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Gordon Institute of Business Science
University of Pretoria

Mindfulness, Responsibility, Ethical Judgement and Ethical Intent: A Virtue Ethics Perspective

Cherise Small

15388621

A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

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ABSTRACT

Proliferation of corporate scandals stands as a stark reminder that leaders can and will behave unethically. Mindfulness and moral responsibility in the context of elements of the ethical decision making process have received limited attention. As such, this study set out to examine and empirically quantify the relationship between moral responsibility, mindfulness and only two of the four constructs of Rests Ethical Decision Making Model (1986), ethical judgement and ethical intent. A broader understanding of mindfulness and moral responsibility may provide organisations with a lever that can be utilised to improve the ethical decisions their leaders make.

A quantitative analysis was conducted in support of this study, using data collected from 191 decision makers within a specific organisation. A questionnaire was used to measure respondents level of ethical judgment, ethical intent, mindfulness and moral responsibility. Statistical techniques which include factor analysis, multivariate analysis of variance, analysis of variance and paired sample t-test were used to determine whether the responses to each scenario were consistent and whether response bias was evident. And lastly, regression analysis was used to determine the strength of the relationship between the four constructs, and to identify the existence of the mediating influence of moral responsibility between mindfulness and ethical judgment, and mindfulness and ethical intent.

The outcome of this study provided empirical linkages between the constructs of mindfulness, moral responsibility, ethical judgement and ethical intent. The predictive power of the independent variables on the dependent variables were all below 10%, but which were all still statistically significant. Furthermore, moral responsibility mediated the relationships between the variables mindfulness and ethical intent, as well as between the variables mindfulness and ethical judgment.

Keywords

Mindfulness, ethical judgement, ethical intent, moral responsibility, virtue ethics.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Cherise Small   Date

GLOSSARY

Accountability: "Perceived expectation that one's decisions or actions will be evaluated by a salient audience and that rewards or sanctions are believed to be contingent on this expected evaluation" (Hall, Frink, & Buckley, 2015)

Buddhism: Religion or philosophy which when practiced aligns conduct with reality with the aim of eliminating pain and suffering, with moral principles forming the foundation (Amaro, 2015)

Deontologism: An ethical philosophy concerned with measuring the "rightness" of an action that adheres to standards, rules or social norms (Crossan, Mazutis, & Seijts, 2013)

Epistemological: A theory of knowledge and understanding (Oxford Dictionaries, 2016)

Ethical Decision Making: A cognitive process individuals employ when faced with ethical dilemmas, with various models identifying the pathway dependencies between the various proponents of the process (Craft, 2013)

Machiavellianism: Personality trait which refers to one who focuses on self-interested pursuits almost exclusively (Oxford Dictionaries, 2016)

Metacognition: State of consciousness which arises from awareness of ones' own thoughts (Oxford Dictionaries, 2016)

Moral Disengagement: Self-regulatory mechanism that one disengages to reduce self-sanctions (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996)

Moral Responsibility: obligation to consider the consequences of an action or behaviour on an audience in the decision making process (Williams & Gantt, 2012)

Mindfulness: A skilled state of mind and traits that enable one to "paying attention in a particular way, on purpose, in the present moment, and non-judgementally" (Chiesa, 2012, para. 13)

Neurocognition: The brains neurological activities, processes and structure responsible for reasoning or cognition (Oxford Dictionaries, 2016)

Phenomenological: A field of study that concentrates on phenomena relating to conscious states and direct experiences (Oxford Dictionaries, 2016)

Positive Psychology: The study of the human mind, mental characteristics or attitudes with the intent to improve positive feelings and functions, distinct from the general psychology field directed at mental illness (Seear & Vella-Brodrick, 2012)

Secular: A non-spiritual or non-religious perspective of certain practices and philosophies (Verhaeghen, 2015)

Self-concept: The perception one holds of oneself constructed based on beliefs and responses of others (Oxford Dictionaries, 2016)

Theory of Moral Self: A principle which ascertains that morality is a personal characteristic, and not just attributable to moral reasoning (Jennings, Mitchell, & Hannah, 2015)

Unwholesome Action: Unhealthy state of mind resulting in harmful bodily, verbal or mental actions (Purser & Milillo, 2015)

Utilitarianism: An ethical philosophy concerned with measuring the "rightness" of the outcome whereby benefits to the audience outweighs the costs (Crossan et al., 2013)

Virtue ethics: An ethical philosophy that is concerned with the specific traits of a person that leads to ethical outcomes (Cabello-Medina & Morales-Sánchez, 2013)

Wholesome Action: Healthy state of mind resulting in harmful bodily, verbal or mental actions (Purser & Milillo, 2015)

LIST OF ABBREVIATIONS

ACC: Anterior Cingulate Cortex
Adv.:   Advantageous
ANOVA: Analysis of Variance
ARS: Ascription of Responsibility
BIDR: Balanced Inventory of Desirable Responding
EDM: Ethical decision making
FFMQ: Five Facet Mindfulness Questionnaire
KMO: Kaiser-Meyer-Olkin
MANOVA: Multivariate Analysis of Variance
MBI: Mindfulness-based interventions
MBSR: Mindfulness-based stress reduction
MDS: Moral Disengagement Scale
MES: Multidimensional Ethics Scale
PFC: Prefrontal Cortex
PPI: Positive Psychology Intervention
SIG: Significance
SME: Structural Equation Model
SPSS: Statistical Package for Social Sciences
STD. Dev: Standard Deviation
TMS: Toronto Mindfulness Scale

NOMENCLATURE

m: Number of independent variables

N: Sample Size

r: Pearson's Correlation Coefficient

R: Correlation Coefficient

R^2: Coefficient of Determination

ρ: Level of Statistical Significance

σ: Standard Deviation

z: A dimensionless quantity that has been standardised to measure normalised standard deviations above or below the mean

Alpha: Symbol representing the Cronbach Alpha

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1.1. Research Title

Mindfulness, Responsibility, Ethical Judgement and Ethical Intent: A Virtue Ethics Perspective

1.2. Introduction

A slew of corporate scandals have taken place, with Enron, Parmalat and Worldcom as the most prominent examples that have occurred within the last 15 years (Lowe & Reckers, 2016). Volkswagen has recently been inducted into this group given the air emission scandal that occurred in September 2015 (Plungis, 2016). Society members loose trust in a company's ability to follow socially accepted norms, or to do what they "ought" to do, when the leaders of a company engage in unethical decisions (Ekpe, 2016; Liew, Puah, & Entebang, 2016). Such a loss of trust immediately reflects in a company's financial performance, and in the case of Volkswagen, the air emission scandal has resulted in a financial loss of $42 billion five months after the incident was publicised (Plungis, 2016). A reoccurrence of such a scandal reignites interest in the ethical decision making process (EDM), and serves as a reminder that further study into these constructs is needed (Dedeke, 2013), especially given the substantial fiduciary consequences.

Managers within any organisation are required to make decisions on a daily basis, and will invariably be faced with an ethical dilemma, as were those managers involved in the Volkswagen, Enron, Parmalat and Worldcom scandals. Numerous models have been developed to examine the individual and organisational factors (delineated into situational and cultural factors) that influence elements of the ethical decision making process. Managers make such decisions using either cognition, intuition or a combination of the two, with the range between cognition and intuition being dependent on the organisational and situational factors, as well as the intensity of the dilemma being faced (Dedeke, 2013). And at the heart of the three models of ethical decision making, namely the Rests Model (1986), the Interactionist Model (1986), and the Issue-Contingent Model (1991), the core elements are ethical awareness, ethical judgement, ethical intent and ethical behaviour, where each step is processed on a cognitive or intuitive level (Lehnert, Park, & Singh, 2015).

The ethical decision making process has been studied in the context of six normative theories, namely deontologism, utilitarianism, relativism, egoism, idealism and virtue ethics. These are the lenses through which ethical decisions are made, which are based on an individuals' normative ideals or standards of acceptable behaviour.   Without the incorporation of a normative perspective, ethical decision making is a descriptive process only, devoid of any normative foundation (Crossan, Mazutis, & Seijts, 2013).   In each normative theory as mentioned above, emphasis by the decision maker is placed on various aspects of the decision making process which is then used to establish the ethicality of such a decision (Crossan et al., 2013). Given the various viewpoints that can be used to ascertain the ethicality of a decision, it is necessary to highlight the differences between these six theories.   Utilitarianism and idealism are focused on maximising benefits to the larger audience, and are positively related in the context of ethical decision making (Craft, 2013). Relativists use the contextual and situational factors to access the ethicality of decisions (Craft, 2013). Egoists are concern with maximising personal benefits which are driven by motives of self-interest (Verbos & Miller, 2015).   Deotologism theories evaluate moral human behaviour on the premise of adherence to rules and procedures, while virtue ethics places emphasis on the strength of character (or traits) and values of an individual (Cabello-Medina & Morales-Sánchez, 2013).

Deotologism and Utilitarianism are the predominate normative theories used to evaluate the rationale of individuals within various contexts, and as such the contribution of a virtue ethics perspective has been limited (Crossan et al., 2013). And yet despite the incorporation of deotologism and utilitarianism normative frameworks in the study of ethical decision making, unethical misconduct and behaviour still occurs, as evidence by the numerous corporate scandals mentioned earlier. The incorporation of a virtue ethics perspective may provide further insights that could uncover some of the disparities in the ethical decision making process. Crossan et al. (2013) have developed a model that uses strength of character and values to bridge the gap between a virtue ethics frameworks and ethical decision making in light of this disparity. Virtues of wisdom and temperance are core character strengths of this model, which in and of themselves do not lead to moral behaviour (Crossan et al., 2013). Instead, Crosson et al. (2013) argues that virtues when coupled with a strong motivation, which is aligned to a specific purpose, influences the various ethical decision making processes. At this juncture, the concept of mindfulness is considered to be particularly significant given that the attainment of wisdom through intentional practices of mindfulness

is identified as a principle virtue, and that the elimination of harm is the sole guiding principle (Purser & Milillo, 2015).

Five traits of mindfulness, which can be ascribed as being virtues, have been identified as being non-reactivity, observing, acting with awareness, describing and non-judging (Chiesa, 2012), and this is succinctly captured in the definition of mindfulness: Mindfulness is defined as cognitive functions such as "enriched awareness … differentiation and refinement of existing categories and distinctions … creation of new discontinuous categories … and a more nuanced appreciation of context and alternative ways" to manage (Purser & Milillo, 2015, p. 3). The Buddhist-based conceptualisation of mindfulness endeavors to eradicate the origins of suffering and distress, such that Pursor and Milillo (2015) go so far as to state that ethics and mindfulness cannot be divorced from one another. Such a utilitarian view of the Buddhist-based conceptualisation of mindfulness also raises questions about ones obligation, or moral responsibility. Given that mindfulness according to this definition is underpinned by an obligation to eradicate the origins of suffering and distress, moral responsibility is deduced to be an important construct of mindfulness.

Is it plausible then to believe that improving traits of mindfulness will improve ethical decision making in an organisational context? Studies of the impact of mindfulness within the organisational context has been conducted by numerous authors, and the results have been consistently replicated (Hyland, Lee, & Mills, 2015; Krägeloh, 2016). Mindfulness interventions, mostly in the format of customised mindfulness-based stress reduction (MBSR) programmes, have been proven to aid employees in managing stress within the organisational environment (Hyland et al., 2015; Jha, Morrison, Parker, & Stanley, 2016; Schultz, Ryan, Niemiec, Legate, & Williams, 2015). Interestingly enough, such studies have consistently identified benefits accrued to the research subjects such as improved learning, working memory, sustained attention, perspective taking, and emotion regulation or improved emotional intelligence (Hyland et al., 2015). Improved learning, memory, sustained attention and perspective taking improved performance of persons participating in cognitive tasks (Hyland et al., 2015). Leadership development of high potential candidates is of utmost concern to organisations, yet return on investment tends to be meagre at best (Hyland et al., 2015). Yet by improving self-awareness and emotional intelligence, the development of high potential employees is fostered, leading to improved succession planning and high potential development programmes (Hyland et al., 2015).

MBSR programmes have also been studied in conjunction with employee engagement and burnout rates (Hyland et al., 2015). Employees tend to be more engaged after such MBSR interventions, which invariably lead to employee satisfaction, reduced burnout, and improved citizenship behaviour (Hyland et al., 2015). Given the plethora of benefits accrued to both employee and organisation, it is presumed that companies have implement such mindfulness based interventions (MBI). However, only companies such as General Mills, Google, Aetna and Target have developed MBIs in response to the emerging interest (Hyland et al., 2015; Schultz et al., 2015). The meagre number of companies that have actually adopted MBIs is rather surprising given the positive impact on employee wellness, engagement and improved cognition. It is plausible that MBIs may well become the norm in the future, and that the development of empirical linkages between ethical decision making and mindfulness may possibly hasten such a transformation.

1.3. Research Motivation

Despite extensive study into the ethical decision making construct, Lehnert et al. (2015) draws attention to the need for continued critical analysis of Rests Model (1986) to identify further antecedents, moderators and mediators of the four elements: moral awareness, moral judgement, moral intent and moral behavior. The aim of this research study is to define the nature of the relationship among the constructs of mindfulness, ethical judgement, moral responsibility and ethical intent.

Relevant literature on the influence of mindfulness within the context of ethical decision making is limited (Craft, 2013). Craft (2013) identified only one study that was aimed at describing the relationship between mindfulness and moral awareness in a meta-review of existing literature. Religiosity and value orientations received more attention than the construct of mindfulness in the ethical decision making process over the period 2004 – 2015 in meta-reviews completed by Craft (2013) and Lehnert et al. (2015). From these meta-reviews, one can infer that the influence of mindfulness on the four elements of Rest's Model (1986) is limited.

For the purposes of this study, the constructs of ethical judgement and ethical intent will be elucidated on in the context of mindfulness. The premise that a relationship exists between mindfulness and ethical judgement is based on the concept of virtue ethics. That is to say that traits of mindfulness refers to "the awareness that emerges through paying attention on

purpose, in the present moment, and non-judgementally" (Chiesa, 2012, para. 13), which supersedes the concept of moral awareness: which is an individual's ability to be cognisant of the manifestation of a moral dilemma (Craft, 2013). Traits of mindfulness as described above is not limited to a fixed cognitive frame of moral awareness, but speaks to a person's ability to constantly pay attention to a given situation on purpose, a virtue attained through meditative practice.

Moral obligation or moral responsibility forms part of the ethical foundation of the Buddhist-based conceptualisation of mindfulness. Responsibility was identified as a sub process of ethical decision making, however Lehnert et al. (2015) have also highlighted the need for further research to empirically validate the role of responsibility. This further substantiates the need to broaden the understanding of the relationship between the theories of mindfulness and ethical intent. Ethical intent refers to a resolve to act on the morrally "right" judgement (Craft, 2013). The triadic model of Buddhist mindfulness highlights that the aim is to eradicate thinking patterns and attitudes that stem from greed, ill will and delusion, which is in keeping with the need to reduce suffering and distress (Purser & Milillo, 2015). Such a description of mindfulness highlights that moral responsibility is a core premise, and should inform ethical intent in this context. The relationship premise between mindfulness, responsibility and ethical intent is that moral responsibility is a mediating factor between the two remaining constructs.

Defining and quantifying the relationship between the four constructs as mentioned above will enhance the current breadth of knowledge of the ethical decision making process. Such knowledge will enhance understanding of human behaviour, which may curb incidents of unethical behaviour or the reoccurance of corporate scandals, such as those of Enron, Parmalat, Worldcom and Volkswagen. Scandals of such magnitude are costly, and damage the reputation of an organisation (Ekpe, 2016; Liew et al., 2016). Mindfulness and ethics are inseparable when viewed from the conical literature of Buddhism (Purser & Milillo, 2015), and this may well serve as a tool which can be used to empower employees to identify and act on moral principles of ethicality.

1.4. <u>Research Problem and Objectives</u>

The purpose of the study is to investigate the relationships between the constructs of mindfulness, moral responsibility, ethical judgement and ethical intent from a virtue ethics

perspective. Deeper understanding into the antecedents and mediators of the ethical decision making models can be gained through defining the relationship among the four constructs, ethical judgement, ethical intent, moral responsibility and mindfulness. In keeping with this research problem, the following objectives have been identified:

- Define the nature of the relationship (if any) between ethical judgement and mindfulness
- Define the nature of the relationship (if any) between mindfulness and moral responsibility
- Define the nature of the relationship (if any) between personal responsibility and ethical intent
- Identify whether the constructs of ethical intent and mindfulness are mediated through the construct of personal responsibility

1.5. <u>Overview of Research Report</u>

The research report is arranged into seven chapters. The first chapter focuses on defining the business problem and identifying the purpose of the research study. The purpose is elucidated under the subheading *Research Motivation* in this chapter. The second chapter critically reviews literature in the field of ethical decision making, moral responsibility and mindfulness in support of the hypotheses generated. The third chapter identifies the formulated research hypotheses identified from the relevant literature. The fourth chapter defines the research methodology and design in support of the proposed hypotheses presented in chapter three. Chapter five documents the results of the research methodology outlined in chapter four, while chapter six discusses the implications of these findings. Finally, a summary of the overall report is provided in chapter seven.

