friendly-Submissive (2.75), Friendly (3.29) and Friendly-Dominant (2.61) subscales, indicating that they are more likely to interact in ways that can be described as social, friendly, warm and trusting than in ways described as cold, detached, passive aggressive or hostile (Kiesler & Schmidt, 2006).

These findings are supported by normative data for 14 separate studies reported by Kiesler and Schmidt (2006), with each of the following octant subscales showing the following range of mean scores, Dominant (1.22 to 1.95), Hostile-Dominant (1.07 to 1.43), Hostile (1.10 to 1.73), Hostile-Submissive (1.26 to 2.08), Friendly (1.83 to 3.43) and Friendly-Dominant (1.73 to 2.87). The Submissive and Friendly-Submissive subscales for this study showed mean scores which were slightly above the range of scores reported by Kiesler and Schmidt (2006), who reported mean scores of between 1.28 to 2.04 and 1.95 to 2.48 for each of the subscales respectively.

5.3   RELIABILITY OF INSTRUMENTS

5.3.1 Reliability and Item Analysis of the Four Measuring Instruments

Cronbach's alpha coefficients were also calculated as part of the reliability test and to assess whether these results could be generalised if we increased the sample size. The Cronbach alpha coefficient represents a coefficient of internal consistency,

and represents how all possible splits within a test measure the same thing (Huysamen, 1996). A value of 0.7 or higher is seen as very good and indicates that the same results would be achieved if the survey were to be carried out with a larger sample of respondents. The Cronbach's alpha was calculated for all four of the questionnaires in the battery. All four instruments in the battery were found to be reliable. The evidence for this will be laid out below.

Cronbach Alpha coefficients of between 0.50 and 0.59 are sufficient for research purposes, while coefficients between 0.60 to 0.69 indicate acceptable levels of internal reliability, those falling between 0.70 and 0.79 indicate high levels of internal reliability and 0.80 and higher are considered ideal (Nunnally, 1978; Nunnally & Burnstein, 1994; Stevens, 1992).

The questions on all the measuring instruments utilised in this study indicated good internal consistency and therefore no questions were eliminated.

5.3.1.1 Reporting and interpretation of data

(a) Antonovsky's Orientation to Life Questionnaire

The reliability analysis for Antonovsky's (1987) Orientation to Life Questionnaire is provided in Table 5.7 below.

Table 5.7

Single Factor Loadings and Cronbach's Alpha for the dimensions of the Orientation Life Questionnaire

Variable	Items	Cronbach's alpha
Overall Sense of coherence	1-29	0.86
Comprehension	1,3,5,10,12,15,17,19,21,24,26	0.73
Manageability	2,6,9,13,18,20,23,25,27,29	0.68
Meaningfulness	4,7,8,11,14,16,22,28	0.77

The overall Cronbach's Alpha for the dimensions of the Orientation to Life Questionnaire is 0.86 and can therefore be considered to have a high internal consistency. Stevens (1992) describes coefficients of above 0.8 as ideal. This finding confirms previous South African studies showing high levels of internal

consistency for his questionnaire of between 0.74 and 0.94 (Basson & Rothmann, 2001, 2002; Cilliers & Kossuth, 2004; Kossuth, 1998).

The individual subscales of the instrument all show acceptable to high levels of internal reliability, ranging from 0.68 for Manageability to 0.77 for Meaningfulness.

(b) Scheper's Locus of Control Questionnaire

The reliability analysis for Schepers' (1999) Locus of Control Questionnaire is provided in Table 5.8 below.

Table 5.8

Single Factor Loadings and Cronbach's Alpha for the dimensions of the Locus of Control Questionnaire

Variable	Items	Cronbach's alpha
Overall LOC	1-88	0.86
Autonomy	1,2,3,5,11,13,14,15,16,17,21,22,23,24,25,28,29,30,39,44,46,62,64,66, 67,68,70,71,73,74,78,81,82,83.	0.83
External control	4,9,12,20,34,35,36,38,41,43,45,47,50,51,52,53,56,57,58,65,72,77,79, 80,84,88.	0.87
Internal control	6,7,8,10,18,19,26,27,31,32,33,37,40,42,48,49,54,55,59,60,61, 63,69,75,76,85,86,87.	0.87

The Scheper's (1999) Locus of Control Questionnaire can also be considered to have a high internal reliability, showing an overall Cronbach Alpha of 0.86. This falls into the range found in other South African studies where Cronbach Alpha's of between 0.82 and 0.88 were obtained (Schepers *et al.*, 2006). Each of the individual subscales of the instrument also has high internal reliability with Cronbach alpha coefficients of between 0.83 and 0.87.

(c) Bandura's Self-Efficacy Scale

The reliability analysis for Bandura's (1982) Self-Efficacy Scale is provided in Table 5.9 below.

Table 5.9

Single factor loadings and Cronbach's Alpha for the dimensions of the Self-Efficacy Scale.

Variable	Items	Cronbach's alpha
Self-Efficacy	1-27	0.79

The Self-Efficacy Scale shows Cronbach Alpha's of 0.79 which falls just short of being considered ideal but is still more than acceptable for research purposes (Nunnally, 1978; Stevens, 1992). This confirms previous findings in South African studies which reported internal Cronbach Alpha coefficients of between 0.71 and 0.86 (Kossuth, 1998).

(d) Kiesler's Interpersonal Message Inventory – Circumplex

The reliability analysis for Kiesler's (1985) Impact Message Inventory – Circumplex (Octant Version) is provided in Table 5.10 below.

Table 5.10

Single Factor Loadings and Cronbach's Alpha for the dimensions of the IMI-C

Variable	Items	Cronbach's alpha
Overall Interpersonal style	1-90	0.91
Dominant	1,30,31,61,66,76,81	0.70
Hostile-Dominant	17,26,41,51,56,71,86	0.71
Hostile	2,7,12,37,62,67,82	0.72
Hostile-Submissive	53,57,63,68,72,78,87	0.70
Submissive	8,23,34,38,58,79,83	0.77
Friendly-Submissive	4,43,54,69,73,88,89	0.87
Friendly	9,10,14,24,25,35,39	0.75
Friendly-Dominant	5,15,40,75,80,85,90	0.79

The Impact Message Inventory - Circumplex (IMI-C) shows an extremely high overall internal reliability at 0.91. All subscales of the instrument also show high levels of internal reliability with Cronbach alpha coefficients of between 0.70 and 0.87. This concurs with Cronbach Alpha coefficients calculated for the subscales on 16 different samples imbedded within 10 different studies, showing coefficients for the IMI-C Octant Version ranging from 0.69 to 0.85 indicating strong to excellent reliabilities

(Kiesler & Schmidt, 2006). No South African studies using the IMI-C could be found to compare with these results.

5.4   TESTING OF THE STUDY HYPOTHESES

The results of the statistical techniques used to test the study's hypotheses will be presented and interpreted in this section. Cohen's (1988) guidelines for the interpretation of effect size will be used and applied to interpret the significance of the statistical results. This is done to prevent the probability of deducing statistically significant differences between groups, or relationships between variables when the size of the effect is very small (Cohen, 1988). Effect sizes can be used to establish whether relationships between two variables are particularly significant (Steyn, 2002).

Where statistically significant results are found for differences between means through the use of t-tests, and analysis of variance d-values are calculated and interpreted as follows: $d = 0.3$ (small effect), $d = 0.5$ (medium effect) and $d = 0.8$ (large effect) (Cohen, 1988).

Where statistically significant relationships are found through correlation coefficients (Pearson product-moment correlations) r-values are calculated and interpreted as follows; $r = 0.1$ (weak correlation), $r = 0.3$ (medium correlation) and $r = 0.5$ (strong correlation) (Cohen, 1988). The coefficient must be interpreted cautiously so as not to attribute meaning that it does not possess, e.g. $r = 0.28$ does not mean that there is 28% of a relationship between the two variables. The correlation coefficient is simply a point on a scale between -1.00 and + 1.00, and the closer the score is to either of those limits, the stronger the relationship between the two variables (Howell, 2007).

5.4.1 Hypotheses Related to Relationships Between Interpersonal Style and Salutogenic Constructs

5.4.1.1   Reporting of data

The results of the Pearson product-moment correlation coefficients between the eight Interpersonal Styles measured as subscales on the IMI-C and three wellness constructs (Sense of Coherence, Locus of Control and Self-Efficacy) are presented in Table 5.11 and discussed thereafter.

The Orientation to Life Questionnaire produces a single factor solution as a measure for Sense of Coherence, which does not reflect, and is not necessarily supported by, the three components of comprehensibility, manageability and meaningfulness (Antonovsky, 1993). Rennemark and Hagberg (1997) state that although the subscales of the Orientation to Life Questionnaire are strongly connected, the questionnaire is not constructed for the purpose of studying the relationships between the subscales, and that the subscales have not been differentiated by correlations with other scales. For this reason only, the total Sense of Coherence score produced by the Orientation to Life Questionnaire is presented in the data.

The Locus of Control Questionnaire measures three dimensions (Autonomy, Internal Control and External Control) which are seen as supportive of an individual having an Internal Locus of Control (derived from the Autonomy and Internal Control subscale) or having an External Locus of Control (derived from the External Control subscale) (Schepers *et al.*, 2006). As this instrument does not culminate in a total Locus of Control score, each of the three subscales is presented in the data.

The Self-Efficacy Scale produces a total score indicating the respondent's level of perceived Self-Efficacy (Bandura, 1989). This total score is presented in the data in Table 5.11. A low score on the Self-Efficacy Scale indicates a higher level of Self-Efficacy for the respondent, therefore the negative correlation coefficients can be interpreted as positive because a low Self-Efficacy score in indicative of a positive adaptation and vice versa (Jackson & Rothmann, 2001).

Table 5.11

Pearson Product-moment Correlation Between the Salutogenic Construct Measures and the Subscales of the IMI-C

N=207

IMI-C subscale		Orientation to life questionnaire	Locus of Control Questionnaire			Self-Efficacy Scale
		Total Sense of Coherence	Autonomy	Internal Control	External Control	Total Self-Efficacy
Dominant	*Pearson Correlation*	-0.090	-0.093	-0.104	-0.086	-0.099
	p-value	0.198	0.182	0.136	0.216	0.155
Hostile-Dominant	*Pearson Correlation*	**-0.143*†**	0.043	0.055	-0.121	0.007
	p-value	0.040	0.538	0.430	0.083	0.921
Hostile	*Pearson Correlation*	**-0.334**††**	**-0.255**†**	**-0.188**†**	0.106	**0.231**†**
	p-value	0.000	0.000	0.007	0.129	0.001
Hostile-Submissive	*Pearson Correlation*	**-0.457**††**	**-0.319**††**	**-0.195**†**	**0.154*†**	**0.368**††**
	p-value	0.000	0.000	0.005	0.028	0.000
Submissive	*Pearson Correlation*	**-0.371**††**	-0.007	0.079	0.129	**0.141*†**
	p-value	0.000	0.926	0.261	0.066	0.043
Friendly-Submissive	*Pearson Correlation*	0.055	0.080	-0.037	-0.086	-0.12
	p-value	0.442	0.259	0.608	0.224	0.152
Friendly	*Pearson Correlation*	**0.346**††**	**0.295**†**	**0.176*†**	**-0.173*†**	**-0.319**††**
	p-value	0.000	0.000	0.011	0.013	0.000
Friendly-Dominant	*Pearson Correlation*	-0.003	**0.180**†**	0.074	-0.104	-0.263
	p-value	0.966	0.010	0.288	0.135	0.000

Note: **Self-Efficacy scores are inverted as a low score indicates a high level of perceived Self-Efficacy**
* **Correlation is significant at the 0.05 level (2-tailed)**
** **Correlation is significant at the 0.01 level (2-tailed)**
† **r > 0.1 (Weak effect size)**
†† **r > 0.3 (medium effect size)**

5.4.1.2   Interpretation of data

The data presented in Table 5.11 will be presented below for each of the first set of hypotheses.

(a) H1: Dominant Interpersonal Style and Salutogenic Constructs

The results show that there is no significant positive relationship between the Dominant subscale of the IMI-C and the three Salutogenic constructs measured in the study.

As there is no positive correlation between Dominance and any of the three Salutogenic constructs measured, the hypothesis H1 is rejected.

This finding is surprising, in that the premise for the hypothesis was based on the finding that psychopathologies show general correlations with interpersonal styles which fall into the Hostile-Submissive quadrant of the Interpersonal Circumplex (Anderson, 2001), and that psychopathologies and personality disorders, in particular, have been found to be related to low levels of dominance and more submissive behaviour (Wiggins & Pincus, 1989, 1994). Contrary to the rational for this hypothesis, this does not necessarily mean that the converse is true for psychological wellness as measured by the Salutogenic constructs used in this study.

A possible explanation for this finding may lie in the assertion that maladjusted individuals, being more image-maintaining, are typically rigid in their interactions and that flexibility in being able to utilise all styles represented on the Interpersonal Circumplex appropriately is central to the healthy personality (Kiesler 1996a, Kiesler & Schmidt, 2006). No international or local research could be located which relates to these specific relationships.

(b) H2: Hostile-Dominant Interpersonal Style and Salutogenic Constructs

There is a significant negative relationship between Sense of Coherence and the Hostile-Dominant subscale of the IMI-C at the 0.05 level of significance ($r = -0.143$; $p = 0.040$). This relationship can be classified as a weak relationship according to the significance guidelines (Cohen, 1988). This relationship can

be interpreted as indicating an increase in Hostile-Dominant behaviour as Sense of Coherence decreases. In other words, as individuals are less able to comprehend their environment, feel less able to manage it and find less meaning in their circumstances, Hostile-Dominant behaviour increases, and vice versa.

The findings support the hypothesis for the Sense of Coherence construct; however, there are no significant relationships between any of the other two Salutogenic constructs and Hostile-Dominant behaviour, and the correlation with the Sense of Coherence scale is weak. Therefore, hypothesis H2 is rejected.

As with the previous hypothesis, this finding may be explained by the assertion made by Kiesler (1996a) and Kiesler and Schmidt (2006) that psychological wellness has more to do with the ability of an individual to utilise interpersonal styles appropriately than being directly linked to a specific style, while psychopathology tends to be linked to the individual's repetitive and rigid use of a specific style. No international or local research could be located which relates to these specific relationships.

(c) H3: Hostile Interpersonal Style and Salutogenic Constructs

The results indicate a statistically significant relationship between the Hostile subscale of IMI-C and the Sense of Coherence construct at the 0.01 level of significance ($r = -0.334$; $p = 0.000$). This relationship can be classified as a medium relationship according to the significance guidelines (Cohen, 1988). This indicates that as Sense of Coherence increases, so hostile behaviour decreases, and vice versa.

There is a significant negative relationship between the Hostile subscale and Internal Locus of Control at the 0.01 level. Both the Autonomy ($r = - 255$; $p = 0.000$) and the Internal LOC ($r = -0.188$; $p = 0.007$) are used as an indicator of Internal Control (Schepers, 2005).   Both subscales indicate a weak relationship with Hostile behaviour, with the Autonomy subscale tending

towards a medium strength relationship (Cohen, 1988). There is no relationship between External Control and Hostile behaviour.

The results show a negative significant relationship between Self-Efficacy and the Hostile subscale of the IMI-C at the 0.01 level of significance (r = 0.231; p = 0.001). Since the Self-Efficacy Scale uses a lower score to indicate a higher level of perceived Self-Efficacy and the IMI-C uses higher scores to indicate an increase in a particular interpersonal style, scores are inverted and therefore a negative score indicates a positive relationship and vice versa. The effect size, according to Cohen (1988), is classified as weak. The interpretation of this score is that as Self-Efficacy increases, so Hostile behaviour decreases, and vice versa.

As there is a significant negative relationship between all three Salutogenic constructs and the Hostile subscale of the IMI-C, the hypothesis H3 is accepted.

A possible explanation for this finding can perhaps be made against the backdrop of the contention that interpersonal behaviour is designed to reduce anxiety (Kiesler, 1996, 2004; Sullivan, 1957). Hostile behaviour may be either passive or aggressive (Kiesler, 2006). An individual with a low Sense of Coherence score may well feel increased social anxiety and attempt to reduce the anxiety by utilising hostility. This idea is substantiated by research conducted by Julkunen and Ahlström (2006) that showed that a strong Sense of Coherence is associated with the ability to control anger and low levels of suppressed anger, as well as Kivamäki (2002) who concluded that low Sense of Coherence has an adverse effect on hostility as it fails to mitigate the expression thereof.

The same argument may be applied to the Self-Efficacy construct and is supported by research conducted by Willemse (2008) that showed a positive correlation between emotional Self-Efficacy and hostility as well as verbal aggression.

The results for External Control are surprising in that the results show that there is no relationship. In contrast to this finding, Vandervoort, Luis and Hamilton (1997) showed that there is a relationship between External Locus of Control and increased hostility.

The findings for Internal Control and Autonomy may also be explained in terms of the idea that interpersonal behaviour is designed to reduce anxiety (Kiesler, 1996, 2004; Sullivan, 1953). Further support for this explanation can be found in a study conducted by Bagherian, Ahmadzadeh and Baghbania (2009), which showed a negative correlation between Internal Locus of Control and hostility (r = -0.355), indicating that an increase in an individual's internal Locus of Control is associated with a decrease in hostile behaviour. Further to this Bagherian *et al.* (2009) also show a negative correlation between Internal Locus of Control and anxiety (r = -0.353). This finding gives support to the argument that decreasing anxiety levels mitigate hostile interpersonal behaviour.

(d) H4: Hostile-Submissive Interpersonal Style and Salutogenic Constructs

The results indicate a statistically significant negative relationship between the Hostile-Submissive subscale of the IMI-C and the Sense of Coherence construct at the 0.01 level of significance (r = -0.457; p = 0.000). In terms of the practical significance guidelines laid out by Cohen (1988), the effect size is classified as medium. The result indicates that an increase in Hostile-Submissive behaviour correlates with a decrease in perceived Sense of Coherence, and vice versa.

A statistically significant negative relationship is indicated in the results between Hostile-Submissive behaviour and the Autonomy subscale (r = -3.19; p = 0.000) of the Locus of Control Questionnaire at the 0.01 level of significance. According to the practical significance guidelines laid out by Cohen (1988), the effect size is classified as medium. In addition, the results show a significant negative relationship between the Hostile-Submissive subscale of the IMI-C and the Internal Locus of Control subscale (r = -0.195; p

= 0.005) of the Locus of Control Questionnaire at the 0.01 level of significance. According to the practical significance guidelines laid out by Cohen (1988), the effect size is classified as weak. These results indicate that as an individual's level of Autonomy and Internal Locus of Control increases so Hostile-Submissive behaviour decreases, and vice versa.

The results show a positive relationship between the Hostile-Submissive subscale of the IMI-C and External Control subscale (r = 0.154; p = 0.028) of the Locus of Control Questionnaire at the 0.05 level of significance. According to the practical significance guidelines laid out by Cohen (1988), the effect size is classified as weak. This result indicates that as an individual's level of external control increases so Hostile-Submissive behaviour also increases.

The results show a negative significant relationship between Self-Efficacy and the Hostile-Submissive subscale of the IMI-C at the 0.01 level of significance (r = 0.368; p = 0.000). Since the Self-Efficacy Scale uses a lower score to indicate a higher level of perceived Self-Efficacy and the IMI-C uses higher scores to indicate an increase in a particular interpersonal style, scores are inverted and therefore a negative score indicates a positive relationship, and vice versa. The effect size, according to Cohen (1988), is moderate. The interpretation of this score is that as Self-Efficacy decreases, so Hostile-Submissive behaviour increases, and vice versa.

As there is a significant negative relationship between all three Salutogenic constructs and the Hostile-Submissive subscale of the IMI-C, the hypothesis H4 is accepted.

These findings may be explained against the backdrop of Kiesler's (2000) contention that people with mental disorders, and personality disorders in particular, become rigid in their interpersonal styles and Anderson's (2001) finding that personality disorders are particularly linked to Hostile-Submissive interpersonal styles. The explanation for the findings may therefore be the

converse for Salutogenic constructs. No international or local research could be located which relates to these specific relationships.