CHAPTER TWO: LITERATURE REVIEW

2.1. <u>Introduction</u>

The central research theories that underpin the premise of this study is introduced and clarification is provided. The subsets of each central theory is introduced as being positive psychology, decision making and self-concept. The concept of mindfulness is believed to fall within the domain of positive psychology, and a discussion to support this view is provided. Decisions made with reference to an ethical dilemma (referred to as ethical decision making) fall within the purview of decision making. And moral traits such as moral responsibility form part of a persons' core identity, or self-concept. The focal points of these established theories are mindfulness, ethical decision making and moral responsibility, which are discussed next.

A critical review of literature pertaining to the ethical decision making process is addressed in this chapter, with specific focus placed on two of the four proponents, ethical judgement and ethical intent. The elements of ethical judgement and ethical intent are defined within the context of Rests Ethical Decision Making Model (1986). The philosophy of virtue ethics, which influences the cognitive elements of ethical judgement and ethical intent, is introduced and discussed. The concept of moral responsibility, argued to denote a virtue, is introduced, and the relationship between ethical intent and moral responsibility is proposed. However, a review of the existing literature base highlights the need for further research into character strengths which are antecedents to the constructs of ethical judgement and ethical intent. At this juncture, the concept of mindfulness is also introduced, and the discrepancies between Western psychological and Buddhist-based definitions is elaborated on. Using the definition of the Buddhist-based conceptualisation of mindfulness, virtues are described as outcomes achieved through intentional practice of mindfulness. These virtues are ascribed to be character strengths which are argued to be antecedents to the constructs of ethical judgement and ethical intent. The proposed pathway dependencies of the four constructs ethical judgement, ethical intent, moral responsibility and mindfulness are identified in the concluding section titled *Research Hypotheses.*

2.2. <u>Conceptual Overview</u>

The scope of this study lies within three established theories; decision making, positive psychology and self-concept, all within the context of organisational behaviour. The rationale behind the overlap of these concepts is discussed in the remainder of this section.

A manager may need to choose a venue for a meeting, or decide whether to discontinue and recall defective equipment. The bearing each decision will have may be insignificant, or may have a pivotal impact on financial performance. Regardless of the consequence or breadth, managers within organisations are constantly making choices between various alternatives given that resources are limited. These choices, which generates the need for decisions, are typically only made when a problem emerges. Subsequently, awareness that a problem exists precedes the decision making process. Once a problem has been identified, a manager will collate, evaluate and interpret the relevant information. But what can be considered relevant? It is within this phase of decision making that a person applies their judgement in order to determine the relevance of information. Thereafter, a manager will evaluate the appropriateness of numerous alternatives, which requires the application of judgement as well. Once an alternative has been selected, the manager must translate the decision reached into various activities or actions. (Robbins & Judge, 2013)

Ethical decision making according to Rests Model (1986) follows distinctive steps which are awareness of an ethical dilemma, a judgement of the appropriate action, and an intention to commit to certain activities and behaviours (Craft, 2013). This succinctly models the decision making process as described by Robbins and Judge (2013). However, ethical decision making is a process focused solely on the ethicality of a decision. Ethical decisionm, is therefore considered to fall within the purview of decision making.

The core outcome of applied positive psychology is to achieve general wellbeing, or for an individual to flourish (Ivtzan & Lomas, 2016; Seear & Vella-Brodrick, 2012). Ivtzan and Lomas (2016) maintain that a person is flourishing through augmentation of hedonic and eudaimonic wellbeing. Hedonic wellbeing is associated with reduction in pain or pain relief, and amplified pleasurable emotions such as happiness (Ivtzan & Lomas, 2016). Seear and Vella-Broderick (2012) echo the assertion that positive affect, which encompasses pleasant emotions, is achieved through positive psychological interventions (PPI). So how does the concept of positive psychology diverge or converge to that of mindfulness? Mindfulness is

defined as "the awareness that emerges through paying attention on purpose, in the present moment, and non-judgementally" (Chiesa, 2012). The secular nature of such a definition of mindfulness limits this concept to dispositional and cognitive mental states that are actively practiced to achieve subjective wellbeing in PPIs (Baer, 2014; Ivtzan & Lomas, 2016; Seear & Vella-Brodrick, 2012). Such conceptualisation of mindfulness in the Western society, though divergent from the Buddhist-based conceptualisation, forms the basis of employing mindfulness techniques as a mechanism to achieve positive psychological outcomes (Ivtzan & Lomas, 2016; Seear & Vella-Brodrick, 2012). For this reason, it is inferred that mindfulness falls within the domain of positive psychology given the application of mindfulness techniques as a mechanism to achieve subjective wellbeing in PPIs.

A person holds the view that they are a cohesive entity, constructed by the beliefs and values held. In this context, a person distinguishes between their core self, and the peripheral self. The core self is composed of stable traits, attributes and beliefs that are central to a persons understanding of social phenomena. Moral traits in particular form part of a persons identity. Moral responsibility is therefore considered to represent a moral trait which forms part of a persons self-concept. (Fernandez-duque & Schwartz, 2016)

The overlap between the concepts of mindfulness, Ethical Decision Making and moral responsibility, within these boarder established theories, is illustrated in figure one below. Within this field of study, the incorporation of virtues of mindfulness and moral responsibility are believed to influence the proponents of the Ethical Decision Making process, which is discussed in the following sections.

Figure 1: Conceptual Overview that underpins the Premise of this Study
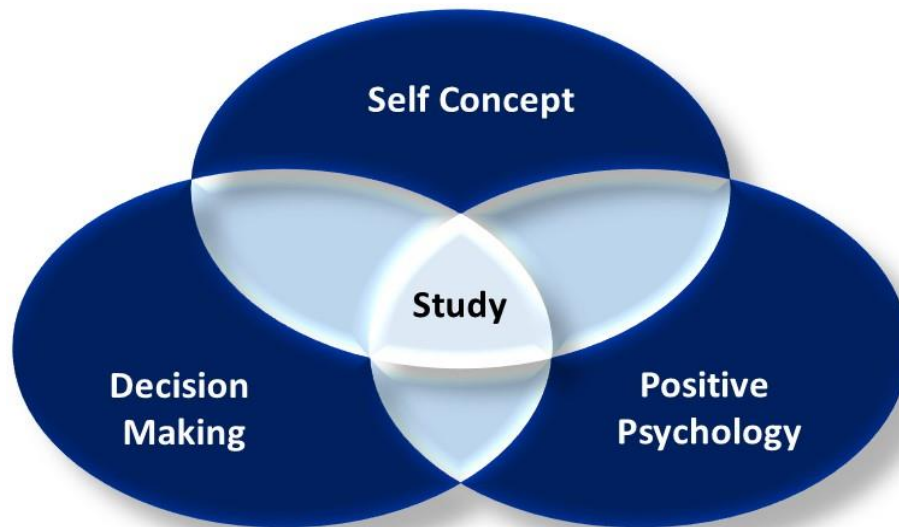
Source: Authors Own

2.3. Ethical Decision Making

Three predominant theories have been developed in order to explain, predict and control unethical behaviour, namely Rests Model (1986), the Interactionist Model (1986), and the Issue-Contingent Model (1991) of decision making. Rest developed a model which identified that an individual has to move through four cognitive stages when faced with an ethical dilemma; moral awareness, moral judgement, moral intent and moral behaviour (Craft, 2013). Moral awareness is the ability to comprehend the moral nature within a given situation. Moral or ethical judgement is the ability to determine right from wrong. Moral intent refers to a resolve to act on the morrally "right" judgement, moral behaviour (Craft, 2013). The Interactionist Model (see figure two) identifies situational and organisational factors that influence the components of ethical judgement and ethical behaviour as described by Rest (Trevino, 1986). Trevino (1986) identified that situational factors such as reinforcement moderated the relationship between ethical judgement and ethical behaviour. She further identified organisational factors, such as the normative structure, obedience to authority and referent others, which moderated the relationship between ethical judgement and ethical behaviour.

Figure 2: The Interactionist Model
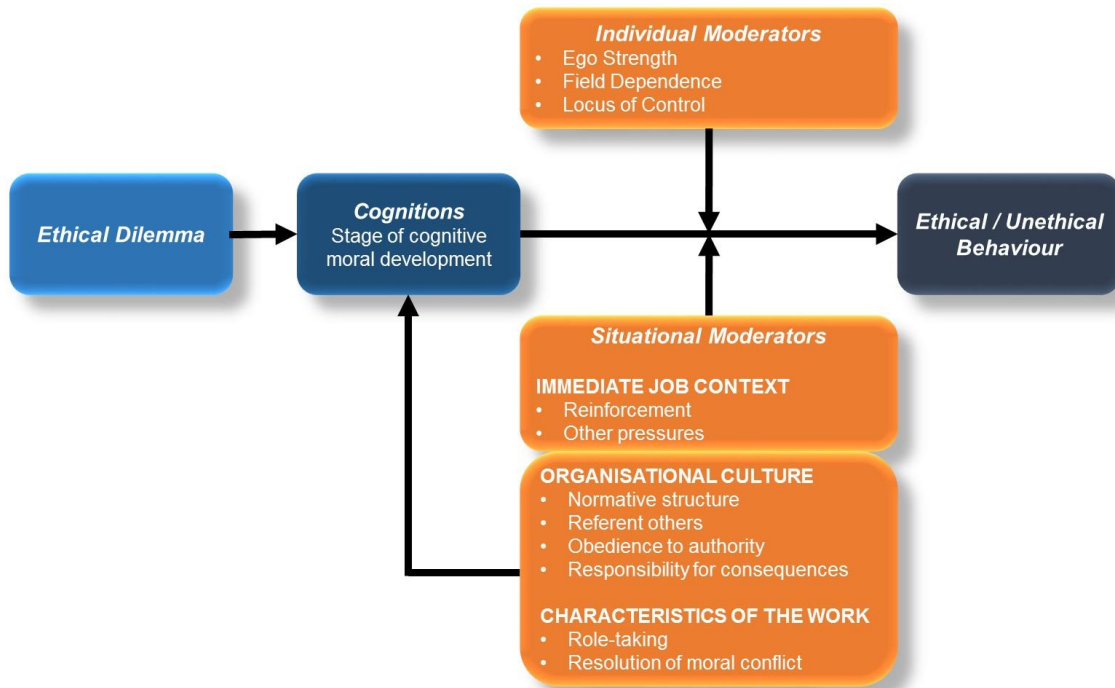
Source: Trevino (1986) p. 603

The Issue-Contingent Model (see figure three below) highlights the impact that the intensity a moral dilemma has on the proponents of Rests Model (Craft, 2013). The Issue-Contingent Model highlighted the need to include the variable moral intensity into Rests Model (1986). Moral intensity was proposed to influence each of the proponents of Rests Model (1986), those being moral awareness, ethical judgement, ethical intent and ethical behaviour (Jones, 1991). This model succinctly identified that greater perceived moral intensity (with may lead to greater likelihood of harm) leads to an increased likelihood of cognition as opposed to intuitive decision making (Jones, 1991). Both the Interactionist and Issue-Contingent Model build on the four components of Rests Model, which still serve as the core individual cognitive processes.

Figure 3: The Issue-Contingent Model(Jones, 1991, p. 370)(Jones, 1991, p. 370)(Jones, 1991, p. 370)(Jones, 1991, p. 370)(Jones, 1991, p. 370)
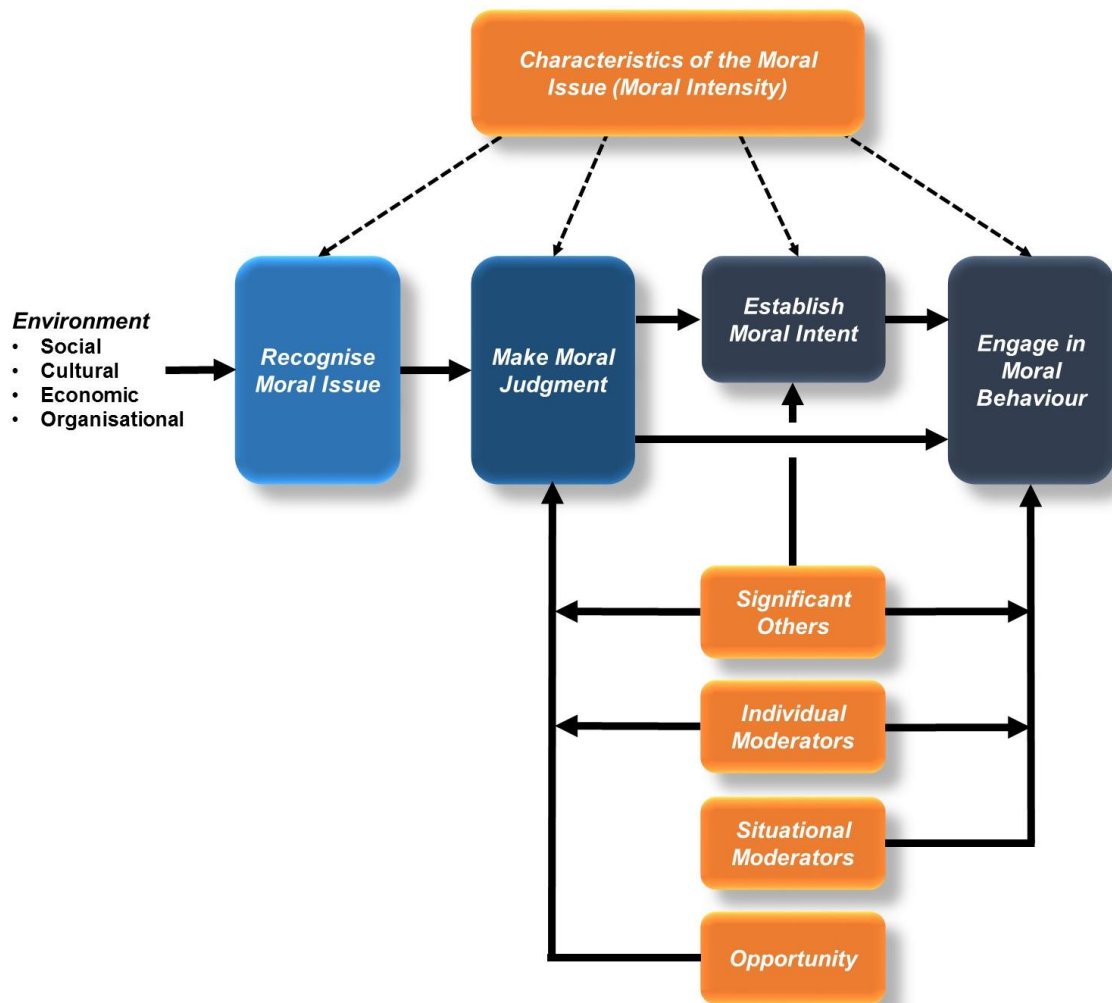
Source: Jones (1991) p. 370

One may have noticed that these ethical decision making models were developed between 1986 and 1991, and may be wondering as to their relevance? Such an observation would be astute, highlighting the need to discuss the Neurocognitive and Sensemaking Approaches to ethical decision making (Macdougall, Martin, Bagdasarov, & Mumford, 2014). It is important to highlight the fundamental differences between these two distinct classes of ethical decision making by understanding the underlying assumptions of the models mentioned above. Rests Model (1986), The Interactionist Model (1986) and The Issue-Contingent Model (1991) are based on the premise that people are rationalists that engage in constant and deliberate thinking (Macdougall et al., 2014). A further extension of

this assumption leads to the inference that cognitive processing ability is unlimited (Macdougall et al., 2014). New research on neurocognition paints a very different picture; that decisions are made automatically and intuitively using heuristics through pattern matching to previous experience-based knowledge known as prototypes, all in the need to reduce cognitive load (Macdougall et al., 2014). In the absence of an existing prototype, unethical behaviour is more likely to occur, except when a person engages in self-reflection (Macdougall et al., 2014). Such an understanding of the use of heuristics or intuition in ethical decision making highlights an important process that occurs, which is the need to justify a decision after the fact (Lowell, 2012; Macdougall et al., 2014). Both the Neurocognitive and Sensemaking Approaches to ethical decision making are based on the automaticity of decision making using heuristics and intuition. But can this process of automaticity be reversed or reduced, which would lead one to surmise that a cognitive process such as Rests Model (1986) would be utilised more fully?