(e) H5: Submissive Interpersonal Style and Salutogenic Constructs

The results indicate a statistically significant negative relationship between the Submissive subscale of IMI-C and the Sense of Coherence construct at the 0.01 level of significance ($r = -0.371$; $p = 0.000$). This relationship can be classified as a medium to strong relationship according to the significance guidelines (Cohen, 1988). This indicates that as Sense of Coherence increases, so submissive behaviour decreases, and vice versa.

The results further indicate no relationship between Autonomy, Internal Locus of Control or External Locus of Control subscales on the Locus of Control Questionnaire and the Submissive subscale on the IMI-C.

A statistically negative relationship is shown to exist between the Submissive subscale on the IMI-C and Self-Efficacy at the 0.05 level of significance ($r = 0.141$; $p = 0.043$). This relationship can be classified as a weak relationship according to the significance guidelines (Cohen, 1988). The results indicate that as an individual's level of Self-Efficacy increases so Submissive behaviour decreases, and vice versa.

The findings support the hypothesis by showing statistically significant negative relationships between the Submissive subscale on the IMI-C and Sense of Coherence and Self-Efficacy. However, the results also indicate there is no significant relationship between the Submissive subscale and the three subscales on the Locus of Control Questionnaire. Therefore hypothesis H5 is partially accepted.

The findings for the Sense of Coherence and Self-Efficacy constructs may well be explained against the finding that psychopathologies and personality disorders in particular have been found to be related to low levels of dominance and more submissive behaviour (Wiggins & Pincus, 1989, 1994).

The hypothesis was formulated on the basis of the converse being true for psychological wellness as measured by the Salutogenic constructs used in this study. The finding may also be explained in terms of the idea that interpersonal behaviour is designed to reduce anxiety (Kiesler, 1996, 2004; Sullivan, 1953). As people with a strong Sense of Coherence are able to handle stress positively without being overcome by it (Nel *et al.*, 2004), it is less likely that they would reduce anxiety through submissive behaviour. Likewise, as a higher level of Self-Efficacy is associated with optimistic behaviour (Bandura, 1989) and approach rather than avoidant behaviour (Betz, 2004), it is less likely that an individual with a high sense of Self-Efficacy would utilise submissive behaviour to reduce anxiety.

The absence of any relationship between all three subscales of the Locus of Control Questionnaire was surprising, and not easily explained. This finding could perhaps be explained by the assertion made by Kiesler (1996a) and Kiesler and Schmidt (2006) that psychological wellness has more to do with the ability of an individual to utilise interpersonal styles appropriately than being directly linked to a specific style, while psychopathology tends to be linked to the individual's repetitive and rigid use of a specific style.

(f) H6: Friendly-Submissive Interpersonal Style and Salutogenic Constructs

The results indicate that there is no significant relationship between the Friendly-Submissive subscale of the IMI-C and any of the other measured constructs.

As the results do not indicate any significant relationships between the Friendly-Submissive subscale of the IMI-C and any of the three Salutogenic constructs measured in this study, hypothesis H6 is rejected.

This finding may be explained by the assertion made by Kiesler (1996a) and Kiesler and Schmidt (2006) that psychological wellness has more to do with the ability of an individual to utilise interpersonal styles appropriately than being directly linked to a specific style, while psychopathology tends to be

linked to the individual's repetitive and rigid use of a specific style, particularly those styles which are classified as Hostile-Submissive (Anderson 2001).

No international or local research could be located which relates to these specific relationships.

(g) H7: Friendly Interpersonal Style and Salutogenic Constructs

The results indicate a statistically significant positive relationship between the Friendly subscale of the IMI-C and Sense of Coherence at the 0.01 level (r = 0.346; p = 0.000). The effect size of this relationship is moderate (Cohen, 1988). This indicates that an increase in friendly behaviour is consummate with an increase in perceived Sense of Coherence, and a decrease in friendly behaviour with a decrease in perceived Sense of Coherence.

The results further indicate a significant positive relationship between the Friendly subscale of the IMI-C and the two subscales of the Locus of Control Questionnaire measuring Internal Locus of Control and Autonomy. There is a significant positive relationship between Friendly behaviour and Autonomy, at the 0.01 level (r = 0.295; p = 0.000). The effect size is weak (Cohen, 1988). There is a further significant positive relationship between the Friendly construct on the IMI-C and the Internal Locus of Control subscale on the Locus of Control Questionnaire at the 0.05 level (r = 0.176; p = 0.011). The effect size of this relationship is classified as weak (Cohen, 1988).

Further to this, the results show a significant negative relationship between the Friendly subscale of the IMI-C and External Locus of Control at the 0.05 level of significance (r = -0.173; p = 0.013). The effect size of the relationship is weak (Cohen, 1988).

The results show that a significant positive relationship exists between the Friendly subscale of the IMI-C and Self-Efficacy at the 0.01 level of significance (r = -0.319; p = 0.000). The relationship is positive despite the negative score due to the fact that the scoring of the two instruments is

inversely proportional to each other. The effect size of the relationship can be said to be medium according to the guideline set out by Cohen (1988). The result indicates that an increase in friendly behaviour is related to an increase in perceived Self-Efficacy, and a decrease in friendly behaviour to a decrease in perceived Self-Efficacy.

As there are significant positive relationships indicated between the Friendly subscale on the IMI-C and all three Salutogenic constructs measured in this study, hypothesis H7 is accepted.

A possible explanation for this finding could be made against the backdrop of the contention that interpersonal behaviour is designed to reduce anxiety (Kiesler, 1996, 2004; Sullivan, 1957). An individual with a higher Sense of Coherence score may well feel decreased social anxiety and thus be more able to demonstrate friendly behaviour. This idea is supported by research conducted by Julkunen and Ahlström (2006) that showed that a strong Sense of Coherence is associated with the ability to control anger and thus interact more amicably. While no specific international or local research could be located linking friendly interpersonal behaviour to Self-Efficacy, Bandura (1986) theorised that individuals with higher Self-Efficacy perceptions are more optimistic about their own social abilities which affects their personalities by reinforcing their friendliness. No specific international or local research could be located linking friendly interpersonal behaviour and Locus of Control.

The findings related to Locus of Control and the Friendly subscale of the IMI-C support Scheper's (2005) contention that there is an inverse relationship between the two constructs measuring Internal Locus of Control (Autonomy and Internal Locus of Control) and External Locus of Control, and that Internal Control and Autonomy are related constructs.

(h) H8: Friendly-Dominant Interpersonal Style and Salutogenic Constructs

There is no statistically significant relationship between the Friendly-Dominant subscale of the IMI-C and overall Sense of Coherence indicated in the results.

The results do indicate a statistically significant positive relationship between the Friendly-Dominant subscales on the IMI-C and the Autonomy subscale in the Locus of Control Questionnaire at the 0.01 level (r = 0.180; p < 0.01). The effect size of this relationship is weak (Cohen, 1988). However, there is no relationship with the Internal Locus of control Subscale. There is also no relationship indicated between this construct and External Locus of Control.

The results further indicate that there is no significant relationship between the Friendly-Dominant subscale on the IMI-C and Self-Efficacy.

The results indicate that there is no significant relationship with the three Salutogenic constructs, with the exception of the Autonomy subscale of the Locus of Control questionnaire, where the relationship is classified as weak, according to Cohen (1988). The hypothesis H8 is therefore rejected.

As with the previous hypothesis (H7), this finding may be explained by the assertion made by Kiesler (1996a) and Kiesler and Schmidt (2006) that psychological wellness has more to do with the ability of an individual to utilise interpersonal styles appropriately than being directly linked to a specific style, while psychopathology tends to be linked to the individual's repetitive and rigid use of a specific style. No international or local research could be located which relates to these specific relationships.

5.4.2 Hypotheses Related to Biographical Variables

5.4.2.1   Interpretation of data

The results of the second set of hypotheses which pertain to biographical variables are reported in Table 5.11 and interpreted below.

(a) H9: Gender and Salutogenic Constructs

The independent samples t-test for equality of means, comparing gender groups with three Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) are presented in Table 5.12 and discussed thereafter.

Table 5.12

Independent Samples t-test for Equality of Means Comparing Gender Groups with Salutogenic Constructs

N=207

Construct		Variance	t	P	Mean	Std error
Sense of Coherence		UNEQUAL	1.107	0.270	0.076	0.069
Locus of Control	Autonomy	EQUAL	-1.151	0.251	-0.086	0.075
	External Control	EQUAL	-1.237	0.218	-0.074	0.060
	Internal Control	UNEQUAL	**-2.399***	0.017	-0.180	0.075
Self-Efficacy		EQUAL	-1.836	0.068	-0.119	0.065

*Note: * Significant at the 0.05 level*

The data provided in Table 5.12 reveals that there are no significant differences between gender groups for Sense of Coherence (t = 1.107; p = 0.270). There is no significant difference between the Autonomy (t = -1.151; p = 0.251) and External Control (t = -1.237; p = 0.218) subscales of the Locus of Control Questionnaire. There is however a statistically significant difference indicated for Internal Control (t = -2.399: p = 0.017) which is significant at the 0.05 level.

The data also shows that there are no significant differences between gender groups and Self-Efficacy (t = -1.836; p = 0.068).

Based on the results as outlined above the hypothesis H9 is partially accepted.

The finding for Sense of Coherence is supported by research conducted by Nilsson, Holmgren and Westman (2000), who state that they found similar Sense of Coherence scores for both men and women. Volanen, Suominen, Lahelma, Koskenvuo and Silventoinen (2007), support this finding in a five year follow up study

stating that specific gender differences related to Sense of Coherence were not discovered.

The findings showing gender differences with regard to the Internal Control subscale of the Locus of Control questionnaire are supported by research conducted by Manger and Eikeland (2000) that showed that females scored significantly higher with regard to Internal Control than their male counterparts.

The fact that the results show that there is no difference between gender groups for the Autonomy subscale but that there is for the Internal Control subscale is surprising as it refutes the contention made by Schepers (2005) that these two constructs complement each other and are closely related. Manger and Eikeland (2000) may be able to provide the basis for a possible explanation for this, in that they report that gender differences are found in some areas of Locus of Control and not in others. They further state that males, for example, show a significantly higher Internal Locus of Control than females on questionnaire items related to luck, while females showed a significantly higher Internal Locus of Control with regard to items related to the belief in the impact of hard work on success. A possible explanation may therefore lie in the structure and interpretation of the individual items used in the Autonomy and Internal Control subscales of the Locus of Control Questionnaire.

Local and international research does not support the finding presented above for the Self-Efficacy construct. Studies conducted by Camgoz, Tektas and Metin (2008) as well as West, Welch and Knabb (2002), both show that males have significantly higher Self-Efficacy perceptions than females, while a South African study conducted by Willemse (2008) shows that females score significantly higher than males in their Self-Efficacy perceptions. A cross-cultural comparison study conducted by Camgoz *et al.* (2008) shows that culture has a mitigating effect on perceptions of Self-Efficacy and states clearly that the impact of gender on Self-Efficacy perceptions should be studied cross-culturally. It may thus be argued that the findings presented for Self-Efficacy and its relationship to gender differences could be impacted on or mitigated by cultural differences within the sample.

(b) H 10: Gender and Interpersonal Style

The independent samples t-test for equality of means, comparing gender groups with the eight interpersonal styles measured as subscales on the IMI-C are presented in Table 5.13 and discussed thereafter.

Table 5.13

Independent Samples t-test for Equality of Means Comparing Gender Groups with Interpersonal Style
N=207

Construct	Variance	t	P	Mean	Std error
Dominant	UNEQUAL	1.107	0.270	0.076	0.069
Hostile-Dominant	EQUAL	-1.937	0.054	-0.130	0.067
Hostile	UNEQUAL	**3.528****	0.001	0.231	0.065
Hostile-Submissive	UNEQUAL	**2.474***	0.014	0.173	0.070
Submissive	EQUAL	-1.151	0.251	-0.086	0.075
Friendly-Submissive	EQUAL	-1.237	0.218	-0.074	0.059
Friendly	UNEQUAL	**-2.399***	0.017	-0.179	0.075
Friendly-Dominant	EQUAL	-1.836	0.068	-0.119	0.065

*Note: * Significant at the 0.05 level*
*   ** Significant at the 0.01 level*

The data provided in Table 5.13 indicates that there are no significant differences between gender groups on the basis of Interpersonal Style for the Dominant (t = 1.107; p = 0.270), Hostile-Dominant (t = -1.941; p = 0.054), Submissive (t = -1.154; p = 0.251), Friendly-Submissive (t = -0.164; p = 0,218) and Friendly-Dominant (t = -1.836; p = 0.068) subscales of Kiesler's IM-C.

The data does however show that there are differences between males and females for the Hostile (t = 3.528; p = 0.001) subscale at the 0.01 level, and also for Hostile-Submissive (t = 2.474; p = 0.014) and Friendly (t = -2.399; p = 0.017) subscales at the 0.05 level.

On the basis of this data the hypothesis H:10 is therefore partially accepted on the grounds that there are differences in terms of interpersonal style preferences between males and females for three of the subscales.

Ansell and Pincus (2004), report that they found no gender differences with regard to interpersonal style. This supports the findings presented above for the Dominant, Hostile-Dominant, Submissive, Friendly-Submissive, Friendly, and Friendly-Dominant subscales of the IMI-C.

On the other hand, Kiesler and Schmidt (2006) support the finding of there being differences between males and females with regard to interpersonal style, but point out that the only four studies showing comparisons between gender are based on the 28 item IMI-C version and therefore only make comparisons with regard to the four octants that anchor the control and affiliation axes of the Interpersonal Circumplex. The only explanation provided for gender differences by Kiesler and Schmidt (2006) is that the representative Ns for males are consistently substantially smaller than females in these studies. This explanation cannot be applied to the findings presented above as there are 110 males and 97 females represented in this study.

Moskowitz (1993) reports that friendly as well as dominant and submissive behaviour differs with regard to gender depending on whether an individual is relating to the same-sex, opposite-sex, strange or familiar individual. When with an opposite-sex stranger, women become less friendly and men become friendlier (Moskowitz, 1993). This phenomenon means that although there are differences between males and females with regard to interpersonal friendly and hostile behaviour, the differences can become quite small as a result. Moskowitz (1993) confirms that gender differences related to friendly and dominant behaviour are present and more observable in situations involving a same-sex friend or stranger. Overall, Moskowitz (1993) indicates that women engaged more frequently in friendly behaviours than men did, with men engaging in more dominant behaviours. This finding gives support to the finding presented above showing differences between genders with regard to interpersonal behaviour, particularly with regard to the Friendly behaviour.

With regard to the findings presented above for Hostile and Hostile-Submissive subscales of the IMI-C, Gerevich, Bácskai and Czobor (2007) found that while there are no differences between gender with regard to hostility and anger, male gender is associated with the expression of verbal and physical aggression. This could help provide an explanation for the finding presented above which shows gender differences for the Hostile and Hostile-Submissive subscales of the IMI-C. As the IMI-C was administered on behalf of the person being evaluated by another individual who had observed their behaviour, it is possible that males may have been portrayed as more hostile due to the fact that they show more verbal and aggressive behaviour which is then perceived as hostile by the observer. In the same way females may be rated as being Hostile-Submissive as they do not, according to Gerevich *et al.* (2007), express their aggression as overtly as their male counterparts. To support this explanation, Horowitz *et al.* (2006) report that the same interpersonal behaviour demonstrated by an individual may be ascribed different meanings and motives by individual observers. This assertion could lead to disagreements among observers and could impact how an observer responds to individual items on the IMI-C.

(c) H 11: Race and Salutogenic Constructs

The analysis of variance, comparing racial groups with three Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) are presented in Table 5.14 and discussed thereafter.

Table 5.14

ANOVA: Comparing Racial Groups with Salutogenic Constructs

N=207

		F	*p. value*
	Sense of Coherence	2.463	0.064
Locus of Control	Autonomy	**22.614**	0.000
	External Control	1.634	0.183
	Internal Control	1.924	0.127
	Self-Efficacy	**8.378**	0.000

*Note: ** Significant at the 0.01 level*

The data presented in Table 5.14 indicates that there is no statistically significant difference between participants of different race groups with regard to Sense of Coherence (f = 2.463; p = 0.64). There are also no differences indicated for two of the three subscales which make up the Locus of Control questionnaire, namely Internal Control (f = 1.924; p = 0.127) and External Control (f = 1.634; p = 0.183). However, the results indicate a difference between race groups on the Autonomy (f = 22.614; p = 0.000) subscale of the Locus of control questionnaire at the 0.01 level.

There is also a difference in terms of perceived Self-Efficacy (f = 8.378; p = 0.000) between race groups who participated in the study.

The hypothesis H11 is thus partially accepted based on the fact that there is no statistically significant difference between Sense of Coherence as well as the Internal and External Control subscales of the Locus of Control Questionnaire. There is however a statistically significant difference between racial grouping and Self-Efficacy as well as the Autonomy subscale of the Locus of Control Questionnaire.

Research conducted by Bruscia, Shultis, Dennery and Dileo (2008), supports the finding that there are no differences between race and Sense of Coherence.

The significant differences shown to exist between race groups and the Autonomy subscale of the Locus of Control questionnaire might be explained by the Scheper's (2005) contention that this subscale refers to individual attempts to master and be effective in their environments and impose one's designs upon it. It may be speculated that this result is due to South Africa's historical socio-political environment, where Asian, Black and Coloured people were legally categorised and marginalised. Research by Mirowsky and Ross (2003), lends support to this possible explanation by reporting that a history of discrimination and restricted opportunity lowers Sense of Coherence in those being discriminated against.

The result showing a statistically significant difference between race groups and Self-Efficacy is supported by research conducted by Urban (2006), which found significant differences in Self-Efficacy scores between Asian, Black and Caucasian

groups in South Africa. A probable explanation for these differences could rest on the historical political climate in South Africa where Asians, Blacks and Coloureds were classified as non-whites and effectively discriminated against in society through legislation and separate education systems negatively impacting on perceived levels of Self-Efficacy. This hangover from the past may also be perpetuated by current practices and attitudes within the South African context that remain active on a psychological and broader social level.

(d) H 12: Race and Interpersonal Style

The analysis of variance, comparing racial groups with the eight interpersonal styles measured as subscales on the IMI-C, are presented in Table 5.15 and discussed thereafter.

Table 5.15

ANOVA: Comparing Racial Groups with Interpersonal Style

N=207

	F	p. value
Dominant	7.542**	0.000
Hostile-Dominant	2.993*	0.032
Hostile	6.887**	0.000
Hostile-Submissive	7.331**	0.000
Submissive	0.705	0.550
Friendly-Submissive	6.865**	0.000
Friendly	9.637**	0.000
Friendly-Dominant	6.542**	0.000

Note: ** Significant at the 0.05 level*

               **Significant at the 0.01 level

The data presented in Table 5.15 indicates that there are statistically significant differences between race groups and interpersonal style preferences with regard to seven (7) out of the eight (8) subscales, namely Dominant (f = 7.542; p = 0.000), Hostile-Dominant (f = 2.993; p = 0.032), Hostile (f = 6.887; p = 0.000), Hostile-Submissive (f = 7.331; p = 0.000), Friendly-Submissive (f = 6.865, p = 0.000), Friendly (f = 9.637; p = 0.000) and Friendly-Dominant (f = 6.542; p = 0.000).

The data indicates that the Submissive (f = 0.705; p = 0.550) subscale shows no significant differences between race groups.

Based on the data provided in Table 5.14, the hypothesis (H12) regarding the relationship between race group and interpersonal style is partially accepted. It must be taken into account that the Submissive subscale showed no significant differences between race groups. South Africa's historical socio-political environment, where people were legally categorised in terms of their racial profile and treated accordingly, may serve as a basis for explaining this result. In support of this possible explanation, Hewstone and Greenland (2000) argue that social categorisation impacts on interpersonal behaviour and relationships and impacts on how individuals relate to others including both relations between groups and individuals belonging to the same group.