The prefrontal cortex (PFC) has been identified as the area of the brain responsible for metacognitive processes, given its responsibility in monitoring and filtering information (Jankowski & Holas, 2014). The anterior cingulate cortex (ACC) is responsible for the mechanisms that improve control over inhibitory lower-level processes. Neuroimaging of both the PFC and ACC improved after meditative practice, which gives credence to the concept that intentional mindfulness practice improves metacognition (Jankowski & Holas, 2014). Neuroscience supports the philosophical understanding of the concept of mindfulness as improving metacognition: mindfulness requires intentional effort to regulate attention which enables the practitioner to monitor continuous changes in a present and non-judgemental way (Jankowski & Holas, 2014; Kuan, 2012). An appreciation of mindfulness as a metacognitive function allows one to surmise that a cognitive approach in decision making is more cogent than the use of heuristics. Given the premised intersection of mindfulness as a cognitive process and decision making, Rests Model (1986) is considered to form the foundation of the ethical decision making process in this study.

In summary, this section described the numerous ethical decision making models which are used to describe (un)ethical behaviour. The underlying assumption that distinguishes between two classes of ethical decision making models refers to the use of cognition as opposed to automatic or intuitive modes. Mindfulness improves metacognition, which indicates that utilisation of the cognitive class of ethical decision making models is

appropriate in this study. The proponents of ethical judgement and ethical intent (which are the main focus areas of this study) are utilised in the three cognition based ethical decision making models, which are the Interactionist Model (1986) and the Issue-Contingent Model (1991) were based on Rests Model (1986). Given this, Rests Model (1986) will be utilised as the representation of the ethical decision making process in this study, with specific focus placed on ethical judgement and intent. Such focused study implies that the two components of moral awareness and moral behaviour have been excluded.

2.4. <u>Exclusion of Moral Awareness and Behaviour</u>

The exclusion of the concepts of moral awareness and behaviour have been deliberate. The justification for the exclusion of moral awareness will be provided in section 2.7, while the justification for the exclusion of moral behaviour is provided in the subsequent paragraph.

The last component of Rests Model (1986) is moral or ethical behaviour, which requires that an action or behaviour be implemented (Cabello-Medina & Morales-Sánchez, 2013). This component is preceded by ethical intent, which is the motivation or willingness to act on specific ethical judgement (Cabello-Medina & Morales-Sánchez, 2013). It is plausible to assume that where a strong motivation is present to act in a morally responsible manner that ethical behaviour will ensue. Note that such an understanding is not an absolute reality given that personal and organisational factors influence the relationship between ethical intent and behaviour (Cabello-Medina & Morales-Sánchez, 2013). However, the argument is based on the fact that the presence of a strong motivation increases the likelihood of ethical behaviour, but that this is not guaranteed. This concept has been verified in previous studies, and will not be replicated here (Craft, 2013).

2.5. <u>Ethical Judgement and Intent</u>

Mudrack and Mason (2013b) define ethical judgement as an evaluation of the extent to which an action is right or wrong. However, various authors obfuscate the term ethical judgement by using the incorrect measurement to analyse obscure terminology, which inevitably leads to inconsistent or inappropriate conclusions (Mudrack & Mason, 2013b). Mudrack and Mason (2013b) provide numerous examples of such articles where authors have used the Multidimensional Ethics Scale (MES) to analyse individuals' ability to

perceive business problems. This scale explicitly measures the degree to which an individual regards an action as right or wrong only (Mudrack & Mason, 2013b). The MES cannot assess an individual's ability to perceive problems, highlighting the need to clearly align the tools used for measurement with the correct construct. To ensure that this report substantially contributes to the growing body of knowledge of ethical decision making, the terms moral or ethical judgement have been included in the literature review exclusively to avoid further obfuscation of this construct, and the terminology of moral or ethical judgement will be used interchangeably throughout this document.

The idea of right or wrong is very subjective and is influenced by a person's cognitive frame or perception of such a construct. Crossan et al. (2013) quote an excerpt from Rest which highlights that the four proponents of his model are units of analysis which indicate a cognitive process, and are not virtues in and of themselves. It is for this reason that the proponents of Rests Model are always analysed in the context of the three predominant philosophies of deontologism, utilitarianism and virtue ethics. As seen in the introduction, deontologism is concerned with measuring the "rightness" of an action that adheres to standards, rules or social norms (Crossan et al., 2013). In this context the emphasis is placed on the "rightness" of the judgement and not on the outcome of the action or behaviour. Utilitarianism, which is also referred to as consequentialism, measures the "rightness" of the outcome whereby benefits to the audience outweighs the costs (Crossan et al., 2013). In this context, the emphasis is placed on the "rightness" of the outcome only. Virtue ethics on the other hand is a framework which "emphasizes the excellences of personal character to define moral behaviour" (Crossan et al., 2013, p. 569). This is an intrinsic focus on the moral character of self, with the explicit aim to improve ones' moral character. The meta-review of literature conducted by Lehnert et al. (2015) clearly substantiate the impact that individual philosophies or value orientations have on the elements of ethical judgement and intent. Values of idealism, deontologism or positive views consistently lead to more ethical judgements, intentions and behaviours than their respective counterparts of relativism, leading one to infer that the former philosophical orientations of idealism, deontologism and positive views generate impetus to behave ethically in the ethical decision making process (Lehnert et al., 2015). However, virtue ethics or the personality types that influence philosophical or ethical values requires further study (Lehnert et al., 2015).

The following step in Rests model is that of ethical intention. It is important to note that the connection between ethical judgement and ethical intent has been empirically supported (Mudrack & Mason, 2013b); various moderators which influences the connection between ethical judgement and ethical intent such as gender, age, education, Machiavellianism, culture, organisational commitment, philosophy and values have enriched the Ethical decision making literature (Lehnert et al., 2015). Therefore, it is not the intention of this study to replicate established theories, so the relationship between ethical judgement and ethical intent will not be included in this investigation, but that the existence of this relationship is presupposed.

As seen earlier, ethical intention, refers to a resolve to act on the morrally "right" judgement (Craft, 2013). It is crucial to understand the relationship between ethical judgement and intent, but more importantly it is crucial to understand moderating variables that affect these elements, ethical judgement and ethical intent. For example, a person may know what the right judgement is which will align to deontological or utilitarian views, but behave in a manner that benefits their own agenda instead. This description further substantiates the need to study ethical intent within the context of an individuals' philosophical orientation or value framework.   Craft (2013) identified literature that codified and quantified the relationship between personal values and philosophies to ethical intent. This meta-review highlighted that values such as empathy, responsibility and internal locus of control but to name a few increased the intention of a person to follow through with the "right" choice identified in the ethical judgement process. Philosophies such as deontologism increased the subjects' intention to engage in ethical behaviour, while idealism and relativism did not affect the ethical intention construct significantly.   Lehnert et al. (2015) highlight that philosophies and value orientation consistently support the stages of Rests model which lead to ethical intentions. However, they also highlight the need for further study into the personality types and traits that influence each stage of the model.

The preceding paragraphs in this section introduced the concepts of ethical judgement and ethical intent, two components of Rests Ethical Decision Making Model (1986). These components have been studied in the context of various normative philosophies, while the philosophy of virtue ethics has been limited. Personality traits with reference to locus of control, Machiavellianism, and the Big Five personality traits influence both of these components, but this list is in no way exhaustive, and new traits can and should be included

in future research (Lehnert et al., 2015). So what virtues, traits, values or motivation would then yield greater judgement and intent in an organisation? And can such a premise be empirically proven? Such assertions that specific virtues, traits, values and motivations, though empirically proven, have included the concepts of moral responsibility and mindfulness, but to a limited extent only. This leads one to wonder whether a relationship between ethical judgement, ethical intent, moral responsibility and mindfulness may be present. And furthermore, could these relationships actually be defined and empirically measured? These questions require a deeper understanding of moral awareness and mindfulness to be formulated first before these question can be addressed.

2.6. <u>Moral Responsibility</u>

It is necessary to distinguish between accountability and responsibility as these terms are sometimes used interchangeably.   Responsibility is an obligation to consider the consequences of an action or behaviour on an audience in the decision making process (Williams & Gantt, 2012). Accountability is defined as a perception that members of a salient group will evaluate the appropriateness of decisions and actions taken, that there is an expectation to provide justifications, and that potential rewards or punishments may be met out (Hall, Frink, & Buckley, 2015).   Responsibility infers that personal causality must be attributed, before one can be held to account (Brees & Martinko, 2015). Why is it important to distinguish between these terms, or can they be used interchangeably in the context of this research?

Accountability is an external driver of behaviour because the appropriateness of a decision is socially contingent on the audiences perceived acceptance of the adherence to rules and standards, or to outcomes, from either a deontological or utilitarian philosophy (Hall et al., 2015). The concept of the social contingency view of accountability is based on the fact that people will behave in a way that will preserve their image and status, or in that they seek approval from the audience (Hall et al., 2015). In this context, accountability is a driving force that moderates the relationship between ethical judgement and behaviour, because if one is to be held accountable, there is a greater chance that one will act on the "right" judgement.   This perspective of accountability is supported by the Interactionist Model of decision making, in which the responsibility for consequences (in reference to the organisational culture) moderates the relationship between the stage of cognitive moral development and ethical behaviour (Trevino, 1986). One such study that empirically proves

this relationship is one where less aggressive actions by tax practitioners (normally perceived to be unethical) occurred in an organisational culture that emphasised and rewarded ethical behaviour (Craft, 2013).

Responsibility ascribes causality of an action or behaviour in service for and to others (as described above). This means that for an individual to feel responsible, there must exist an intentional obligation to behave or act in a manner that minimises harm or suffering. Williams and Gantt (2012) define such a felt moral obligation as a "primitive, pre-rational, but unmistakably moral and contextual sense of particular "oughtness", that felt obligation is an intentional construct from a phenomenological perspective" (p. 427). Williams and Gantt (2012) belabor the point that having moral principles will not ensure a moral life, but that only the existence of felt moral obligation will. They continue on to say that felt moral obligation establishes the foundation of moral principles, which is an internalised virtue that illuminates the need to act with moral intentions in the presence of an ethical dilemma (Williams & Gantt, 2012). If felt obligation is not present, the ability to rationalise or justify an action is all too common (Williams & Gantt, 2012). Ethical intent refers to a resolve to act on the morally "right" judgement (Craft, 2013), while moral responsibility refers to an intentional obligation to behave or act in a way that reduces harm. Such a comparison between these two constructs infers that if one were in the process of developing an intention on how to act or behave, then a belief that one is obligated to behave in alignment with the moral judgement will strengthen the original intention.

No scale was uncovered in the literature reviewed that is able to measure a persons' level of moral responsibility. However, both the Ascription of Responsibility Scale (ARS) and the Moral Disengagement Scale (MDS) were considered. The ARS measures the locus of responsibility, which in other words, refers to the person or persons to whom the subject attributes causality, or responsibility (Hakstian, Suedfeld, Ballard, & Rank, 1986). The three groups to which responsibility is ascribed are figures of authority (for example God), social groups which represents unspecified or depersonalised figures of authority, and finally to the self (Hakstian et al., 1986). Given these descriptions, this scale would only indicate to whom causality is ascribed. In ascribing causality to a specific person (or persons), there is no indication as to the morality of such an ascription. For example, an Egoist may attribute his or her success to self. Such an understanding of the scope of the scale highlights that there is no indication of normative frames of reference. On the other hand, the MDS

measures the degree to which one is able to justify an immoral behaviour (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Baron, Zhao, & Miao, 2015). The latter scale is deemed appropriate in that it mirrors the concept of moral responsibility in the converse by measuring the degree to which a person can use justifications to disengage moral responsibility. However, it must be noted that this scale does not identify a baseline of moral responsibility, but only the tools employed to disengage moral responsibility. In short, a person may employ a high degree of disengagement, but from a principled moral baseline or vice versa. This indicates that the use of the MDS is flawed, but no alternatives options are available. Given that the MDS scale will be employed, and given the interpretation of the relationship between moral responsibility and moral intention in the preceding paragraph, the first proposition of this study has been developed and is as follows:

Hypothesis 1: The construct of moral responsibility is related to moral intention.

And yet, how does the virtue of moral responsibility develop in the first place? Jennings, Mitchell and Hannah (2015) use the Theory of the Moral Self to underscore the agentic perspective of the self to take responsibility, to make decision and exert control, underpinned by cognitive construction which relates to an epistemological interpretation of the relationship between meaningful experiences and individual perceptions and beliefs. The Theory of Moral Self highlights the concept of virtues that can be ascribed to an individual, for which they take responsibility while exercising decisions and actions.

The preceding paragraphs in this section introduced the concept of moral responsibility, not to be confused with the term accountability. Moral responsibility is argue to represent an intrinsic virtue, which is understood to represent an intentional obligation to minimise harm. Moral responsibility in this context is a requirement of ethical intention, and is an important part of moral identity or self-concept (Fernandez-duque & Schwartz, 2016). This interpretation of moral responsibility, and how it relates to ethical intent, gave rise to the first proposition highlighting the existence of a relationship between these two constructs. But what precedes or develops the belief, if at all, that one is obligated to behave ethically? Are there antecedents to moral responsibility that would influence or strengthen the existence of such an ethical virtue? This is an important question that will be addressed in the following section.

2.7. **Mindfulness**

Over the past decade, interest into the empirical investigation of the concept and applications of mindfulness has surged (Chiesa, 2012; Monteiro, Musten, & Compson, 2015). Such interest has arisen given the successful use of MBIs to reduce physical and psychological disorders in clinical settings, with the origin dating back to the 1970s (Chiesa, 2012). Physical and psychological alignments that have been treated using MBIs range from chronic pain, to stress reduction, to borderline personality treatments, to name but a few (Chiesa, 2012; Monteiro et al., 2015). Recently, the neurosciences have provided compelling evidence of the neural effect mindfulness practices have. One study concluded that practices of gratitude (a mindfulness exercise) exhibited "significantly greater neural modulation … in the medial prefrontal cortex" using functional magnetic resonance imaging scans, three months after a one hour long gratitude exercise had taken place (Kini, Wong, Mcinnis, Gabana, & Brown, 2016, p. 1). A particular region in the brain as identified in this study provides insight into the "mechanistic account of the intervention: specifically, it may increase the neural activity related to predicting the effects of one's actions on another person" (Kini et al., 2016, p. 8). Yet given the surfeit of benefits evidenced in numerous studies in psychological and neurobiological studies, a consensus on an unequivocal definition of mindfulness in Western psychology is still not available (Chiesa, 2012; Lindahl, 2015; Monteiro et al., 2015). Purser and Milillo (2015) have argued that an unequivocal definition of mindfulness will not exist until the Buddhist-based conceptualisation of mindfulness is incorporated, which even then this may not be possible given the numerous schools of Buddhism in existance (Lindahl, 2015; Monteiro et al., 2015).

Western psychology conceptualises mindfulness as "paying attention in a particular way, on purpose, in the present moment, and non-judgementally" (Chiesa, 2012, para. 13). Such a definition implies two distinct features, which are that mindfulness includes a mental skill or state and that it accounts for personality traits (Chiesa, 2012). In contrast, Purser and Milillo (2015) describe *Sati* (mindfulness) as the

> "*de-automatization of habitual reactions and perceptual evaluations. Sati* (mindfulness) *thereby leads to a progressive restructuring of perceptual appraisal, and culminates in an undistorted view of reality "as it is". The element of non-reactive watchful receptivity in sati forms the foundation for satipatthána* (clear

comprehension) *as an ingenious middle path which neither suppresses the contents of experience nor compulsively reacts to them"* (p. 5)

Mindfulness in this context is closely related to the virtue of attaining wisdom, obtained through intentional wholesome actions that lead to a skilled state of mind (Krägeloh, 2016; Purser & Milillo, 2015).

Cabello-Medina and Morales-Sánchez (2013) describe traits or virtues as an intrinsic strength of character that is fairly enduring, but that habitual repetition of virtuous acts will strengthen such an intrinsic trait or virtue. Such a definition provides further support for the concept of mindfulness as both a trait and a virtue which is strengthen through practice or experience (whether intentional or not). The authors Chiesa (2012), Cabello-Medina, Morales-Sánchez (2013), Purser and Milillo (2015) provide a nuanced view of the concept of mindfulness, in that an individual may intrinsically have the values or traits of mindfulness, but that such an individual practices mindfulness (whether intentionally or not) through experience to cultivate and improve on these intrinsic values. It is therefore critical to consider mindfulness in this context as both an intrinsic trait, as well as a state of mind. To date only two scales measure mindfulness as both a trait and a state of mind (dealt with at a later stage within this section).

So how do the traits or state of mindfulness relate to the ethical decision making process? The ultimate purpose of Buddhist traditions is twofold. The first objective of Buddhist-based conceptualisations of mindfulness is rooted in the desire to eliminate causes of suffering (Amaro, 2015; Lindahl, 2015; Purser & Milillo, 2015; Verhaeghen, 2015). The second objective of mindfulness, which is used to attain the first, is to intentionally eliminate adverse mental states which leads to "dramatic and irreversible changes in behavioral and psychological traits" (Purser & Milillo, 2015, p. 4). These objectives are attained through progression through three stages of which the first stage (or path) is to skillfully develop mental states of moral principles grounded in ethics, integrity and virtues (Purser & Milillo, 2015, p. 6). In the triadic model of Buddhism, the first path is described as right view, and serves as the ethical foundation of mindfulness (Purser & Milillo, 2015).

Pertinent to the understanding of right view, is the ability to discern between "right" (wholesome) and "wrong" (unwholesome) actions, and the perceptions of "right" and

"wrong" are informed by personal motivation (Krägeloh, 2016; Purser & Milillo, 2015). The three overarching motives that produce "right" action is embedded in non-greed, non-aversion and non-delusion which forms the foundation of right view mindfulness. Such actions, through the intentional practice of mindfulness, manifest as virtues of generosity, loving-kindness, compassion and wisdom (Purser & Milillo, 2015).

An alternative perspective of the link between the presence of virtues and Ethical decision making has been proposed. Crossan et al. (2013) argue that six universal virtues along with strong values, which are defined as guiding principles, bridge the gap between virtue frameworks and the ethical decision making model. The virtues identified were wisdom, courage, humanity, justice, temperance, and transcendence (Crossan et al., 2013). This view was supported by Cabello-Medina and Morales-Sánchez (2013), who suggested that the presence of moral virtues of prudence, justice, fortitude and temperance positively influences the processes of ethical decision making. Mindfulness, or the practice of mindfulness, is therefore considered to be a virtue of wisdom and temperance in line with the moral virtues identified by Crosson et al. (2013) and Cabello-Medina and Morales-Sánchez (2013). Temperance is inferred to be inculcated during the mindfulness process because the trait of nonreactivity refers to avoiding a rush to judgement or action, while wisdom is explicitly state as being an end goal by Purser and Milillo (2015). It is in this context that the ethical decision making process is viewed in this research as a virtue ethics philosophy.

Once right view is established, right effort is a cognitive exercise which manifests as internal vigilance of unwholesome thoughts and actions. Right effort equates to a mental state, which supports the view that mindfulness is not a set of traits only, but an intentional exercise to apply cognitive thought and to reduce automatism in decision making. Ethical decision making models have incorporated intuitive moral judgements, arguing that people only use cognition after the fact to justify the intuitive decision (Moore & Tenbrunsel, 2013). Such mindlessness at the trait level however has proven to be a predictor of unethical behaviour (Moore & Tenbrunsel, 2013). From this one can infer that any trait or state of mind that is aimed at improving cognition is more likely to follow Rests model of ethical decision making, rather than searching for self-justifications after the fact.

There are three dimensions which outline right view and they are (1) entrenching a foundation of desire to emancipate oneself and others from suffering, (2) a paradigm or lens used to view experiences that enables identification of the presence and causes of suffering, with the intention to abandon such causes, and (3) acumen or wisdom which edifies the "oughtness" in line with the paradigm (Purser & Milillo, 2015). Purser and Milillo (2015) indicate that right view develops the ethical compass of individuals to enable them to discriminate right from wrong, going so far as to state that mindfulness is nothing more than an instrument if this foundation is missing. The first dimension underpins the aim of mindfulness, which is to understand how your actions can lead to suffering or harm for yourself and for others. Such an understanding of the first dimension speaks to an obligation to oneself and an audience to minimise harm. As moral responsibility is defined as being obligated to and for others to behave in a manner that is socially accepted (Williams & Gantt, 2012), there seems to be a parallel between these two concepts. Therefore a relationship between mindfulness and moral responsibility is plausible given the parallel in definitions. Such an explication of the relationship between these constructs gives rise to the second proposition.

Hypothesis 2: The construct of moral responsibility is related to mindfulness.

The first two propositions gives rise to a conundrum. If moral responsibility is related to ethical intent and mindfulness, then how does mindfulness relate to ethical intent? The use of an example will best illustrate the relationship between mindfulness and ethical intent. A sniper, with the intention of killing for financial gain or pleasure, may practice focused attention, non-reactivity, describing and observation (Monteiro et al., 2015). A sniper in service of the police or military may employ utilitarian ethics, which requires the death of one person to save many (Monteiro et al., 2015). The former scenario does not subscribe to the Buddhist-based conceptualisation of mindfulness, which is intended to eliminate suffering, while the latter scenario does. The latter scenario also intimates that the police officer is obligated to behave in line with a utilitarian perspective. In the Buddhist-based conceptualisation of mindfulness, the motivation or obligation to eliminate harm is essential in generating ethical intentions and behaviours. That without this felt obligation, the intention may be immoral. This notion of felt obligation, or moral responsibility, is akin to mediation in which the relationship is dependent on the presence of an intermediate variable (Fairchild & Mackinnon, 2009). This gives rise to the third proposition, given below.

Hypothesis 3: The construct of moral intent and mindfulness are only related through the intermediary variable of moral responsibility.

The second dimension of right view speaks of a framework for viewing experiences, which is akin to actively recognising and identifying situations which may result in harm. The first component of Rests Model (1986) is moral awareness (Cabello-Medina & Morales-Sánchez, 2013), which is defined as an individual's ability to be cognisant of the manifestation of a moral dilemma (Craft, 2013). Such a definition implies only that a person is consciously aware that a choice between alternatives may generate harm, known to be termed as the existence of a moral dilemma. Such an understanding in no way speaks to the processes that occur which will enable a person to become conscious of such a dilemma in the first place, or in actively recognising the presence of a moral dilemma. Mindfulness, which is defined as "paying attention in a particular way, on purpose, in the present moment, and non-judgementally" (Chiesa, 2012, para. 13), describes the process of metacognition that increases the probability of a person becoming aware of the manifestation of a moral dilemma. The process of "paying attention in a particular way on purpose" (Chiesa, 2012, para. 13), is essentially a broader understanding of how awareness of a moral dilemma takes place, in so much that one can presume that the presence of mindful behaviour will invariably include the cognitive process of moral awareness. This comprehension of moral awareness and mindfulness gives rise to the fourth and final proposition.

Hypothesis 4: The construct of mindfulness is related to ethical judgement.

The third dimension of right view as mentioned above speaks to the concept of discernment as to what should be done. Two interpretations can be drawn from this definition. The first is that right mindfulness provides deeper insight into what the "right" action is, which aligns with the definition of ethical judgement. The second interpretation is that even once such an insight has been obtained, one "ought" to act on this insight which aligns more with the definition of moral intent. The second interpretation is more plausible as the second dimension of right mindfulness (as mentioned above) speaks more to the awareness construct of Rests model, which is positively correlated with ethical judgement. It is therefore believed that the third dimension aligns more closely with the concept of moral intent, which speaks to what "ought" to be done. But as discussed in the preceding paragraph, this relationship is mediated with the variable moral responsibility.

The preceding paragraphs made mention of the need to measure mindfulness as both a trait and a state of mind. To date, only the Toronto Mindfulness Scale (TMS) and Five Facet Mindfulness Scale (FFMQ) were deemed applicable (Baer, 2014; Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006; Chiesa, 2012). The Toronto Mindfulness Scale measures the experience of mindfulness as a state with reference to meditation only (Chiesa, 2012). This scale is only applicable in a study that includes meditation interventions, which limits its scope considerably. The Five Facet Mindfulness Questionnaire (FFMQ) measuring non-reactivity, observing, acting with awareness, describing and non-judging, is a multifaceted measure of mindfulness as both a state of mind and as a trait which fulfils the definition of mindfulness as above and will be used in this research (Goldberg et al., 2015). The latter scale, deemed appropriate to the study, will be employed given the absence of use of MBIs as part of the methodology (described in detail in chapter 4).

The section relating to mindfulness highlights the intricate relationships between the four constructs of mindfulness, ethical judgement, moral responsibility and ethical intent, all viewed from a virtue ethics perspective. Moral awareness is superimposed with the construct of mindfulness, giving rise to the proposition that mindfulness is related to ethical judgement in accordance with Rests Model (1986). The first dimension of mindfulness, which relates to a need to eliminate suffering and distress, is believed to relate to the construct of moral responsibility; described as being an intrinsic virtue of felt moral obligation. The proposition that these two constructs are related is formed on the basis that mindfulness inculcates moral responsibility. Moral responsibility, inferred to be a motivation, is related to ethical intention, which is presented as another proposition. And lastly, the relationship between mindfulness and ethical intent, from a Buddhist-based conceptualisation, is only present if a strong obligation to reduce harm is present. This relates to the last proposition, in that the concepts of ethical intent and mindfulness are only related if the variable of moral responsibility is present.

2.8. <u>Secularised Mindfulness?</u>

The focus of this study may lead one to question the relevance of a Buddhist-based perspective given the religious connotations. It is not the aim of the author to address this aspect of mindfulness as part of the study, but it is worth discussing in brief. The debate about the secularised nature of mindfulness still rages on between Western practitioners, and the Buddhist community (Krägeloh, 2016; Monteiro et al., 2015; Verhaeghen, 2015).

The Buddhist community is displeased based on the premise that mindfulness which is applied without the ethical foundation customarily leads to unwholesome behaviour (Monteiro et al., 2015; Verhaeghen, 2015). However, Verhaeghen (2015) argues that secularised ethical foundations, which can be considered to be within-world view of virtue ethics, can and should be incorporated in Western instructions of mindfulness to overcome this argument. Krägeloh (2016) argues that morality plays a de facto role in mindfulness and positive psychology interventions, such that a secularised notion of mindfulness does not adversely affect its relevance and impact. Regardless of these diverse views, it is important to note that this article takes a secularised view of mindfulness in conducting this study.

2.9. <u>Conclusion</u>

This chapter provided an outline of the established theories of positive psychology, decision making and the concept of self. The boundary within each of these theories was confined to the concepts of mindfulness, Ethical decision making and moral responsibility respectively, after which each concept was clarified.

Ethical decision making refers to implicit cognitive and behavioural processes responsible for influencing the outcome of ethical dilemmas. There are two classes of Ethical decision making, differentiated on the basis of the fundamental assumption which relates to the level of cognition employed. The first class of Ethical decision making models is based on the assumption that persons apply constant and deliberative cognition with unlimited processing ability when making decisions, while the second class of Ethical decision making models argues the fact that persons employ heuristics and intuition. Heuristics and intuition as a process of decision making occurs automatically, through retrieval of previous experience. Neuroimaging studies have however determine that intentional mindfulness practices improves metacognition, which reduces automaticity. Rests Model (1986), which forms part of the cognitive class of Ethical decision making, is therefore argued to be appropriate as the foundation of Ethical decision making in this study. Rests Model (1986) comprises of four sequential steps, which are moral awareness, ethical judgement, ethical intent and moral behaviour.

When one becomes aware of the presence of a moral dilemma, moral awareness has been said to have taken place. However, intentional mindfulness is a metacognitive process that

improves a persons ability to pay attention to, and to become aware of the presence of moral dilemmas. Only once this activity has transpired can an ethical judgement be made. Given the notion that mindfulness is a process of moral awareness, the first proposition is identified: moral awareness is related to ethical judgement.

Ethical judgement, as part of Rests Model (1986) is devoid of any normative perspective. Virtue ethics is one such normative perspective which influences the ethical judgement process. A virtue is defined as a strength of character that is fairly enduring, but that habitual repetition of virtuous acts will strengthen. The practice of intentional mindfulness is aimed at obtaining wisdom and temperance through vigilant attention to (un)wholesomeness of any action or thought. This invariably develops virtues of wisdom and temperance, described to be the ultimate goal of mindfulness. Mindfulness is therefore viewed from a virtue ethics perspective because of this reasoning, which further strengthens the first proposition as discussed above.

Once an individual has moved through the ethical judgement stage, they move to the next stage which is ethical intention. Ethical intention refers to a resolve to act on the morrally "right" judgement. However, a persons intention does not always align with the "right" judgement. For example, a person may intent to steal given a specific context even though they are aware of the "right" judgement that should be followed. Moral characteristics, which form part of a persons self-concept, influence the construct of ethical intent. More specifically, moral responsibility, defined as an intrinsic obligation to minimise harm, is argued to lead to higher levels of ethical intention. This gives rise to the second proposition, which is that moral responsibility relates to ethical intent.

The Buddhist-based conceptualisation of mindfulness is argued to be underpined by an ethical foundation of minimising harm, without which, it is simply a tool. From the Buddhist-based conceptualisation of mindfulness, moral responsibility is therefore argued to represent the moral compass of a mindfulness practisioner, which gives rise to the third proposition: moral responsibility relates to mindfulness. However, since moral responsibility is proposed to be related to ethical intent, but which also relates to mindfulness, it is important to understanding the interdependency of these three constructs. The fourth proposal is that moral responsibility mediates the relationship between mindfulness and ethical intent. This is argued to be a credible arrangement given that a person practising

the tools of mindfulness may do so with unpredictable intentions and behaviours. However, by introducing the concept of moral responsibility, the expectation is that higher levels of mindfulness will lead to higher levels of ethical intent.

The four propositions identified above in the literature are translated into hypotheses in chapter three, with the intention to empirically validate each proposed relationship.

CHAPTER THREE: RESEARCH HYPOTHESES

3.1. Introduction

The review of the pertinent literature on Ethical decision making and mindfulness have led to the identification of relationships that have heretofore received limited study. These relationships, presented as propositions in chapter two, are converted into four research hypotheses, with empirical validation as the main aim of this study. These hypotheses are posed in the subsequent section of this chapter.

3.2. Hypotheses

3.2.1. Hypothesis 1: Mindfulness and Ethical Judgement

The first hypothesis is premised on the notion that mindfulness and ethical judgement are positively related. From this, the null and alternative hypotheses are as follows:

- **Hypothesis 1_0**: There exists no positive linear relationship between mindfulness as defined by the FFMQ and ethical judgement
- **Hypothesis 1_A**: There exists a positive linear relationship between mindfulness as defined by the FFMQ and ethical judgement

3.2.2. Hypothesis 2: Mindfulness and Moral Responsibility

The second hypothesis is premised on the notion that mindfulness and moral responsibility are positively related. However, since moral responsibility is measured in the inverse using the construct of moral disengagement, the null and alternative hypotheses are as follows:

- **Hypothesis 2_0**: There exists no positive linear relationship between mindfulness as defined by the FFMQ and moral responsibility
- **Hypothesis 2_A**: There exists a positive linear relationship between mindfulness as defined by the FFMQ and moral responsibility

3.2.3. Hypothesis 3: Moral Responsibility and Ethical Intent

The third hypothesis is premised on the notion that moral responsibility and ethical intent are positively related. From this, the null and alternative hypotheses are as follows:

- **Hypothesis 3_0**: There exists no positive linear relationship between moral responsibility and ethical intent
- **Hypothesis 3_A**: There exists a positive linear relationship between moral responsibility and ethical intent

3.2.4. Hypothesis 4: Moral Responsibility Mediates the Relationship between Mindfulness and Ethical Intent

The last hypothesis is premised on the notion that moral responsibility mediates the relationship between mindfulness and ethical intent. From this, the null and alternative hypotheses are as follows:

- **Hypothesis 4_0**: The relationship between mindfulness as defined by the FFMQ and ethical intent is not mediated by the construct moral responsibility
- **Hypothesis 4_A**: The relationship between mindfulness as defined by the FFMQ and ethical intent is mediated by the construct moral responsibility

3.3. <u>Conclusion</u>

This chapter produced four hypotheses which require empirical validation. These hypotheses are best represented using figure four below.