(e) H 13: Age and Salutogenic Constructs

The analysis of variance, comparing age groups with three Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy), are presented in Table 5.16 and discussed thereafter.

Table 5.16

ANOVA: Comparing Age Groups with Salutogenic Constructs

N=207

		F	p. value
	Sense of Coherence	**5.414****	0.001
Locus of Control	Autonomy	**10.556****	0.000
	External Control	1.841	0.141
	Internal Control	0.357	0.784
	Self-Efficacy	**3.013***	0.031

Note: ** Significant at the 0.05 level*

**Significant at the 0.01 level

The data presented in Table 5.16 indicates that there is a statistically significant difference between age groups with regard to Sense of Coherence (f = 5.414; p = 0.001).

Two out of three of the subscales on the Locus of Control questionnaire show that there is no difference between age groups; these subscales are External Control (f = 1.841; p = 0.141) and Internal Locus of Control (f = 0.357; p = 0.784). The Autonomy (f = 10.556; p = 0.000) subscale however indicates that there is a statistically significant difference between age groups in this regard for this subscale.

The data further indicates that there is a statistically significant difference between age groups and Self-Efficacy (f = 3,013; p = 0.031).

The hypothesis H13, which concerns the differences between age groups and Salutogenic constructs, is thus partially accepted, based on the fact that there are significant statistical differences between age groups with regard to Sense of Coherence, Self-Efficacy and the Autonomy subscale of the Locus of Control Questionnaire, but not for the Internal and External Control Subscales.

The results presented for Sense of Coherence are validated by a study conducted by Klepp, Mastekaasa, Sørensen, Sandanger and Kleiner (2007) which found that Sense of Coherence increases through adulthood. Differences in Sense of Coherence scores for different age groups could possibly be explained by how individuals with more or less life experience are able to manage, understand and find meaning in their circumstances.

The result presented for the Autonomy subscale of the Locus of Control Questionnaire is supported by research conducted by Mirowsky and Ross (2003), which shows that older adults have a lower sense of personal control than younger or middle-aged adults. Fry (2000) states that losses accompanying the aging process are brought on by external factors which may contribute to this finding.

The finding that there are no differences between age groups for the Internal Control subscale of the Locus of Control Questionnaire but that there are differences for the Autonomy subscale is surprising in that it does not support Schepers (2005) contention that these two constructs complement each other and are closely related. In addition, the research presented by Mirowsky and Ross (2003), as presented above, does not support the finding. It may possibly be explained, as per the

explanation put forward for the hypothesis (H9) regarding gender and Salutogenic constructs, where the same dilemma was discussed. Manger and Eikeland (2003) report that gender differences are found in some areas of Locus of Control and not in others. They provide the example of how males tend to show higher Internal Control scores for items related to success as a result of luck, while females score higher Internal Control items related to the belief in hard work and success. While no research could be located to explain the impact of age with regard to this discrepancy, the findings by Manger and Eikeland (2003) may provide a possible explanation for this finding, in that if it is possible for different gender groups to show differences in different areas of Internal Control, perhaps it is feasible that this may explain the same phenomenon with regard to age groups. To establish whether there is any validity for this possible explanation for this finding, further research would be required.

In support of the finding for Self-Efficacy, West *et al.* (2002) show that older adults score lower on Self-Efficacy perceptions than younger adults and state that these differences may be due to possible generational beliefs about ability.

(f) H14: Age and Interpersonal Style

The analysis of variance, comparing age groups with the eight interpersonal styles, measured as subscales on the IMI-C, are presented in Table 5.17 and discussed thereafter.

Table 5.17

ANOVA: Comparing Age Groups with Interpersonal Style

N=207

	F	**p. value**
Dominant	2.160	0.094
Hostile-Dominant	**4.423****	0.005
Hostile	**3.002***	0.032
Hostile-Submissive	1.925	0.127
Submissive	1.904	0.130
Friendly-Submissive	**4.106****	0.007
Friendly	1.544	0.204
Friendly-Dominant	2.160	0.094

*Note: * Significant at the 0.05 level*

*   **Significant at the 0.01 level*

The data in Table 5.17 reveals that there are statistically significant differences between age groups with regard to interpersonal style preferences for the following subscales, Hostile-Dominant (f = 4.4.23; p = 0.005), Hostile (f = 3.002; p = 0.032) and Friendly-Submissive (f = 4.106; p = 0.007).

The data also reveals that there are no statistically significant differences between age groups for the remaining subscales, namely Dominant (f = 2.160; p = 0.094), Hostile-Submissive (f = 1.925; p = 0.127), Submissive (f = 1.904; p = 0.130), Friendly (f = 1544; p = 0.204) and Friendly-Dominant (f = 2.160; p = 0.094).

This hypothesis (H14) is therefore also partially accepted.

No international or local research could be located which links age to differences in Interpersonal Style behaviour as conceptualised by Kiesler's 1982 Interpersonal Circumplex. Significant differences in age groupings were however reported for the Hostile-Dominant, Hostile and Friendly-Submissive subscales of the IMI-C as indicated above. Further research would be required to provide an adequate explanation for this finding.

Kiesler (2006) argues that individuals develop their repertoire of Interpersonal Style preferences over time based on social learning and the results that they achieve in

their interactions with others. Individual maturity as a result of life experience may therefore provide an explanation for this result.

(g) H15: Tenure and Salutogenic Constructs

The analysis of variance, comparing tenure groups with three Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) are presented in Table 5.18 and discussed thereafter.

Table 5.18

ANOVA: Comparing Tenure Groups with Salutogenic Constructs

N=207

		F	*p. value*
	Sense of Coherence	**3.504****	0.000
Locus of Control	Autonomy	**5.722****	0.000
	External Control	**3.776****	0.000
	Internal Control	0.910	0.619
	Self-Efficacy	**3.994****	0.000

Note: ** Significant at the 0.05 level*

                **Significant at the 0.01 level

According to the data presented in Table 5.18, there is a statistically significant difference between tenure groups and Sense of Coherence (f = 3.504; p = 0.000) as well as tenure groups and Self-Efficacy (f = 3.994; p = 0.000).

Regarding the Locus of control, the data suggests that there is a difference between two of the subscales, namely Autonomy (f = 5.722; p = 0.000) and External Control (f = 3.776; p = 0.000). However, the data reveals that there is no statistically significant difference between tenure groups and the Internal Control (f = 0.910; p = 0.619) subscale.

Given the overall data presented in Table 5.18, the hypothesis H15 dealing with the difference between tenure groups and Salutogenic constructs is partially accepted, based on the finding that there is no significant relationship between tenure and Internal Control.

While it was expected that tenure would show no significant differences with regard to Salutogenic constructs, this was not found to be the case for all three Salutogenic constructs chosen for this study with the exception of the Internal Control subscale of the Locus of Control Questionnaire.

With regard to the finding that there are differences between tenure groupings and Salutogenic constructs, it was expected that no significant differences would be found. This is based on the assertion by Stone (2004) that tenure within an organisation may be mitigated by working experience gained in other organisations.

No international or local research could be located which establishes a direct relationship between tenure and Sense of Coherence. Further research is required to provide an adequate explanation for this finding. A possible explanation for a relationship between tenure and Sense of Coherence may lie in Antonovsky's (1987) preconditions for a strong Sense of Coherence, which include recognising structure and predictability in the environment, understanding the resources available to meet the demands of the environment and feeling that the demands and challenges are worthy of an individual's investment of time and effort. These conditions may be more strongly formed, within a specific organisational environment, for people who have longer tenure.

Bennett, Rigby and Boshoff (1997) report that longer tenure is associated with lower levels of Internal Control and the use of avoidance as a coping strategy rather than actively trying to change environmental circumstances. This finding supports the finding for there being a relationship between tenure and the Autonomy and External Control subscales of the Locus of Control Questionnaire. A possible explanation for the finding, based on the findings of Bennett *et al.* (1997), may be that people with shorter tenure possibly score higher on the Autonomy subscale and those with longer tenure possibly score higher on the External Control subscale of the Locus of Control Questionnaire. Further research is required to establish a less speculative explanation.

The fact that no significant differences between tenure groups were shown for the Autonomy subscale and not the Internal Control subscale of the Locus of Control

Questionnaire is surprising and unexpected, as it refutes Scheper's (2005) contention that these two constructs are closely related and are both a measure of Internal Control. Further research is required to provide a comprehensive explanation for this. However, the basis for a possible explanation may be found in the interpretation of the individual items making up each of these two subscales of the Locus of Control Questionnaire by the different tenure groupings. This possible explanation is based on the same reasoning put forward for the hypotheses related to gender (H9) and age (H13), which draws on research conducted by Manger and Eikeland (2000), showing that differences can be found between different groupings, specifically gender, and different "areas" of Internal Control.

The finding for Self-Efficacy is validated by Tierney and Farmer (2002), who report that job tenure contributes to increased Creative Self-Efficacy, and can be explained in terms of individuals developing a greater belief in their efficacy through practice and experience in a specific job.

(h) H 16: Tenure and Interpersonal Style

The analysis of variance, comparing tenure groups with eight interpersonal styles measured as subscales on the IMI-C, are presented in Table 5.19 and discussed thereafter.

Table 5.19

ANOVA: Comparing Tenure Groups with Interpersonal Style

N=207

	F	p. value
Dominant	5.141**	0.000
Hostile-Dominant	5.193**	0.000
Hostile	11.381**	0.000
Hostile-Submissive	7.545**	0.000
Submissive	4.760**	0.000
Friendly-Submissive	3.348**	0.000
Friendly	3.338**	0.000
Friendly-Dominant	3.097**	0.000

Note: *Significant at the 0.05 level

          **Significant at the 0.01 level

The data in Table 5.19 indicates that there is a statistically significant difference between tenure groups and all subscales on Kiesler's IMI-C. The results show as follows: Dominant (f = 5.141; p = 0.000), Hostile-Dominant (f = 5.193; p = 0.000), Hostile (f = 11.381; p = 0.000), Hostile-Submissive (f = 7.545; p = 0.000), Submissive (f = 4.760; p = 0.000), Friendly-Submissive (f = 3.348; p = 0.000), Friendly (f = 3.338; p = 0.000) and Friendly-Dominant (f = 3.097; p = 0.000).