Figure 4: Proposed Pathways between Constructs
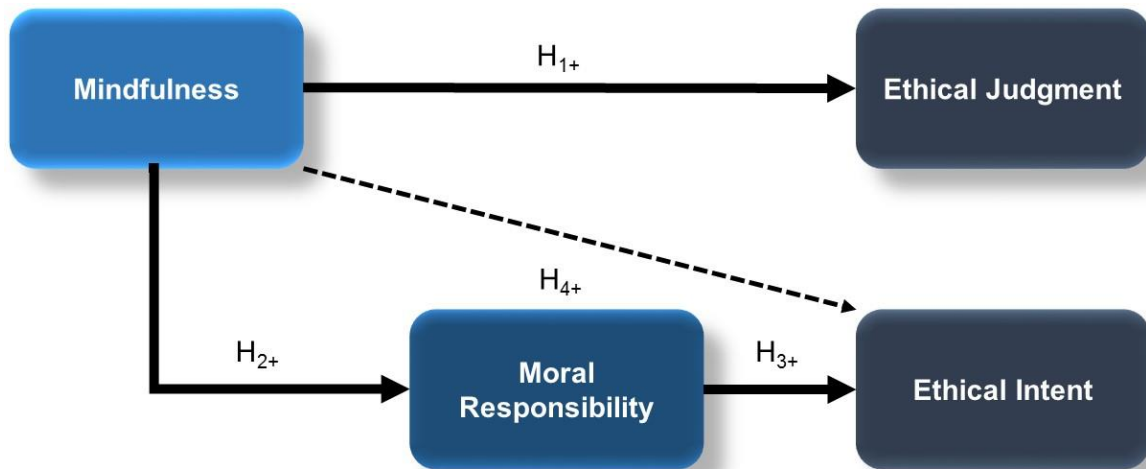
Source: Authors own

The critical review of literature suggest that the level of ethical judgement and moral responsibility is related to the construct mindfulness. If such a relationship were to be quantified, then one is able to utilise this output to predict changes in the dependent variable. As such, it is important to note that the terms relationship or prediction are used interchangeably throughout this document. The review of current literature also suggests that moral responsibility relates to (and is able to predict the level of) ethical intent, which suggests that moral responsibility is a mediator (as indicated in figure four above). Data must be obtained to empirically validate such hypotheses, and as such, the following chapter outlines the research methodology employed in search of such data.

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1. Research Design and Methodology

The overarching premise of this study necessitated an explanation which would define the relationships between the four main constructs ethical judgement, ethical intent, moral responsibility and mindfulness. Explanatory research in this context was therefore deemed appropriate, which describes relationships through correlations or causality (Saunders & Lewis, 2012; Zikmund, Babin, Carr, & Griffin, 2010). Exploratory or descriptive research would supplement the breadth of knowledge on the topic of decision making (as evidenced by the meta-reviews completed by (Craft, 2013) and Lehnert et al. (2015)) only marginally, further justifying the need for explanatory research to be conducted. Quantitative research, in support of the research gap, was chosen to validate the hypotheses generated which requires a definition of the relationships between the four constructs. A benefit associated with the adoption of a quantitative study is that the findings may be generalised to a larger group beyond that of the sample (Wegner, 2012).

A critical realism philosophy in research design goes beyond generating a description of behaviour by understanding and interpreting the factors that drive behaviour, which are not easily discernible (Saunders & Lewis, 2012). In the Organisational Behaviour context, this philosophy is aimed at understanding the subjective processes that occur in driving behaviour (Saunders & Lewis, 2012). Given the need to understand the underpinning traits of mindfulness believed to influence cognitive processes, this philosophy was adopted.

The topic of ethical decision making is studied within the context of mindfulness, building on existing conceptual theories which required a deductive research approach be adopted (Zikmund et al., 2010). Two research strategies were best suited to obtain quantitative data required in alignment with the overall design, which was the use of surveys and vignettes. The use of vignettes in conjunction with surveys will be elaborated on in the *Data Gathering Process* section.

4.2. Research Scope (Population)

Mounting interest in economic growth opportunities in the African context has given rise to a call for further research within Africa (George, Corbishley, Khayesi, Haas, & Tihanyi,

2016). George et al. (2016) highlight corruption and unethical behaviour on the individual level as one of the many challenges faced within the African context, which can be curbed through the correct application of human resource management within organisations. An African based study focusing on the antecedents of (un)ethical behaviour will greatly contribute to this gap in the knowledge base, limiting the scope of this study to the African context.

A criticism by Lehnert et al. (2015) of the methodology of numerous studies on (un)ethical behaviour draws attention to the use of students as subjects, raising concerns as to the generalisability of findings to an organisational context. By definition, an organisation refers to a group of individuals of two or more working towards a common goal or purpose, who arrange procedures and processes in a systemised way (Robbins & Judge, 2013). Organisations that operate within the private sector in the African continent generate approximately 70percent of the economic output which is a material contribution to the country's economy (George et al., 2016). Therefore, the scope of this research has be narrowed to include individuals employed in profit generating organisations that participate within the private sector only given the dominance of this sector. Unethical behaviour may occur at all levels within an organisation, however, employees required to make complex decisions who behave unethically can generate fiduciary losses of the order of magnitude of the Volkswagen scandal (Plungis, 2016). For this reason, the population was limited further to only include employees from the first line tier of management. The population in this context consisted of any person from the first line management tier who is part of a profit generating organisation in Africa.

4.3. <u>Sampling Method and Size</u>

A sample is a subset of the population, which is representative of the population such that valid and reliable inferences can be drawn (Wegner, 2012). Purposive sampling of the heterogeneous variety was employed in support of the research aims, by limiting the study to one organisation. It is recognised that a comparison of respondents representing various companies may generate unreproducible data given the potential moderating influences of organisational culture as depicted in the Interactionist Model of decision making (Trevino, 1986). It is therefore deemed prudent to limit the study to one company such that this influence will be minimised, and given the sample size required, a medium or large scale organisation was considered to be suitable. Furthermore, a medium or large scale

organisation which consists of a sufficiently large sampling frame will ensure that the sample has adequately diverse characteristics that will allow patterns of interest and value to emerge (Saunders & Lewis, 2012). Omnia Holdings, which operates in Southern Africa, was identified as a suitable organisation as it met the size criterion, generating turnover of 7.8 billion rand and a market capitalisation of 15.0 billion rand as of September 2015 (Funds Data Online, 2016). Access to information from Omnia Holdings was also readily available which ensured that data could easily be obtained (see Appendix A for the letter of consent). Within this organisation, the sampling frame was known, which was used to further refine the sampling method.

Within the given sample frame, simple random sampling was utilised, ensuring that there was equal probability that any member of the sample frame would be selected (Wegner, 2012). The sample frame consisted of a total of 3 088 employees. Unskilled employees were excluded as they are not responsible for decision making, which reduced the list to a total of 1 258 employees. Each employee was assign a number, and the random generator function using excel was used to select employees, to reduced selection bias (Wegner, 2012). A total of 650 employees were targeted, but given duplication of selections, only 544 employees were finally identified (see Appendix B).

Pallant (2005) recommends a guideline which utilises the number of independent variables to be used. The guideline is represented as follows:

$$N = 50 + 8m \tag{1}$$

where N represents the sample size, and m the number of independent variables. Three independent variables were identified, such that a minimum of 74 responses was required.

4.4. Data Gathering Process

Data is generally extracted from the sample using various techniques. However, the unit of analysis was determined first to ensure that the research aim was being addressed. Thereafter, the relevant measurement instruments used to extract information from the unit of analysis was identified. Once the measurement instruments were identified and pre-tested, a devised strategy was employed in order to present the instruments to the sample.

4.4.1. Unit of Analysis

This research is focused on individuals and their perceptions that inform ethical judgements, moral responsibility and ethical intention. The perceptions of an individual were therefore defined to be the unit of analysis, which refers to the salient topic under investigation (Rea & Parker, 2014).

4.4.2. Measurement Instruments

A measurement instrument or scale consists of a combination of questions that serve to provide information on a specific topic (Rea & Parker, 2014). Scales such as these are subject to construct validity and reliability testing, which is a measure of the effectiveness of a scale (Rea & Parker, 2014).

The aim of this research is to define the nature of the relationship between the four constructs ethical judgement, ethical intent, moral responsibility and mindfulness. In order to obtain information on these constructs, the following scales were employed
.

- Multidimensional Ethics Scale (Cohen, Pant, & Sharp, 1993, p. 17)
- Amended Moral Disengagement Scale (Bandura et al., 1996, p. 374)
- Five Facet Mindfulness Questionnaire (Baer et al., 2006, pp. 34–35)

The Multidimensional Ethics Scale (MES) developed by Reidenback and Robin (1990) was extended to a 17-item instrument, used in combination with vignettes, in which a respondent indicated the ethicality of the situation using a seven-point Likert scale (Cohen et al., 1993). Three vignette scenarios were revised from Miller, Becker, and Pernsteiner (2014), which accompanied the MES. The vignettes aligned with recommendations made by Bowers and Pipes (2000) in that an ethical dilemma is present when two competing ethical principles arises, and that a person must choose between either ethical principle. Ethical principles involving "confidentiality, dual relationships, and payment" are the most challenging ethical concerns according to academic research (Bowers & Pipes, 2000, p. 68). Subsequently, the three vignettes described situations in which confidences had been broken, action was taken to benefit one side of a dual relationship, and a company policy was ignored in the vendor application process to benefit a friend. The vignette scenarios presented to the research subjects is available in Appendix C for further perusal.

The MES is based on moral philosophies of fairness, justice, contract, duty, consequence and greatest good (Reidenback & Robin, 1990). However there exists a conceptual overlap among these philosophies, as well as an overlap among religions, including Buddhism (Reidenback & Robin, 1990). Cohen et al. (1993) verified that the assumption of orthogonality of constructs is not correct, but that the various philosophical orientations are interlaced, which increases the validity of this instrument. The MES scale was tested for reliability and validity on the sample population under study, which resulted in individual Cronbach Alpha scores ranging from 0.79 to 0.86 for the three vignettes (See section 5.3). The item to total correlations were used to reduce the number of questions to a total of 12 questions, essentially eliminating those questions that correlated poorly with the construct in question. Convergent validity was established using principle component analysis which identified the existence of a single underlying component. Subsequently, the individual questions were averaged to obtain an individual score per vignette.

The Moral Disengagement Scale (MDS) consists of a 32-item instrument which measures the extent to which moral responsibility is deactivated or disengaged using a seven-point Likert scale. Moral responsibility is disengaged or deactivated through eight mechanisms which are moral justification, euphemistic language, advantageous comparison, displacement of responsibility, diffusion of responsibility, disregarding or distorting the consequences, or dehumanising another person. A person employs moral justification as a means to reconstruct a reprehensible action into a moral purpose. A reprehensible act is made benign through the use of euphemistic language which distorts thinking patterns. Comparison by contrast of a reprehensible act to one that is more so reduces the perception of the act to one that is trivial or inconsequential. A nuanced disparity between displacement and diffusion of responsibility is present in that the former mechanism involves "transferring" responsibility to other social agents, while the latter mechanism involves "distribution" of responsibility to members of a group. Consequences are distorted or disregarded when a person is more likely to recall the benefits of a reprehensible act, while simultaneously minimising or ignoring the negative outcomes. The last mechanism involves the process of ascribing inhuman qualities to the recipient, allowing the person to justify their actions. The MDS scale was tested for reliability and validity on the sample population under study, which resulted in a Cronbach Alpha score of 0.83 (See section 5.3). Item to total correlations highlighted the existence of questions which correlated poorly to the construct under investigation. Principle component analysis verified the need to remove two questions with

low communalities. Nine underlying components were identified using factor analysis, but which did not represent those dimensions as described above. Convergent validity was therefore not established. Though a single score was used to represent the construct of moral responsibility, the concern of convergent validity impacts on the findings of this study, which will be addressed in chapter six.

The Five Facet Mindfulness Questionnaire (FFMQ) consists of a 39-item instrument which measures mindfulness as traits and mental states using a five-point Likert scale (Baer et al., 2006). As mentioned previously, the FFMQ measures the five facets of mindfulness which are acting with awareness, observing, non-reactivity, describing and non-judging (Aguado et al., 2015; Baer et al., 2006). The FFMQ does not adopt attributes of a single factor structure, but rather that mindfulness consists of five distinct facets (Aguado et al., 2015; Baer et al., 2006). The observing subscale does not sufficiently assess the levels of mindfulness between those with lay or proficient meditative experience (Aguado et al., 2015; Baer et al., 2006). The FFMQ does adopt traits of a single factor structure though when the observing subscale is removed (Baer et al., 2006). The FFMQ scale was tested for reliability and validity on the sample population under study, which resulted in individual Cronbach Alpha scores ranging from 0.63 to 0.77 for the five facets (See section 5.3). When tested as a single construct, the Cronbach Alpha yielded a result of 0.85. The item to total correlations were used to reduce the questions for those that displayed low correlations. Thereafter, the five constructs were tested for separately using principle component analysis, and each dimension exhibited a single factor structure. However, those questions with low communalities were also deleted, which decreased the reliability of the scale. The concern here is the existence of a trade-off between reliability and validity.

The existing measurement instruments utilised in this study employed the use of Likert scales to measure attitudes. Likert scales are the most common method of capturing observable expressions of an underlying attitude (Rea & Parker, 2014; Zikmund et al., 2010). Consequently, subjective responses are captured, but which still allows for the comparison of attitudes between subjects (Rea & Parker, 2014; Zikmund et al., 2010). This study was aimed at comparing variations in attitudes, such that the use of Likert scales was aligned to the research aim. As such, the measurement instruments were utilised in their original formats which utilised Likert scales.

The final measurement instrument developed in this study, which utilised the three scales as discussed above, comprised of four sections. The first section of the questionnaire, Section A, required respondents to provide demographic information. Section B of the questionnaire contained three separate vignettes in combination with a MES, designated as scenarios one to three. Section C of the questionnaire contained the MDS, and section D of the questionnaire contained the FFMQ scale. Appendix C contains a sample of the measurement instrument presented to respondents.

4.4.3. Pre-testing of Questionnaires

Ten individuals were asked to pre-test the measurement instrument to ensure ease of use. Only one of those individuals responded with a suggestion that questions 13 and 17 of the MDS be reworded. The modifications to these questions were as follows:

Table 1: Modifications to MDS as a Result of Pre-Testing

MDS	ORIGINAL QUESTION	MODIFIED QUESTION
13	If kids are not disciplined they should not be blamed for misbehaving	If people are not disciplined they should not be blamed for misbehaving
17	It is alright to fight when your group's reputation is threatened	It is alright to fight for your group's reputation when threatened

4.4.4. Data Gathering

The members of the sample are widely dispersed throughout Southern Africa, which increased the complexity of the distribution channels. A two-pronged strategy was employed to overcome this obstacle. The first strategy comprised of numerous hourly sessions hosted at three various sites, in which members were invited to attend. Each session started with a 15 minute discussion on mindfulness in lieu of recompense for an individuals time, after which a paper-based questionnaire was distributed and completed by those in attendance. The face-to-face nature of these hourly session allowed respondents to seek clarification, which in turn improved the completion rate. Respondents maintained anonymity and confidentiality, but individuals were presented with the option of recording their names if they wished to receive their results. Respondents were instructed to place the completed questionnaire in a container (only marked by the location), to ensure anonymity and confidentiality. However, during this process, the researcher was present which may have exacerbated the response bias prone to self-reported questionnaires. The

second strategy comprised of electronically distributing the questionnaire (using the tool Survey Monkey) for those that were based in inaccessible locations. The distribution between the various channels of data collection is reflected in figure five below.

Figure 5: Survey Respondents Contribution per Collection Channel
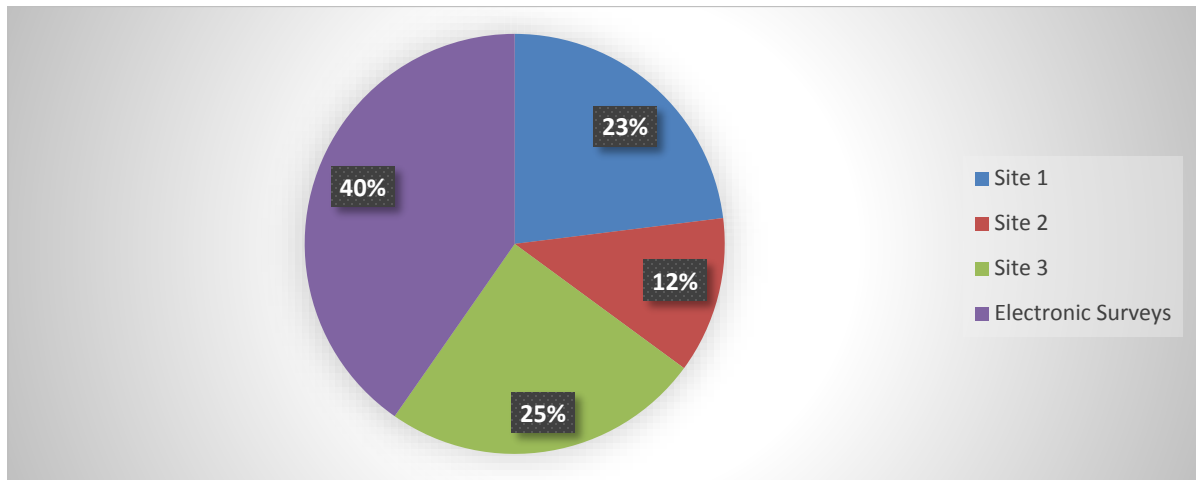
A total of 544 employees' were targeted, but only 222 responses were received. Of the 222 responses, 31 were classified as non-respondents given that not one of the constructs had been completed in full. This exclusion resulted in a total of 191 useable responses. The response rate from all distribution channels was 35.1 percent, while the partial response rate was 2.6 percent. The response rate is obtained by excluding all non-respondents from the total respondents contacted; a response is classified as non-respondent if not one construct has be completed (Newman, 2016). The partial response occurs when only some, but not all, of the constructs have been completed, and when divided by the total number of respondents contacted yields the partial response rate (Newman, 2016).