This gives an indication that individuals with different lengths of service within the organisation utilise different Interpersonal Styles to a greater or lesser extent.

Hypothesis H16 is thus rejected.

No international or local research could be located which links tenure to differences in Interpersonal Style behaviour as conceptualised by Kiesler's 1982 Interpersonal Circumplex. Significant differences were however reported for all eight (8) subscales of the IMI-C as indicated above. Further research would be required to provide an adequate explanation for this finding.

Kiesler (2006) argues that individuals develop their repertoire of Interpersonal Style preferences over time based on social learning and the results that they achieve in their interactions with others. This may provide some basis for using the concept of maturity, chronological age or years of experience within an organisation (tenure) as a starting point to provide an explanation for this finding.

The group sizes for employees having 11 to 15 years, 16 to 20 years and more than 20 years with the organisation were very small and may have thus affected the result.

5.5   SUMMARY AND INTEGRATION OF RESULTS

This chapter reported the outcomes of the study. Firstly, biographical data was presented which indicated that 53.1% of respondents were male and 46.9% were female. The racial breakdown of respondents was as follows, 61.8% were White, 18.8% were Black, 12.6% were Asian and 6.8% were coloured. The average age of

respondents was 34.7 years old, with the modal age group being between 18-29 years old (42.5%). The average tenure was reported at 7.3 years.

Descriptive statistics were presented for each of the instruments used in the study. An analysis of the reliability of the measuring instruments indicated that all four scales have adequate internal consistency, ranging from (α = 0.79 to α = 0.91), with the IMI-C showing the highest Cronbach Alpha coefficient (α = 0.91).

5.5.1 Hypotheses Related to Relationships between Interpersonal Style and Salutogenic Constructs

The hypotheses related to relationships between interpersonal style and Salutogenic constructs were tested by means of Pearson product moment correlations. An overview of the results is presented in Table 5.20 in order to allow for easier comparisons:

Table 5.20

Results Summary Table Showing Relationships between Interpersonal Style and Salutogenic Constructs

	Sense of Coherence	Locus of Control	Self-Efficacy	Accept or reject Hypothesis
H1: Dominant	✘	✘	✘	Rejected
H2: Hostile-Dominant	✓*	✘	✘	Rejected
H3: Hostile	✓	✓	✓	Accepted
H4: Hostile-Submissive	✓	✓	✓	Accepted
H5: Submissive	✓	✘	✓	Partially accepted
H6: Friendly-Submissive	✘	✘	✘	Rejected
H7: Friendly	✓	✓	✓	Accepted
H8: Dominant-Friendly	✘	✘	✘	Rejected

*weak effect size

Key:

✘ - Expected correlation does not exist

✓ - Expected correlation exists

The results indicate the following:

- There is no significant positive relationship between the three chosen Salutogenic constructs and the Dominant subscale on the IMI-C.
- There is no significant negative relationship between the three chosen Salutogenic constructs and the Hostile-Dominant subscale on the IMI-C.
- There is a significant negative relationship between the three chosen Salutogenic constructs and the Hostile subscale on the IMI-C.
- There is a significant negative relationship between the three chosen Salutogenic constructs and the Hostile-Submissive subscale on the IMI-C.
- There is a significant negative relationship between the Sense of Coherence and Self-Efficacy but not Internal Locus of Control and the Submissive subscale on the IMI-C.
- There is no significant positive relationship between the three chosen Salutogenic constructs and the Friendly-Submissive subscale on the IMI-C.
- There is a significant positive relationship between the three chosen Salutogenic constructs and the Friendly subscale on the IMI-C.
- There is no significant positive relationship between the three chosen Salutogenic constructs and the Hostile-Dominant subscale on the IMI-C.

The effect sizes ranged from weak to medium.

5.5.2 Hypotheses Related to Biographical Variables

The relationship between Interpersonal Styles and the biographical of gender, racial grouping, age and tenure were analysed by means of a t-test and Analysis of Variance (ANOVA), and are presented in Tables 5.21 and 5.22 respectively, to allow for easy comparisons.

Table 5.21

Results Summary Table Showing Differences between Biographical Variables and Salutogenic Constructs

	Sense of Coherence	Locus of Control			Self-Efficacy	Accept or Reject
		Autonomy	Internal Control	External Control		
H9: Gender	✖	✖	✖	✓	✖	Partially accept
H11: Race	✖	✓	✖	✖	✓	Partially accept
H13: Age	✓	✓	✖	✖	✓	Partially accept
H15: Tenure	✓	✓	✓	✖	✓	Partially accept

Key:

✖ - Expected correlation does not exist

✓ - Expected correlation exists

Table 5.22

Results Summary Table Showing Differences between Biographical Varaibles and Interpersonal Style

	Dominant	Hostile-Dominant	Hostile	Hostile-Submissive	Submissive	Friendly-Submissive	Friendly	Dominant-Friendly	Accept or Reject
H10: Gender	✖	✖	✓	✓	✖	✖	✓	✖	Partially accept
H12: Race	✓	✓	✓	✓	✖	✓	✓	✓	Partially accept
H14: Age	✖	✓	✓	✖	✖	✓	✖	✖	Partially accept
H16: Tenure	✓	✓	✓	✓	✓	✓	✓	✓	Reject

Key:

✖ - Expected correlation does not exist

✓ - Expected correlation exists

The results indicate the following:

- There are no differences between males and females with regard to the chosen Salutogenic constructs.
- There are no significant differences between males and females with regard to five of the eight subscales on the IMI-C. However, there are significant differences for the subscales measuring Hostile, Hostile-Submissive and Friendly behaviour between gender groups.
- There are no significant differences between race groups with regard to Sense of Coherence or the internal and external subscales on the Locus of Control Questionnaire. However, there are significant differences between racial groupings with regard to Self-Efficacy and the Autonomy subscale of the Locus of Control Questionnaire.
- There are significant differences between racial groupings with regard to Interpersonal Style.
- There are significant differences between people of different age groups and Salutogenic constructs with the exception of the internal and external Locus of Control subscales.
- There are significant differences between age groupings with regard to the Hostile-Dominant, Hostile, Friendly-Submissive and Friendly-Dominant subscales on the IMI-C, but not with regard to the Dominant, Hostile-Submissive, Submissive and Friendly subscales.
- There are significant differences between tenure groups with regard to the Salutogenic constructs of Sense of Coherence, Self-Efficacy and the Autonomy and External Control subscale of the Locus of Control Questionnaire. There is however no significant difference between tenure and the Internal Control subscale of the Locus of Control Questionnaire.
- The results indicate a significant difference between tenure groups and all Interpersonal Style subscales on the IMI-C.

The above results are indicative of the relationships between the various biographical variables, and either Salutogenic scores or Interpersonal Style repertoires utilised by subjects that make up the sample.

5.5.3 Testing the Central Hypothesis

The central hypothesis in this study is that there is a relationship between Salutogenic constructs and Interpersonal Style.

The results presented in Table 5.11 and summarised in Table 5.20 provide the basis for testing the central hypothesis of this study. These results show that people with a high Sense of Coherence, internal Locus of Control and high level of perceived Self-Efficacy are more likely to display higher levels of Friendly behaviour and less likely to display behaviour classified as Hostile-Submissive.

There appears to be no relationship between the three chosen Salutogenic constructs and Dominant-Hostile or Friendly-Submissive behaviour. The remaining Interpersonal Styles display weak and variable relationships with the Salutogenic constructs.

The findings can thus be summarised by stating that as psychological wellness increases, as measured by the three Salutogenic constructs utilised in this study, Friendly behaviour increases and Hostile and Hostile-Submissive behaviour decreases.

The findings further showed a relationship between two of the Salutogenic constructs (Sense of Coherence and Self-Efficacy) and Submissive behaviour. However, the same was not found for internal Locus of Control and Submissive behaviour.

5.6 CHAPTER SUMMARY

This chapter dealt with the reporting and interpretation of the results provided by the study. First, the biographical data was presented. This was followed by an overview of the descriptive statistics for the variables of the study. The reliability or internal consistency of the measuring instruments was presented and discussed. The hypotheses were then tested by means of Pearson product moment correlations t-

tests and analysis of variance (ANOVA) which were presented and discussed. The chapter was concluded with a summary and integration of the results.

In Chapter 6, the conclusions, limitations and recommendations will be discussed.

CHAPTER 6: CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS

In this chapter, the conclusions, recommendations and limitations of the study are presented. The conclusions will be presented and structured in terms of the specific theoretical aims of the study, which are:

- To conceptualise selected Salutogenic constructs, namely Sense of Coherence, Locus of Control and Self-Efficacy, and to indicate how individuals with these Salutogenic dispositions theoretically tend to cope better with work and life stressors.

- To conceptualise the construct of Interpersonal Style, using Kiesler's 1982 Interpersonal Circumplex as the foundation.

- To theoretically describe the relationship between Interpersonal Style and Sense of Coherence, Locus of Control and Self-Efficacy.

Conclusions are also formulated in terms of the specific empirical aims of the study, which are:

- To empirically determine the relationship between the three Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) and Interpersonal Styles.

- To indicate possible differences between biographical variables (gender, race, age and tenure) and three Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy), as well as Interpersonal Style.

- To formulate conclusions and recommendations based on this result for future research and for the future understanding of the relationship between psychological wellness and Interpersonal Styles within organisations.

The significance of this study on the relationship between Salutogenic constructs and Interpersonal Style has placed emphasis on the following: *firstly*, the fact that these constructs can be measured and verified scientifically, *secondly*, that organisations need to be made aware of any relationships that might exist, *thirdly*, the need to put in place programmes that support and enhance employee wellness within organisations and *fourthly,* the need to assist managers and employees within organisations to improve their interpersonal skills and their understanding of interpersonal dynamics.

Recommendations are presented in terms of the specific and empirical aims of the study. These recommendations relate to the importance of utilising knowledge of health and wellbeing in organisations to enhance managerial competence as well as learning to utilise more relevant and helpful interpersonal styles to enhance managerial competence.

Limitations are discussed in terms of the theoretical viewpoint as well as the empirical research.