4.5. Data Coding and Cleaning

Statistical computations available are dependent on the type of data captured (Wegner, 2012). The demographic variable income was classified as ordinal data, which was coded in ranked order for descriptive statistical analysis. The demographic variables gender, ethnicity and religion were classified as nominal data sets, coded only for the purposes of descriptive statistical analysis. Neither the nominal and ordinal data sets were subjected to further statistical analysis, given their weak numerical properties (Wegner, 2012). Likert scales were used to record the responses to the MES, MDS and FFMQ questionnaires,

which also required coding. Likert scales were categorised as interval data, with sufficient numeric properties for statistical analysis (Wegner, 2012). Data coding is a process which ascribes numerical values to nominal, ordinal and interval data such that the relevant information is usable in statistical software (Pallant, 2005). Such a coding process dictated the need to develop a codebook, which is available in Appendix D for further perusal.

Missing data is unavoidable, dictating the need to apply missing data treatments; abstinence is not optional (Hair, Black, Babin, & Anderson, 2010; Newman, 2016). Item-level missing data occurred when an individual answered the majority of the questions relating to one construct, but for various reasons, had left one question or more unanswered in a randomised pattern (Newman, 2016). The corresponding missing data technique applied in such instances was to use the mean across available items, which is considered to be an acceptable method (Hair et al., 2010; Newman, 2016). A partial response occurred when an individual responded to only part of the survey in such a manner that one or more constructs was incomplete. Given a partial response rate of 2.6 percent, pairwise deletion was used as the missing data technique. Newman (2016) highlights that pairwise deletion introduces errors in inferential statistics under the assumption of systematic "missingness". However, at partial response rates below 10 percent, these errors are insignificant (Hair et al., 2010; Newman, 2016). Pairwise deletion allowed for statistical analysis of completed constructs, while missing constructs were excluded.

4.6. <u>Data Analysis</u>

The coded data was imported into the IBM SPSS Statistics (Version 24) software program for analysis purposes. Measures of centrality were determined for all data, which also included dispersion characteristics and skewness for numeric data only. Thereafter, the internal consistency of the MES, MDS and FFMQ questionnaires was determined by calculating the Cronbach Alpha for each. This determined whether the individual questions contributed to one underlying construct (Hair et al., 2010; Pallant, 2005).   The corrected item-total correlations were used to determine whether individual question were contributing to the reliability of the research instrument, and items were considered for deletion if the correlations were below 0.3 (Pallant, 2005). Data reduction and summation was achieved through the use of factor analysis using Varimax rotation, which determined the underlying structure of each construct for those factors with Kaiser Eigen values greater than one (Hair et al., 2010; Pallant, 2005), and a factor loading of greater than 0.4 (Hair et al., 2010).

Further statistical analysis requires that the significance level be specified for acceptance, with 0.05 being the chosen level for this study.

It was necessary to conduct a multivariate analysis of variance (MANOVA) first in order to determine whether the results between the three vignettes were statistically significant, before proceeding with any statistical analysis. MANOVA determines whether the differences in means are statistically significant for different but related dependent variables (Pallant, 2005; Wegner, 2012). The differences in means were determined to be statistically significant, such that an aggregate response for the constructs of ethical judgement and intent could not be utilised.

The hypotheses generated in chapter three required the use of linear regression and correlation analysis, which is used to analyse and quantify relationships (Hair et al., 2010; Pallant, 2005; Wegner, 2012). Linear and multiple linear regression was utilised in support of the hypothesised relationships between the independent variable mindfulness and the dependent variable moral responsibility, the independent variable mindfulness and the dependent variable ethical judgement, and the independent variable moral responsibility and the dependent variable ethical intent. Correlations were determined by calculating the Pearson's Correlation Coefficient, which ranged from negative one to positive one and which is denoted by the symbol R (Pallant, 2005; Wegner, 2012). A calculated Pearson's' Correlation Coefficient of negative one indicates the existence of a perfect inverse association, while a coefficient of positive one indicates the existence of a perfect positive association (Pallant, 2005; Wegner, 2012). A Pearson's Correlation Coefficient of zero indicates the lack of a relationship between two variables (Pallant, 2005; Wegner, 2012). The hypotheses described earlier in this paragraph specified the existence of positive relationships amongst the constructs. Such a specification required the use of one-tailed tests when calculating these correlations. The coefficient of determination, denoted using the symbol R^2, was also calculated to measure the percentage of variation present in the dependent variable attributable to the independent variable, otherwise referred to as predictability. The coefficient of determination ranges from zero to 100 percent, with the latter output indicating that the independent variable perfectly predicates the dependent variable.

The last hypothesis postulated that moral responsibility mediates the relationship between mindfulness and ethical intent. Such a relationship was established using regression analysis amongst these variables. Firstly, the relationship between the independent construct of mindfulness and the dependent construct of ethical intent was tested for, and the significance of this relationship recorded. Thereafter, moral responsibility was introduced as a second independent variable, and the model fit was tested for mediating effects by determining the impact on the significance level of the original relationship. If the significance level increased above 0.05, then full mediation was said to have occurred. If the significance level increased, but was still below 0.05, then partial mediation was said to have occurred. (Hair et al., 2010)

Lastly, the presence of response bias was tested for to assist with the interpretation of data. A paired sample t-test was conducted to compare the ethical intentions of the respondent versus the belief of their peers ethical intention (Pallant, 2005; Wegner, 2012). A significant difference between the means of the respondents' perspective for both questions would indicate the presence of response bias. Respondents were classified according to the distribution channel with which the questionnaires were collected. The differences between the means of each independent sample was compared for statistical significance using the independent sample t-test. A significant difference in responses received from electronic questionnaires as opposed to the paper-based questionnaires is a further indication of a response bias introduced by the choice of the data gathering strategy.

4.6.1. Assumptions of Statistical Analysis Techniques

The statistical analysis techniques employed above are reliant on specific assumptions, which therefore have implications for the results. These assumptions are summarised in table two below for ease of reference (Pallant, 2005).

Table 2: Statistical Assumptions of Analysis Techniques Employed

ASSUMPTION	DESCRIPTION	APPLICABILITY
SAMPLE SIZE	The sample must be sufficiently large to allow for generalisability	Regression analysis, factor analysis, MANOVA
NON-MULTICOLLINEARITY	Multicollinearity occurs when independent variables are highly correlated	Regression analysis, MANOVA

ASSUMPTION	DESCRIPTION	APPLICABILITY
OUTLIERS	The presence of very high or low scores that influence measures of centrality are not present	Regression analysis, factor analysis, MANOVA
NORMALITY	All data set is normally distributed	Factor analysis, regression analysis, correlation analysis, t-test, (M)ANOVA
LINEARITY	Relationships are represented by straight lines	Regression analysis, correlation analysis, factor analysis, MANOVA
HOMOSCEDASTICITY	Variance about predicted dependent variables are the same for all predicted values	Factor analysis, regression analysis, correlation analysis
HOMOGENEITY OF VARIANCE	The variability of scores obtained for each of the groups (dependent or independent) are similar	T-test, (M)ANOVA

Where appropriate, violations of the respective assumptions was tested for and will be addressed in chapter five. Such violations introduce error and may bias the findings (Hair et al., 2010).

4.7. <u>Limitations</u>

Shortcomings in the research design and methodology place restrictions and limitations on the conclusions of any research study, because parametric results are dependent on the representativeness of a sample with reference to a larger population (Hair et al., 2010). The choices made in developing this research design and methodology introduced various limitations. The limitations as identified relate to the use of vignettes, lack of causality, the use of a mono-design, the choice of population, the instrument choices, and the lack of information on other factors that influence the decision-making process. Each identified limitation is discussed in detail in the paragraphs to follow.

A vignette typically describes a scenario of an ethical dilemma, which is then followed by a serious of questions (Mudrack & Mason, 2013b). If the scenario described in the vignette is too vague, not relevant, or unfamiliar to the sample members, a disparity between the researchers' objective and the subjects perspective of the characteristics of the vignette

occur (Mudrack & Mason, 2013b). Such disparity generates inconsistent and unreliable data (Mudrack & Mason, 2013b), leading to a trend towards the use of simulations and experimental designs (Lehnert et al., 2015). However, if an appropriate vignette is utilised which is relevant and familiar, the validity of the methodology is uncompromised (Mudrack & Mason, 2013b). Therefore, this research study will still employ the use of vignettes, however the study will utlise replication techniques to verify the appropriateness of the chosen vignettes.

The research aim dictates the need for linear regression and correlation analysis, which is only able to provide information on the (non)existence of a relationship between the various constructs (Wegner, 2012). The existence of a relationship does not equate to causality, which can only be determined by means of an experimental design. For this reason, the findings of this study are limited to the identification of the existence of relationships only, and that interpretations of causality are excluded.

Omnia Holdings was identified as the sample frame, which implies that further restrictions on the generalisability of findings is ascertained. Omnia Holdings is a listed company, with an employee base of more than 4 000 (Omnia Holdings, 2016), classified as a medium sized corporation. Given that the culture of an organisation may impact the decision making process of individuals as identified in the Interactionist Model (Trevino, 1986), the findings of such a study may not be applicable to those of small firms or non-profit organisations. The study is aimed at identifying antecedents of ethical judgement and intent on an individual level, which if determined may be applicable to all organisations. However, further research will be required to validate such a conclusion.

The use of the FFMQ imposes restrictions on the study as well. Buddhist-based conceptualisations of mindfulness is a phenomenological orientation while the FFMQ is an evidence-based psychological orientation (Chiesa, 2012). The FFMQ as an instrument may not be appropriate then to measure mindfulness through the lens of ethical virtues. Using the FFMQ may compromise the validity of this study, such that the null hypotheses may be accepted when in fact the alternative hypotheses is true, described statistically as being a Type II error (Wegner, 2012). In fact, Goldberg et al. (2015) state that instruments used to measure mindfulness have failed to discriminate between groups of individuals with theoretically divergent levels of mindfulness.   However, given the lack of instruments that

encompasses the Buddhist-based conceptualisation, the FFMQ is the most appropriate tool available.

And lastly, other factors are not controlled for by using a questionnaire. For example, the Issue-Contingent Model (1991) developed the concept of moral intensity, in which the perceived intensity of the dilemma influences both ethical judgement and intent (Jones, 1991). If one subject were to perceive the moral dilemma posed in a vignette as morally intense, they are more likely to identify the unethical behaviour as inappropriate (Mudrack & Mason, 2013b). This construct may influence the relationship between ethical judgement and mindfulness, and ethical intent and mindfulness, which may reduce the validity and reliability of the findings.

Despite the numerous limitations identified, literature suggests that the existing body of knowledge can be expanded upon by completing this study. Qualitative studies still dominate the debate centered around the relationships under study, such that it is deemed essential to quantify these. Furthermore, the use of previously validated instruments adds credence to the study despite their limitations as an order of magnitude quantification will still be beneficial. This study was therefore deemed not just to be viable, but essential.

4.8.   Conclusion

An overview of the research design and methodology was provided in the preceding chapter. The research philosophy, approach and strategies were illustrated in the introduction (section 4.1), while the remainder of the chapter emphasised the techniques and procedures used to collect and analyse date. The sample size, sampling method and data gathering process was described, including a rationale for each respective technique or procedure. And finally, the method of analysis was presented along with a rationale for each method.

CHAPTER FIVE: RESULTS

5.1. Introduction

The preceding chapter outlined the research methodology required in resolution of the research aim. The result of executing on such a methodology generated data that was recorded and analysed, which is described in this chapter. The recorded data is depicted as descriptive statistics in section 5.2, presented separately for the demographic information and for each of the four constructs. Thereafter, evidence of the reliability and validity of each of the questionnaires is described. Lastly, the results of each of the hypotheses established in chapter three is divulged separately.

5.2. Descriptive Statistics

An overview of a random variable is communicated through the use of tables and graphs, while more specific information can be used to describe numeric random variables (Wegner, 2012). The remainder of this section undertakes to provide such an overview for the demographic random variables of the sample, as well as for the individual constructs of ethical judgement, ethical intent, moral responsibility and mindfulness.

5.2.1. Demographic Information of the Sample

The first section of the measurement instrument requested demographic information from each respondent; gender, age, religion, ethnicity and income bracket. The results of these categories are displayed in figures six to ten below in the form of percentages or counts.

Figure 6: Gender Distribution
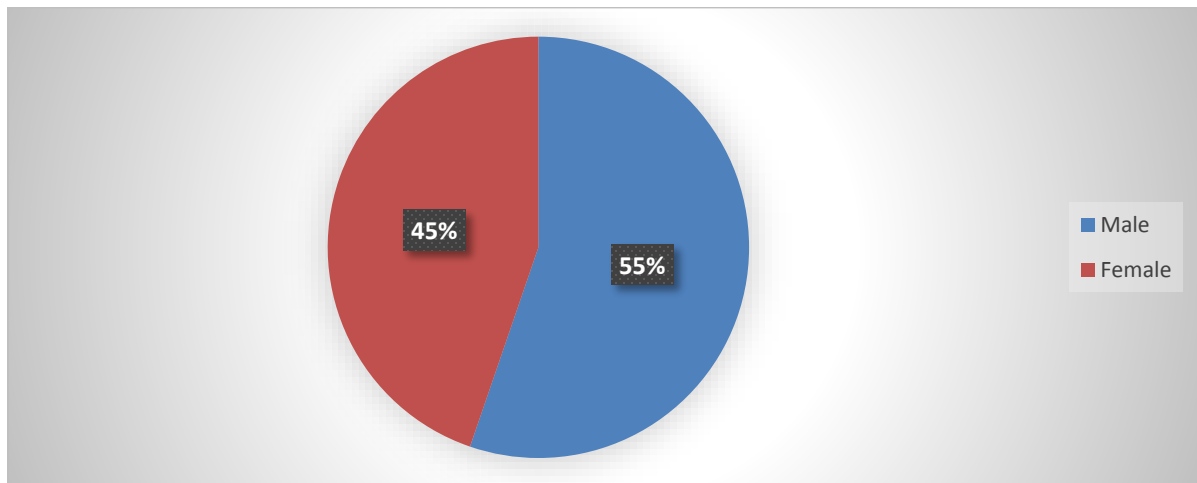
The mode in terms of gender of the respondents is that of male, as is also evident in the pie chart above. Males represented 55 percent of the sample, while females represented 45 percent. No other descriptive statistic is applicable given the nominal nature of the data.

Figure 7: Age Distribution
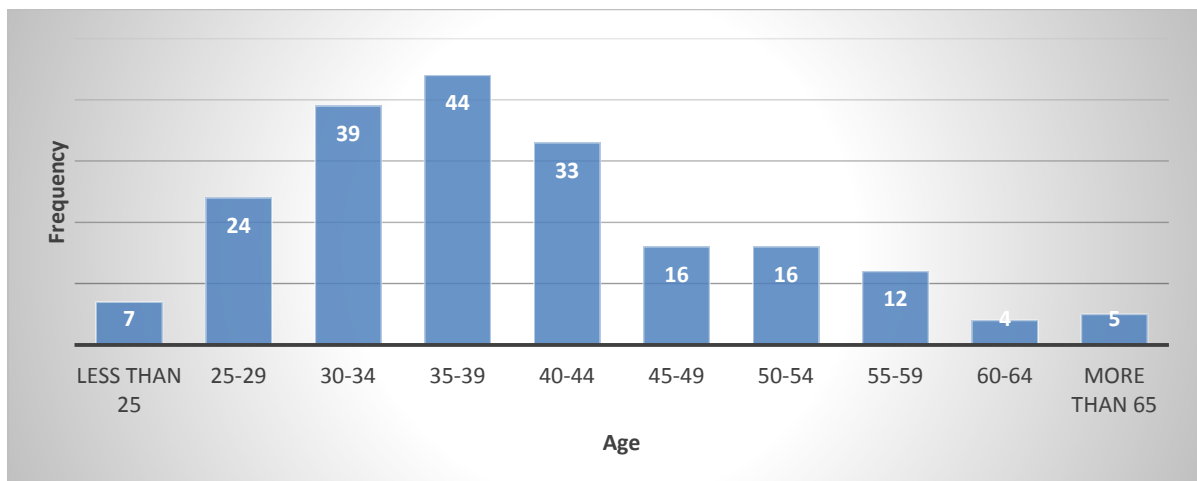
The demographic variable age is categorised as discrete numeric data, such that the mean, median and mode can be provided as measures of centrality. The mean, median and mode is 38.6 years, 37 years and 37 years respectively. Variance around the measures of centrality or dispersion of data is best represented by quoting the standard deviation, which in this case is 9.5 years. The off-set between the mode and mean indicate a measure of skewness, which has been calculated to be 0.53. The shape of the curve is platykurtic given

a kurtosis of -0.15, which indicates that the peak is "flatter" than that of a normally distributed curve (Hair et al., 2010).

Figure 8: Distribution of Ethnicity
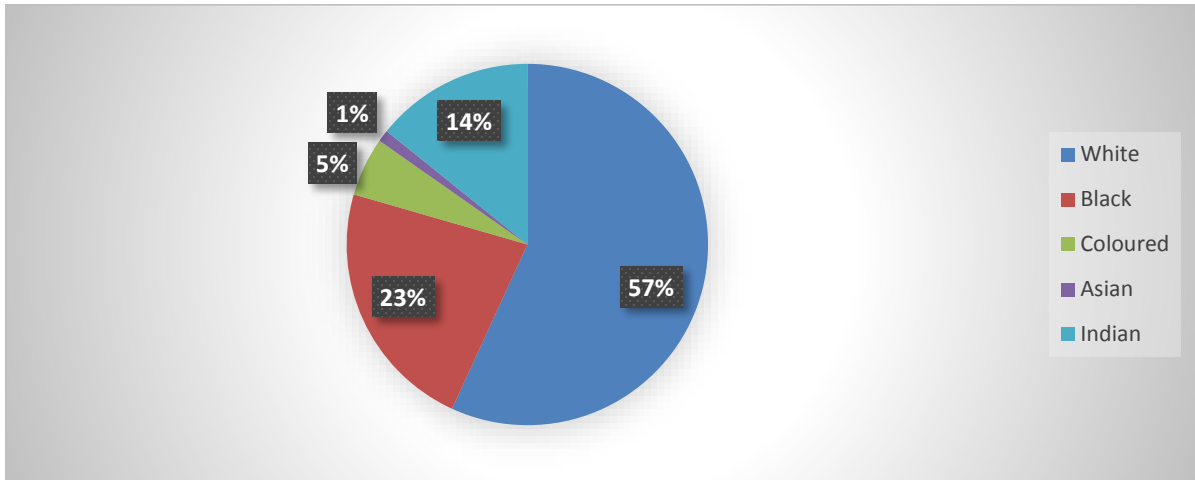
The mode which describes the most common ethicality of respondents is that of white (57%). The ethic classification of black represented by 23 percent of the sample, while indians represented 14 percent. Ethnic classifications of asian and coloured represented the minority group at contributions of five percent and one percent respectively. No other descriptive statistic is applicable given the nominal nature of the data.

Figure 9: Distribution of Religious Orientation
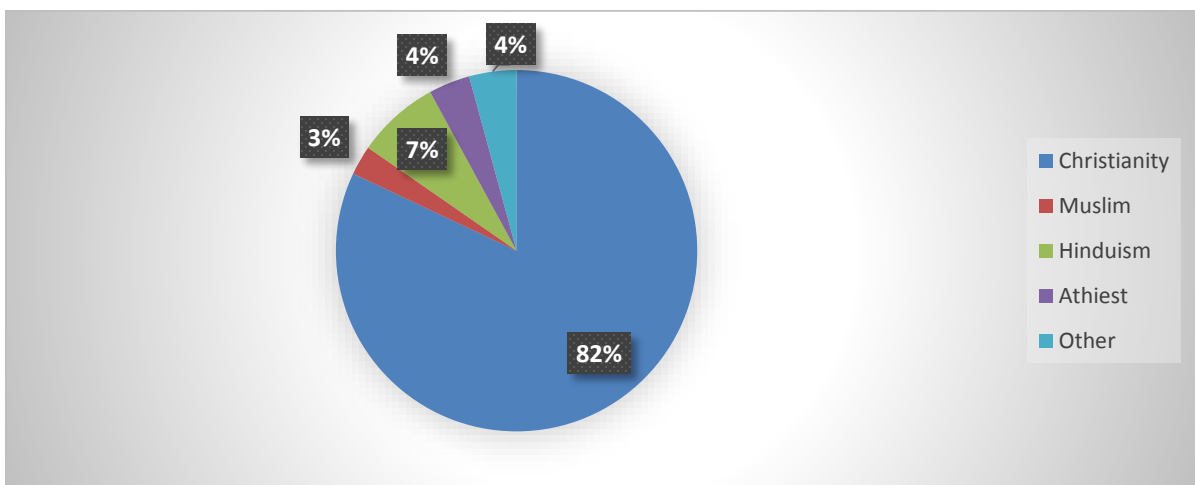
The mode which describes the most common religious orientation of the respondents is that of christianity (82%). The remainder of the sample is represented by religious orientations of hinduism, athiesm, muslim and other, with contributions of seven percent, four percent, four percent and three percent respectively. No other descriptive statistic is applicable given the nominal nature of the data.

Information pertaining to bins of monthly gross income was requested. The distribution of responses as per the alloted bins is available below.

Figure 10: Income Distribution
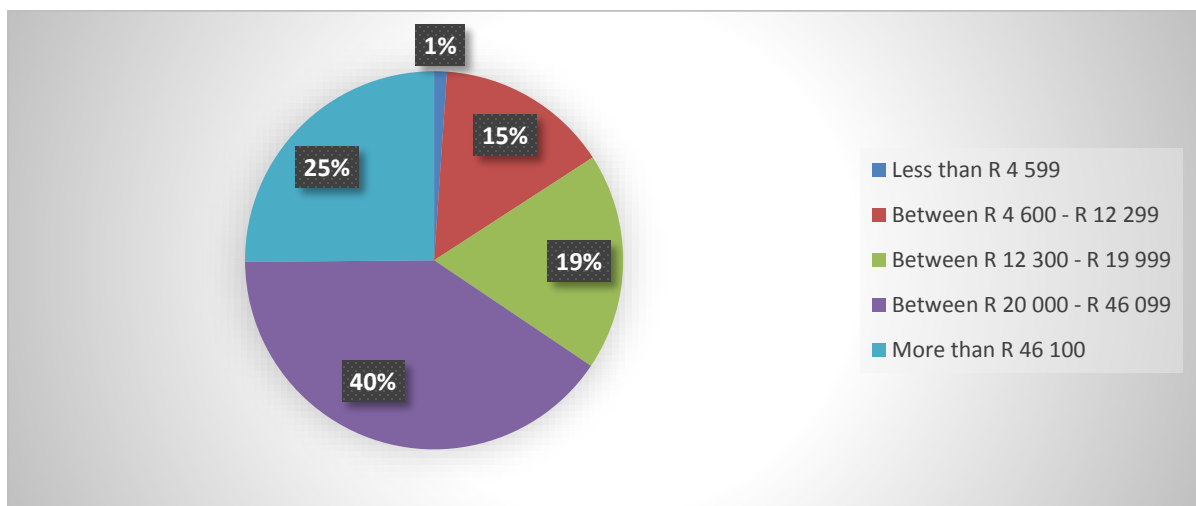
The mode which describes the most common income bracket of the respondents is that of a gross income between R 20 000 and R 46 099 per month (40%). Twenty five percent of the respondents indicated that they are earning a gross monthly salary greater than R 46 100 per month. The third largest contributor which accounted for 19 percent of the responses, were those respondents who indicated that they are earning between R 12 300 and R 19 999. Only 15 percent of respondents indicated that they are earning gross monthly salaries of between R 4 600 and R 12 299, while only one percent of respondents indicated that they are earning less than R 4 599 per month. No other descriptive statistic is applicable given the ordinal nature of the data.

5.2.2. Descriptive Statistics of the Construct Ethical Judgement

In response to three vignettes presented, respondents were asked to judge the ethicality of the actions described on a seven point Likert Scale. The coded value of one represents the judgement "strongly agree", while the coded value of seven represents the judgement "strongly disagree". The MES can be treated as one factor (Cohen et al., 1993), such that the responses were aggregated in order to generate the descriptive statistics available in table three below.

Table 3: Descriptive Statistics of the Construct Ethical Judgement

	N	MEAN	MEDIAN	STD. DEV	SKEWNESS	KURTOSIS
SCENARIO 1	175	3.89	3.80	1.01	0.48	-0.10
SCENARIO 2	177	4.45	4.53	0.97	-0.14	-0.25
SCENARIO 3	178	5.04	5.07	0.824	-0.59	0.85

The first scenario elicited an average response of "neutrality" to the ethical dilemma, indicating that there was a belief that the action taken was neither "wrong" nor "right" (M=3.89, SD=1.01). On average, respondents maintained "neutrality" in the action taken in the second scenario (M=4.45, SD=0.97). The average judgement in response to the action taken in the third scenario was "disagree slightly" (M=5.04, SD=0.82).

The distributions for all three scenarios is not symmetrical. Skewness is a measure of the unbalanced nature of a distribution. The response to the first scenario is negatively skewed, while scenarios two and three are both positively skewed. Given that these Pearson's coefficients of skewness are between the values of negative one and positive one, they are not excessively skewed (Wegner, 2012). The distribution may also be "flatter" or more "peaked" if not normally distributed, and this is denoted by the measure kurtosis (Hair et al., 2010). Violation of the assumption of normality was tested for using the equations provided below.

$$Z_{Skewness} = \frac{Skewness}{\sqrt{\frac{6}{N}}} \tag{2}$$

$$Z_{Kurtosis} = \frac{Kurtosis}{\sqrt{\frac{24}{N}}} \tag{3}$$

The calculated z values for skewness was greater than ±1.96 for scenarios one and three, while the z value for kurtosis was greater than positive 1.96 for scenario three. This indicates that the distribution is not normally distributed for all three scenarios, and as such, this assumption has been violated. However, the effects of kurtosis and skewness are negligible for sample sizes of approximately 200, such that the researcher did not consider transformation of data (Hair et al., 2010). The impact of such a decision is that violations of homoscedasticity may still occur, such that hypothesis testing becomes more stringent or sensitive (Hair et al., 2010). Homoscedasticity is assessed when conducting regression analysis, and the consequence is discussed.

Outliers occur when data points are substantially different from other observations. Univariate detection methods indicated the existence of outliers within the respondents levels of ethical judgement across all scenarios. However, given that the data set is skewed, these outliers have been retained as there is valid reason to assume that they represent a small but viable segment of the population. (Hair et al., 2010).

5.2.3. Descriptive Statistics of the Construct Ethical Intent

Respondents were asked to indicate their intention of taking similar actions to those mentioned in the three vignettes, using a seven point Likert Scale. Each respondent was also asked to indicate the likelihood that their peers would hold the same intention. The coded value of one represents the intention "very high", while the coded value of seven represents the intention "very low". The descriptive statistics generated are available in table four below.

Table 4: Descriptive Statistics of the Construct Ethical Intent

		N	MEAN	MEDIAN	STD. DEV	SKEWNESS	KURTOSIS
SCENARIO 1	**SELF**	188	3.74	3.00	2.06	0.35	-1.20
	PEERS	182	3.67	3.00	1.73	0.53	-0.70
SCENARIO 2	**SELF**	186	5.49	6.50	1.90	-0.97	-0.39
	PEERS	186	3.96	4.00	1.88	0.23	-1.00
SCENARIO 3	**SELF**	187	6.37	7.00	1.30	-2.26	4.42
	PEERS	188	5.19	5.00	1.76	-0.55	-0.87

The first scenario elicited an average response of neutrality in terms of the intention to act as those within the vignette (*M*=3.74, *SD*=2.06). On average, respondents intention to act as those in the vignette was "slightly low" in the second scenario (*M*=5.49, *SD*=1.90). The average intention to take the same action as those indicated in the vignette was "low" in the third scenario (*M*=6.37, *SD*=1.30).

The first scenario elicited an average response by the respondent of "neutrality" in terms of the intention of others to respond as those within the vignette (*M*=3.67, *SD*=1.73). On average, respondents opinion of the intention of others to act as those in the vignette was "neutral" in the second scenario (*M*=3.96, *SD*=1.88). The average opinion of others intention to take the same action as those indicated in the vignette was "slightly low" in the third scenario (*M*=5.19, *SD*=1.76).

The distributions across all three scenarios is potentially not normally distributed for both the respondents intention to act as those in the vignette as well as their belief of how their peers would act. The Pearson's coefficients of skewness is between the values of negative one and positive one for all but the response to scenario three in terms of the respondents' intention. However, the z skewness values are above ±1.96 except for the response of self-intention in scenario one and those of peers in scenario two. The distributions are all platykurtic except for self-reported intention in scenario three, and their z values also exceed negative 1.96 except for scenario three. The exception, the self-reported intention for scenario three, is leptokurtic and has a z value of greater than one. This exception is excessively skewed towards the response of "very low". Regardless of the violation of normality, the data was not transformed given the large sample size (Hair et al., 2010). However, such a decision will impact on regression analysis if the assumption of homoscedasticity is violated.

Univariate detection methods indicated the existence of outliers within the respondents levels of ethical judgement across all scenarios. However, given that the data set is skewed, these outliers have been retained as there is valid reason to assume that they represent a small but viable segment of the population. (Hair et al., 2010).

5.2.4. Descriptive Statistics of the Construct Moral Disengagement

Respondents were asked to complete the Moral Disengagement Scale (MDS) using a seven point Likert Scale. The coded value of one represents the statement "strongly disagree", while the coded value of seven represents the statement "strongly agree". The average score for all eight methods of moral disengagement was calculated, as well as the summated average across all dimensions. The descriptive statistics for this scale is summarised in table five below.

Table 5: Descriptive Statistics for the Construct Moral Disengagement

	N	MEAN	MEDIAN	STD DEV	SKEWNESS	KURTOSIS
MORAL JUSTIFICATION	191	2.93	2.75	0.93	0.15	-0.25
EUPHAMISIM	191	1.72	1.50	0.71	1.47	3.23
ADV. COMPARISON	191	1.43	1.00	0.63	1.68	2.75
DISPLACEMENT	191	2.19	2.00	0.96	0.55	-0.65
DIFFUSION	191	2.45	2.50	1.07	0.79	0.70
DISTORTING	191	1.77	1.50	0.74	1.11	1.00
ATTRIBUTION	191	2.00	1.75	0.87	1.11	1.56
DEHUMANISATION	191	1.56	1.50	0.62	1.29	1.62
OVERALL TOTAL	191	2.01	1.97	0.55	0.49	-0.34

The results reveal that moral justification has the highest mean and median represented by values of 2.93 and 2.75 respectively. On average, the respondents "disagree slightly" that this disengagement tool is employed. The disengagement tool employed the least is that of advantages comparison, which yielded an average response of "strongly disagree". Obtaining an overall average across all the dimensions of the MDS scale for the level of moral disengagement tools employed yielded an average response of "disagree".

The distributions across all eight dimensions is potentially not normally distributed. The Pearson's Coefficients of Skewness is between the values of negative one and positive one for the overall total such that it is considered not to be excessively skewed (Wegner, 2012). However, five of the moral disengagement tools are considered to be excessively skewed because of a small number of individuals which indicated higher scores than the majority.

The z skewness values are all above ±1.96 except for the dimension of moral disengagement. The distributions are platykurtic for the dimension of moral disengagement, and for the summated total score of moral disengagement, and their z values also exceed negative 1.96. The remaining dimensions are all leptokurtic given z values in excess of positive 1.96. Regardless of the violation of normality, the data was not transformed given the large sample size (Hair et al., 2010). However, such a decision will impact on regression analysis if the assumption of homoscedasticity is violated.