6.1   CONCLUSIONS

The conclusions in terms of the specific aims of the study (Chapter 1, Section 1.3.2.) will now be discussed.

6.1.1 Conclusions in Terms of the Specific Theoretical Aims of the Research

The conclusions in terms of the theoretical analysis of Salutogenic constructs and interpersonal styles will be discussed in the next section.

6.1.1.1   First Aim: Conceptualisation of Salutogenic Constructs

The first specific aim of the study was to conceptualise selected Salutogenic constructs, namely Sense of Coherence, Locus of Control and Self-Efficacy, and to indicate how individuals with certain Salutogenic dispositions theoretically tend to cope better with work and life stresses. This aim was achieved in Chapter 2.

In order to fulfil this aim, each of the three selected Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) selected for the purpose of this study were discussed in turn and evaluated in terms of the literature. The following conclusions can be made:

Salutogenic thinking is a break from the medical model, which focuses on what is wrong with people and the pursuit of fixing what is wrong, and a move towards what is right with human functioning and how people cope in specific situations. This is particularly relevant to the field of Industrial and Organisational Psychology which focuses on people in an organisational context and the optimisation of individual and organisational performance and development within that context.

The following conclusions were made with regard to each of the Salutogenic constructs which were chosen for this study:

- Sense of Coherence is a strong contributor to any individual's ability to cope with stress, avoid burnout and function more effectively. It manifests in a feeling of enduring confidence that stimuli deriving from an individual's internal and external environment in the course of living are structured, predictable and explicable (comprehensibility), the necessary resources are available to meet the demands of the environmental stimuli (manageability) and that the stimuli present demands and challenges worthy of investment and engagement (meaningfulness).
- An internal Locus of Control and a greater sense of autonomy (which are related concepts) are associated with the ability of an individual to cope better with life stressors and reach their goals despite setbacks and obstacles, while external Locus of Control is associated with behaviour and events being attributed to chance or luck which negatively impacts on individual performance and personal success.
- Higher levels of Self-Efficacy contribute to individuals coping better with demanding and challenging situations, having more confidence and higher levels of perseverance when faced with challenges.

From the literature, the conclusion can be made that the three chosen Salutogenic constructs are recognised as related constructs which make a contribution to an individual's general wellbeing, mental health and ability to cope with stress. This conclusion is in agreement with that expressed by Jackson and Rothmann (2001), and has been adopted as a premise for this study.

6.1.1.2   Second Aim: Conceptualisation of Interpersonal Psychology

The second aim, which was to conceptualise the construct of Interpersonal Style, using Kiesler's 1982 Interpersonal Circumplex as a foundation, was achieved in Chapter 3.

It was concluded that Interpersonal Psychology in general and the Interpersonal Circumplex of Kiesler (1982) is characterised by a strong bias towards psychopathology; therefore, a study looking at the Interpersonal Circumplex and its relation to wellness constructs was both justified and needed.

It was concluded that Kiesler's 1982 Interpersonal Circumplex is a useful and powerful model for conceptualising, organising, assessing and describing interpersonal behaviour preferences and interactions.

It was concluded, for the sake of this study, that the octant version of the Circumplex was most useful for doing research as it provides more defined classifications for the adjacent categories than the original 16 categories, where distinctions become more subtle and difficult to make. Further to this, it was concluded that the octant version shows more stability across situations. The octant version of the interpersonal circumplex was therefore adopted.

Several conclusions were reached regarding the dynamics of interpersonal relationships with regard to Kiesler's 1982 Interpersonal Circumplex. These include:

- Interpersonal behaviour can be learned and reinforced over time. As such, individuals are essentially responsible for their own interpersonal relationships which are controlled by the way they treat others and respond in turn.

- Interpersonal behaviour is based primarily on two dimensions (dominance-submission and hostility-affect) within the circumplex framework.

- Interpersonal Styles are developed out of a need to reduce personal and social anxiety.

- Interpersonal behaviour is made up of an "evoking" message and an "impact" message, where behaviour is intended to evoke specific responses from others and where behaviours impact upon the receiver of the "impact" message so as to elicit a desired response.

- Complementary responses confirm, reinforce or validate an individual's self presentation.

- Acomplementary or Anticomplementary responses do not confirm, reinforce or validate an individual's self presentation but force a change in behaviour, or create an unsustainable relationship.

It was also concluded that despite some valid criticisms of Kiesler's (1982) Interpersonal Circumplex, outlined in Section 3.5, it remained nonetheless a powerful tool for assessing interpersonal behaviour.

6.1.1.3 Third Aim: Theoretical Relationship between Salutogenic Constructs and Interpersonal Style

The third aim was to theoretically describe the relationship between Interpersonal Style and Sense of Coherence, Locus of Control and Self-Efficacy.

This aim was dealt with in Chapter 3, the overriding conclusion being that significant research with regard to the relationship between Salutogenic constructs and Interpersonal Style has not been conducted in the past.

It was however concluded that the literature does acknowledge theoretically that some of the interpersonal styles in the repertoire are more healthful and functional than others. For example, it is acknowledged in the literature that psychologically healthy individuals affect others with specific behaviours which elicit appropriate responses, while maladjusted individuals affect others by applying inflexible and

strong interpersonal pressures (Hafenscheid, 2005). Further to this, the literature points to many discussions regarding how specific Interpersonal Styles utilised by a psychologist in therapy impact positively on the wellness of the client (Lillie, 2007), which implies a link between the Interpersonal Circumplex and wellness. Research conducted by Lock and Sadler (2007) looked at and confirmed the impact of Self-Efficacy on Interpersonal interactions.

The conclusion was drawn that the field of Industrial and Organisational Psychology has a primarily Salutogenic disposition, seeking to move people from normal to superior levels of functioning and therefore warranted a more Salutogenic approach.

Given the prevalence of studies which have acknowledged a link between psychopathology and interpersonal style, it was further concluded that there is place for a more Salutogenic approach to Interpersonal Styles, which emphasises the link between psychological wellness and Interpersonal styles.

Based on the literature, it is further concluded that specific Interpersonal Styles are more healthful and relevant in a working environment and particularly that there is a specific repertoire of styles which are more useful for leadership and management, as is pointed out by Koortzen and Mauer (2005). These styles fall predominantly in the Dominant-Friendly quadrant of the Interpersonal Circumplex, but also include, to some degree, competitiveness, which is a Dominant-Hostile trait, as well as warmth and trust which are found in the Friendly-Submissive quadrant of Kiesler's 1982 Interpersonal Circumplex.

The conclusion was drawn that if good management and leadership behaviour are associated with Interpersonal Styles described in the Dominant-Friendly quadrant of Kiesler's 1982 Interpersonal Circumplex, as asserted by Koortzen and Mauer (2005), and Psychopathologies are associated with the Dominant-Friendly quadrant, as attested by Anderson (2001) and Kiesler (1996a), then the Dominant-Friendly quadrant could be linked to specific Salutogenic constructs, which indicate and promote wellness. This conclusion formed the foundation of the study.

6.1.2 Conclusions Regarding the Empirical Study

The conclusions in terms of the empirical aims of the study (Chapter 1, Section 1.3.3) will now be discussed.

6.1.2.1 First Aim: Relationship between Salutogenic Constructs and Interpersonal Style

The first empirical aim, namely to determine the relationship between three Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) and Interpersonal Styles was achieved in Chapter 5.

The following measuring instruments were used to measure each of the constructs:

- Sense of Coherence by means of Antonovsky's (1987) Orientation to Life Questionnaire.
- Locus of Control by means of Scheper's (1999) Locus of Control Questionnaire (Third edition).
- Self-Efficacy by means of Bandura's (1977) Self-Efficacy scale.
- Interpersonal Style by means of Kiesler's Impact Message Inventory (Octant Version) or IMI-C.

The resulting correlations between scores from each of the scales measuring the Salutogenic constructs (Orientation to Life Questionnaire, Locus of Control Questionnaire and Self-Efficacy scale) and the scores from each subscale on the IMI-C were presented in Chapter 5 (refer to Table 5.11).

From the results presented in Chapter 5, the conclusions can be drawn that people with a high Sense of Coherence, internal Locus of Control and a high level of perceived Self-Efficacy have a tendency to Friendly behaviour. In the same way, people displaying these same Salutogenic traits are less likely to display behaviour classified as being Hostile-Submissive.

There appears to be no relationship between the three chosen Salutogenic constructs and Dominant, Hostile-Dominant or Friendly-Submissive behaviour. The remaining Interpersonal Styles display weak and variable relationships with the Salutogenic constructs.

In summary, it can be said that as psychological wellness increases, as measured by these Salutogenic constructs, Friendly behaviour increases and Hostile and Hostile-Submissive behaviour decreases.

The findings confirmed the expected conceptual relationship between Salutogenic constructs and Friendly behaviour as well as Hostile and Hostile-Submissive behaviour. The findings also confirmed the conceptual relationship between two of the Salutogenic constructs (Sense of Coherence and Self-Efficacy) and Submissive behaviour; however the same was not true of internal Locus of Control and Submissive behaviour.

The effect sizes ranged from weak to medium. This indicates that although the relationships, which have been identified, are present they are not as strong as were conceptually expected.

6.1.2.2 Second Aim: Relationship between Salutogenic Constructs, Interpersonal Style and Biographical Variables

The second empirical aim, namely to indicate possible differences between biographical variables (gender, race, age and tenure) on three Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy), and Interpersonal Style was achieved in Chapter 5.

The following conclusions are drawn:

- There are no differences between males and females regarding Salutogenic constructs and five of the eight interpersonal classifications. However, males and females seem to show differences with regard to Hostile, Hostile-Submissive and Friendly behaviour. Notably, these are the same three

interpersonal styles which show significant relationships with Salutogenic constructs. It is, however, unclear whether these results are connected.

- Race groups differ with regard to Self-Efficacy and Autonomy. There are also significant differences between race groups with regard to Interpersonal Style repertoires.

- People of different ages differ in terms of Salutogenic dispositions and show both similarities and differences with regard to Interpersonal Styles, which does not seem to follow any recognisable pattern, as these differences are seen with regard to Hostile-Dominant, Hostile, Friendly-Submissive and Friendly Dominant behaviours but not with regard to Dominant, Hostile-Dominant, Submissive and Friendly behaviour.

- Tenure groups show statistically significant differences with regard to Salutogenic constructs and Interpersonal Style generally. Length of service thus seems to impact on wellness as well as Interpersonal Styles people adopt towards others in the workplace. The only area where there does seem to be no difference is with regard to Internal Control, yet this conflicts with the related construct of Autonomy.

6.1.2.3 Third Aim: Formulation of Conclusion and Recommendations

The third empirical aim, which is to formulate recommendations based on this result for future research and for the future understanding of the relationship between psychological wellness and Interpersonal Styles within organisations will be discussed later in Section 6.3.

6.2   LIMITATIONS OF THE RESEARCH

The limitations of the study will be discussed below.

6.2.1   Limitations of the Literature Review

The literature review was subject to the following limitations:

- There were no South African studies which made use of the IMI-C, making it difficult to discuss with regard to relevant contextual norms.

- While there is much written on Interpersonal Psychology and Interpersonal Styles with regard to Psychopathology, there is limited literature which relates Interpersonal Psychology and Interpersonal Style to wellness and Salutogenesis.

6.2.2 Limitations of the Empirical Investigation

Limitations encountered in the empirical investigation will be discussed below.

6.2.2.1 Sample

This study was conducted within a single organisation, which means that the results obtained cannot be generalised to the broader South African population. Further to this, the sample was not representative of the broader South African population. Notably, in this regard, the modal age group represented in the study was those categorised between the ages of 18-29 (42.5%). This group was made up of mostly white individuals (61.8%). Asians made up 12.6% of the sample, coloureds made up 8.2% and blacks only accounted for 18.8%. Although these figures represent an accurate picture of the population represented within this organisation of people in the job bands utilised for the sake of this study, it means that the results cannot be generalised to the broader South African population.

The size of the sample was problematic in that it was small, which may have contributed to the low and medium effect sizes obtained in the results. This was particularly so in certain sub categories within the biographical makeup of the sample. In particular, respondents making up sub-categories regarding race, age group and tenure (e.g. Asian, Coloured, age >50 years (25) and tenure groups 11 to 15 years, 16 to 20 years and > 20 years) were small.

Another limitation of the sample was that a sample of convenience was used, which included only two of four divisions within the organisation, and did not include all of

the branches, as branches in the Eastern and Western Cape as well as the Free State provinces were not included in the surveys. This again impacts on the generalisability of the study.

6.2.2.2   Measuring instruments

Only self-report measures were used to measure the Salutogenic constructs, which may have an impact on the validity or the results. The Interpersonal Style, on the other hand, was measured by means of the IMI-C which is filled in by a significant other person who knows the individual well. The IMI-C could be used more effectively if used as a 360 degree questionnaire as this would increase the validity of the results obtained. There was no control in this study as to who would fill in the questionnaire on behalf of the subject, and therefore there is no understanding of how well the person knew the subject and thus how valid the results are.

6.2.2.3   Choice of the Salutogenic variables

In order to prevent the scope of the study from growing too large, only three Salutogenic constructs were selected from the large repertoire available (Sense of Coherence, Locus of Control and Self-Efficacy). Although they were selected on the basis that they are recognised to be good Salutogenic constructs, and contribute to an individual's general sense of wellbeing and mental health (Jackson & Rothmann, 2001), they do not represent all aspects of Salutogenesis or mental health.

6.2.2.4   Research design

The research design does not allow for a determination of the direction of the relationship between variables. It was not the aim of the study to determine the direction of the relationships between variables. A future study aimed at determining a directional relationship could add value.

6.3 RECOMMENDATIONS

The limitations of the study as well as some of the findings discussed in previous sections provide a basis for recommendations for further research. These are discussed below.

6.3.1 Recommendations for Industrial Psychologists working in the Field of Psychological Wellness and Interpersonal psychology

The results of this study form the basis of recommendations for Industrial Psychologists working within this particular organisation. These include:

- The implementation of wellness programmes which focus on the development and increased awareness of individual Salutogenic dispositions and thus strengthen employee ability to cope within the changing working environment.

- Selection processes which focus on evaluating individual Sense of Coherence, Locus of Control and Self Efficacy of prospective staff members. However, in order to do this further research may be required, particularly as these constructs were not studied in a research context.

- The development and implementation of programmes designed to improve interpersonal behaviour, particularly for managers and leaders within the organisation. The assertion that specific repertoires of Interpersonal Styles are more beneficial and effective for managers and leadership create an opportunity in terms of developing an understanding of those behaviours in managers as well as training and development initiatives aimed at providing cognitive behavioural training programmes which teach and strengthen the practical utilisation of those specific behaviours. The identified behaviours which fall predominantly in the Dominant-Friendly quadrant, but also include other situation specific behaviours, need to be incorporated into the repertoire of the organisations' competencies identified for leadership and management candidates and practitioners alike.

- The implementation of selection processes which focus on Interpersonal Style repertoires of prospective managers and executives would enhance the managerial and leadership competence of prospective employees.

- The organisation can contribute to the specific development of the Sense of Coherence of individual employees through structured, regular and clear dissemination of information to employees. This can be further enhanced through training and the implementation of clear systems and processes.

- The utilisation of assessments of organisational employees, in order to assess areas of strength and weakness for development purposes.

6.3.2 Recommendations for Further Research

The following recommendations for further research are made on the basis of the results from the empirical study:

- The Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) form part of the body of knowledge contributing to Positive Psychology and as such need to be researched further so as to contribute to the body of knowledge making up this relatively new area of research.

- Interpersonal behaviour, as conceptualised by Kiesler's 1982 Interpersonal Circumplex needs to be researched further within an organisational context as it has implications for managerial and leadership practices within organisations. While it has been, and remains a useful therapeutic tool, research into its uses with regard to organisational coaching and mentoring need to also be explored.

- Further study of the relationships between both Salutogenic constructs and Interpersonal Style need to be undertaken in a South African context with regard to biographical variables such as gender, race, age and tenure. The results obtained in this study are very superficial in this area, yet showed both similarities and differences for each of these variables, without much explanation or understanding. Notably, with regard to racial grouping, the study could be expanded beyond the classifications utilised in this study and far better representivity could be achieved.

- A similar study could be undertaken in a broader context, utilising a more representative sample, a larger sample size to improve the generalisability of the results. Further to this, the research design must allow for directional relationships between the variables to be identified.

- Further research of the measurement of both Salutogenic constructs and Interpersonal Styles, and the development and improvement of measuring instruments.

- Notably, the results show significant statistical relationships between Salutogenic constructs and Interpersonal Styles classified as being Friendly, Hostile, and Hostile-Submissive. The results further show there to be differences between males and females regarding these same Interpersonal Styles. Consequently, further research into this phenomenon may reveal whether this finding is coincidental or whether it has any significance.

6.4   INTEGRATION OF THE RESEARCH

This study focuses on the relationship between Salutogenic constructs and Interpersonal Style. Positive Psychology, a relatively new field, which has flourished and grown significantly since the year 2000, is discussed as having its origins in the construct of Salutogenesis (Antonovsky, 1987; Seligman *et al.,* 2005; Strümpfer, 2002). Three constructs (Sense of Coherence, Locus of Control and Self-Efficacy) were selected from a wide repertoire, to represent Salutogenic thinking from a wellness perspective, as well as with regard to the contribution they make to employee functioning within the world of work. The fact that these constructs are understood to contribute significantly towards individual functioning, coping and performance within the organisational context leads to the conclusion that specific focus should be placed on better understanding this area of study.

Interpersonal interactions and behaviour was discussed against the background of Interpersonal Psychology, as conceived by Sullivan (1953) and Leary (1957) and conceptualised by Kiesler's 1982 Interpersonal Circumplex (Kiesler, 1983). Interpersonal Style is fundamental to personality and human interaction, with specific style repertoires argued to be more useful than others, and as having relevance to

leadership and management practices within the organisational context (Kiesler, 2006; Koortzen & Mauer, 2005). Thus, if Industrial and Organisational Psychologists can utilise the concept of interpersonal interactions for the purposes of diagnosing leadership and management shortcomings and evaluating effectiveness of managers based on their Interpersonal Style repertoires, it becomes evident that there should be some focus on understanding this area from an organisational perspective.

Previous research in the field of Interpersonal Psychology, and in particular, Interpersonal Style, has established strong relationships between specific interpersonal styles, notably those falling into the Hostile-Submissive classification of Kiesler's 1982 Interpersonal Circumplex model, but no significant research has been done which seeks to look at relationships between Interpersonal Style and Salutogenic constructs (Anderson, 2001; Kiesler, 1996a). This formed the foundation of the central hypothesis and study aims of this study.

The findings of the study were reported in Chapter 5, and the conclusions discussed earlier in this chapter.

In conclusion, the study has provided some support for relationships existing between Salutogenic constructs and interpersonal style. Most notably that Salutogenic constructs have a negative statistically significant relationship with Hostile and Hostile-Dominant behaviours and a positive statistically significant relationship with Friendly interpersonal behaviour. The fact that the demographics of the sample were too small and not generalisable in the South African context and that the size of the sample is too small to assert any significant conclusions and that the research design did not allow for a directional relationship to be studied, sum up the limitations of the study. However, under the circumstances, the relationships which were demonstrated provide some additional insight and legitimise recommendations for further research, as have been made earlier in this chapter.

6.5   CONCLUDING PERSPECTIVE

The study with regard to *the relationship between Salutogenic constructs and Interpersonal Style* was conducted through a systematic research process, which was performed by the researcher as follows:

The researcher provided an introductory chapter in which the problem statement and motivation for the study were presented. This was followed by a detailed outline of the research procedures to be followed. Relevant literature was utilised to gain a better understanding of the relationship between Salutogenic constructs and Interpersonal Style through an analysis of three chosen and related Salutogenic constructs (Sense of Coherence, Locus of Control and Self-Efficacy) and Kiesler's (1982) Interpersonal Circumplex and its octant version, which formed the basis for the study.

The literature review and analysis was used as the foundation for the empirical investigation, from which specific results were obtained. These results were then interpreted and discussed, and conclusions and recommendations were made and presented by the researcher.

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