Univariate detection methods indicate the existence of outliers within the respondents levels of ethical judgement across all scenarios. However, given that the data set is skewed, these outliers have been retained as there is valid reason to assume that they represent a small but viable segment of the population. (Hair et al., 2010).

5.2.5. Descriptive Statistics of the Construct Mindfulness

Respondents were asked to complete the Five Faceted Mindfulness Questionnaire (FFMQ) scale using a five point Likert Scale. The coded value of one represents the statement "never or very rarely true", while the coded value of five represents the statement "very often or almost always true". The average score for all five dimensions of mindfulness was calculated, and is summarised in table six below.

Table 6: Descriptive Statistics for the Construct Mindfulness

	N	MEAN	MEDIAN	STD DEV	SKEWNESS	KURTOSIS
OBSERVING	189	3.40	3.38	0.67	-0.88	2.75
DESCRIBING	189	3.50	3.50	0.72	-0.59	2.37
ACTING WITH AWARENESS	189	3.67	3.63	0.62	-0.90	5.53
NON-JUDGING	189	3.33	3.25	0.66	-0.53	2.34
NON-REACTIVITY	189	3.33	3.29	0.60	-0.88	4.49
TOTAL MINDFULNESS	189	3.47	3.44	0.40	0.36	0.21

Respondents scored highest in the mindfulness dimension acting with awareness, with an average score of "often true". The dimension in which the respondents scored the lowest was non-judging with an average score of "sometimes true".

The distributions across all five dimensions is negatively skewed, which indicates that a small number of respondents provided lower scores than the majority. The Pearson's Coefficients of Skewness is less than negative one which indicates that there is no excessive skewness present (Wegner, 2012). However, the z skewness values are all above ±1.96, indicating the presence of a non-normally distribution. The distributions are leptokurtic for all dimensions, including the summated score. With the exception of the summated score of mindfulness, the z values exceed positive 1.96. Regardless of the violation of normality due to skewed and "peaked" distributions, the data was not transformed given the large sample size (Hair et al., 2010). However, such a decision will impact on regression analysis if the assumption of homoscedasticity is violated.

Univariate detection methods indicated the existence of outliers within the respondents levels of ethical judgement across all scenarios. However, given that the data set is skewed, these outliers have been retained as there is valid reason to assume that they represent a small but viable segment of the population. (Hair et al., 2010).

Given that all constructs contained outliers, but which were assigned substantive value, multivariate outlier analysis will not be calculated in any of the analysis techniques to be applied in the remaining sections.

5.3.   Reliability and Validity of Measurement Instruments

Measurement instruments employed in any research study should be subjected to reliability and validity assessments. Reliability analysis evaluates the level of measurement error, computed through internal consistency or item to total correlation analysis. Internal consistency of any measurement instrument is tested using the indicator Cronbach Alpha (Pallant, 2005). Such an analysis determines whether the questions of a specific measurement instrument amount to the same construct, and ideally should always be above 0.7 (Pallant, 2005). Item to total correlation analysis identifies those questions that may be considered for deletion if the correlations are below 0.3, though this step may be omitted if the Cronbach Alpha is already above 0.7. Construct validity determines whether the scale

employed actually was a valid measure of the construct under scrutiny. It is essential that both reliability and validity are investigated concurrently, as one scale may consistently or reliably be measuring the incorrect (or invalid) construct. Principle component analysis was the exploratory factor analysis tool used for the sole objective of data reduction and summation. Orthogonal rotation was applied using the Varimax technique as part of the factor analysis process, to enable simplification of the factor-loading matrix. Factor analysis enable the researcher to determine whether convergent validity was evidenced. The results of the internal consistency, item to total correlations and principle component analysis for each of the scales employed is provided in the remainder of section 5.3.

5.3.1. Reliability and Validity of the Multidimensional Ethics Scale

Internal consistency in terms of the Cronbach Alpha was calculated for the Multidimensional Ethics Scale (MES) scale for each of the three vignettes. The resultant Cronbach Alpha for scenarios one to three was 0.86, 0.85 and 0.79. The item to total correlation was also calculated for each of the individual scenarios. The item to total correlations indicated poor reliability for questions seven, eight, nine, thirteen and fifteen for all three scenarios given that there correlation to the total was close to zero, and negative. This highlights the fact that these questions were potentially misunderstood in terms of the construct being measured. It was therefore deemed prudent to remove these questions, and the statistical analysis as mentioned above was recalculated. The results of the original Cronbach Alpha scores and item to total correlations are available in Appendix E, while the recalculated results are available in tables seven and eight.

Table 7: Internal Consistency of the Multidimensional Ethics Scale

	SCENARIO 1	SCENARIO 2	SCENARIO 3
ALPHA	0.95	0.94	0.91
N	173	177	177

Table 8: Item-Total Correlation for the Multidimensional Ethics Scale

SCENARIO 1: DO YOU BELIEVE THE ACTION		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q1	Was just	0.84	0.94
Q2	Was fair	0.86	0.94
Q3	Was culturally acceptable	0.78	0.94

SCENARIO 1: DO YOU BELIEVE THE ACTION		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q4	Was individually acceptable	0.87	0.94
Q5	Was traditionally acceptable	0.77	0.94
Q6	Was acceptable to my family	0.77	0.94
Q10	Produces the greatest utility	0.73	0.94
Q11	Maximises benefits while minimising harm	0.77	0.94
Q12	Leads to the greatest good for the greatest number	0.80	0.94
Q14	Person was obligated to act this way	0.51	0.95
SCENARIO 2: DO YOU BELIEVE THE ACTION		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q1	Was just	0.83	0.93
Q2	Was fair	0.85	0.93
Q3	Was culturally acceptable	0.78	0.93
Q4	Was individually acceptable	0.78	0.93
Q5	Was traditionally acceptable	0.80	0.93
Q6	Was acceptable to my family	0.77	0.93
Q10	Produces the greatest utility	0.73	0.93
Q11	Maximises benefits while minimising harm	0.69	0.94
Q12	Leads to the greatest good for the greatest number	0.67	0.94
Q14	Person was obligated to act this way	0.46	0.94
SCENARIO 3: DO YOU BELIEVE THE ACTION		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q1	Was just	0.74	0.90
Q2	Was fair	0.73	0.90
Q3	Was culturally acceptable	0.68	0.90
Q4	Was individually acceptable	0.74	0.90
Q5	Was traditionally acceptable	0.69	0.90
Q6	Was acceptable to my family	0.76	0.90
Q10	Produces the greatest utility	0.68	0.90
Q11	Maximises benefits while minimising harm	0.59	0.91
Q12	Leads to the greatest good for the greatest number	0.75	0.90
Q14	Person was obligated to act this way	0.50	0.91

The appropriateness of principle component analysis is determined by calculating the Kaiser-Meyer-Olkin (KMO) and Barlett's Test for Sphericity statistical analysis. The KMO output must be greater than 0.6 (Pallant, 2005), while Barlett's Test must be statistically significant. The KMO for scenarios one to three were 0.92, 0.90 and 0.86 respectively, while Bartlett's test yielded a significance value of 0.00 for each scenario. Factor analysis was therefore deemed to be appropriate given the adherence to these specified criterion. Factor loadings and communalities of each question was used to determine whether further deletion of items was required, while cross loadings were ignored (given that the objective was data reduction only). Question 14 was therefore removed as the communality was below 0.5 for all scenarios, and factor analysis was replicated. The removal of this question did not adversely affect the Cronbach Alphas for any of the scenarios. The result of the recalculated factor analysis is captured in tables nine and ten, which summarises the Eigen value (greater than one) and the total percentage of variance.

Table 9: KMO and Bartlett's Test for Multidimensional Ethics Scale

	SCENARIO 1	SCENARIO 2	SCENARIO 3
KAISER-MEYER-OLKIN	0.91	0.89	0.85
BARTLETT'S TEST (SIG)	0.00	0.00	0.00

Table 10: Factor Analysis of the Multidimensional Ethics Scale

	SCENARIO 1		SCENARIO 2		SCENARIO 3	
	EIGEN	CUMULATIVE %	EIGEN	CUMULATIVE %	EIGEN	CUMULATIVE %
COMPONENT ONE	6.47	71.83 %	6.08	67.59 %	5.50	61.12 %

An inspection of the scree plots (available in Appendix H) for each of the scenarios verifies the existence of a single component contributing to the construct of ethical judgement. The original questionnaire developed and administered by Reidenbach and Robin demonstrated a three factor model, while Cohen et al. (1993) identified the presence of a four factor model. Such discrepancy in the number of underlying factors highlights the variability that researchers observe when conducting studies in various contexts.

The item to total correlations and factor loadings reveal the presence of a moderate to strong positive correlation between the individual questions and the underlying construct. The fact

that the construct of ethical judgement can be presented as a single component justifies the use of a summated score for any further statistical analysis. Each component for the various scenarios is able to explain more than 60 percent of the variance, which is a minimum guideline for social sciences (Hair et al., 2010). The results of the abovementioned statistical assessments provide sufficient evidence of the reliability and convergent validity of this scale.

5.3.2. Reliability and Validity of the Moral Disengagement Scale

Internal consistency in terms of the Cronbach Alpha was calculated for the Moral Disengagement Scale (MDS), and the results are available in table 11 below. The item to total correlations were also extracted from this data set. Three of the questions generated item to total correlations at or below 0.3. However, it was not deemed prudent at this point to delete these specific questions. This was due to the fact that the Cronbach Alpha was already above 0.7 for the entire scale, and that deletion would not have resulted in significant movement in the Cronbach Alpha (Pallant, 2005). The calculated Cronbach Alpha and item to total correlations are available in tables 11 and 12.

Table 11: Internal Consistency of the Moral Disengagement Scale

	MDS
ALPHA	0.84
N	191

Table 12: Item-Total Correlation for the Moral Disengagement Scale

		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q1	It is alright to fight to protect your friends	*0.25*	0.83
Q2	Slapping and shoving someone is just a way of joking	*0.27*	0.83
Q3	Damaging some property is no big deal when you consider that others are beating people up	0.47	0.82
Q4	A member of a group should not be blamed for the trouble of the group	0.34	0.83

		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q5	If someone is under bad conditions they cannot be blamed for behaving aggressively	0.33	0.82
Q6	It is okay to tell small lies because they don't really do any harm	0.48	0.82
Q7	Some people deserve to be treated like animals	*0.29*	0.83
Q8	If someone at work causes trouble and misbehave at work it is their managers fault	0.32	0.82
Q9	It is alright to beat someone who bad mouths your family	0.43	0.82
Q10	To hit obnoxious members of society is just giving them "a lesson"	0.50	0.82
Q11	Stealing some money is not too serious compared to those who steal a lot of money	0.46	0.82
Q12	A person who only suggests breaking rules should not be blamed if other people go ahead and do it	0.33	0.82
Q13	If people are not disciplined they should not be blamed for misbehaving	*0.27*	0.83
Q14	People do not mind being teased because it shows interest in them	0.35	0.82
Q15	It is okay to treat badly someone who behaved like a "worm"	0.40	0.82
Q16	If people are careless where they leave their things it is their own fault if they get stolen	*0.20*	0.83
Q17	It is alright to fight for your group's reputation when threatened	*0.11*	0.84
Q18	Taking someone's stationary without their permission is just "borrowing it"	0.34	0.82
Q19	It is okay to insult a work colleague because beating him / her is worse	0.44	0.82

		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q20	If a group decides together to do something harmful it is unfair to blame any person in the group for it	0.30	0.83
Q21	People cannot be blamed for using swear words when all their colleagues do it	0.59	0.82
Q22	Teasing someone does not really hurt them	0.47	0.82
Q23	Someone who is obnoxious does not deserve to be treated like a human being	0.48	0.82
Q24	People who get mistreated usually do things that deserve it	0.44	0.82
Q25	It is alright to lie to keep your friends out of trouble	0.33	0.83
Q26	It is not a bad thing to "get high" once in a while	*0.28*	0.83
Q27	Compared to the illegal things people do, taking some things from a store without paying for them is not very serious	*0.24*	0.83
Q28	It is unfair to blame a person who had only a small part in the harm caused by a group	0.30	0.83
Q29	People cannot be blamed for misbehaving if their colleagues pressured them to do it	*0.27*	0.83
Q30	Insults among colleagues do not hurt anyone	0.45	0.82
Q31	Some people have to be treated roughly because they lack feelings that can be hurt	0.45	0.82
Q32	People are not at fault for misbehaving if their managers force them too much.	0.50	0.82

The KMO for the MDS scale was 0.78, while Bartlett's test yielded a significance value of 0.00. Factor analysis was therefore deemed to be appropriate given the adherence to these specified criterion. The initial calculated factor analysis generated two questions with low

communalities, which were therefore excluded. This calculation was replicated and a final factor structure was obtained. It is important to note that some of the items cross loaded over more than one factor. However, given that the aim of this analysis was data reduction, these items were retained, and allocated to the factor with the highest loading (available in Appendix F).   The result of the factor analysis is captured in tables 13 and 14, which summarises the number of components with Eigen values greater than one.

Table 13: KMO and Bartlett's Test for Moral Disengagement Scale

Kaiser-Meyer-Olkin	0.77
Bartlett's Test of Sphericity (sig)	0.00

Table 14: Factor Analysis of the Moral Disengagement Scale

COMPONENT	EIGEN	CUMULATIVE %
ONE	4.05	13.48 %
TWO	2.89	23.12 %
THREE	2.24	30.58 %
FOUR	2.20	37.93 %
COMPONENT	EIGEN	CUMULATIVE %
FIVE	1.91	44.29 %
SIX	1.59	49.59 %
SEVEN	1.55	54.76 %
EIGHT	1.49	59.72 %
NINE	1.30	64.04 %

An inspection of the scree plots (available in Appendix H) for each of the scenarios verifies the existence of nine components contributing to the construct of moral disengagement. The original questionnaire developed and administered by Bandura proposed the existence of eight dimensions, but revealed the existence of a single factor with low variance (Bandura et al., 1996). Loadings of the various questions to the identified components is random, and does not correlate to the eight dimensions.   For example, component one contains questions relating to the dimensions of advantages comparison, displacement, moral justification, dehumanisation, attribution and euphemism. The presence of a larger number of factors in this study, and the random loading of questions, highlight the fact that the respondents of this sample interpreted the questions differently from those of other studies.

An alternative explanation of this phenomenon relates to the sample size. Hair et al. (2010) indicate that a minimum sample size of 160 would be required for this study using the ratio of five respondents to every one question. However, the ideal ratio is 20 respondents to every one question, which would require a sample size of 640. Perhaps a single factor structure would only emerge if a larger number of respondents had been achieved.

The item to total correlations and factor loadings reveal the presence of a weak to moderate correlation between the individual questions and the underlying construct. The combination of the nine components for this scale is able to explain more than 60 percent of the variance. The construct of moral disengagement cannot be presented as a single component without increasing measurement error in any further statistical analysis. Unfortunately, as the construct moral disengagement is a dependent variable, summation will be required. The results of the abovementioned statistical assessments provide sufficient evidence of the reliability of the scale, while convergent validity is of concern.

5.3.3. Reliability and Validity of the Five Faceted Mindfulness Questionnaire

Internal consistency in terms of the Cronbach Alpha was calculated for the Five Faceted Mindfulness Questionnaire (FFMQ), and the results are available in table 15 below. The item to total correlations were also extracted from this data set. A total of seven items were deleted for item to total correlations below 0.3. The results of the original Cronbach Alpha scores and item to total correlation are available in Appendix G. The recalculated Cronbach Alpha and item to total correlations (after deletion) are available in tables 15 and 16.

Table 15: Internal Consistency of the Five Faceted Mindfulness Questionnaire

	OBSERVING	DESCRIBING	AWARENESS	NON-JUDGING	NON-REACTIVITY	FFMQ
ALPHA	0.70	0.77	0.69	0.72	0.62	0.85
N	189					

Table 16: Item-Total Correlation for the Five Faceted Mindfulness Questionnaire

OBSERVING		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q1	When I am walking, I deliberately notice sensations of my body moving	0.36	0.70

OBSERVING		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q6	When I take a shower or bath, I stay alert to the sensations of water on my body	0.46	0.66
Q15	I pay attention to sensations, such as the wind in my hair or sun on my face	0.50	0.64
Q26	I notice the smells and aromas of things	0.49	0.64
Q31	I notice visual elements of the art or nature, such as colours, shapes, textures or patterns of light and shadow	0.50	0.64
DESCRIBING		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q2	I am good at finding words to describe my feelings	0.54	0.73
Q16	I have trouble thinking of the right words to express how I feel about things (R)	0.49	0.74
Q22	When I have a sensation in my body, it is difficult for me to describe it because I cannot find the right words (R)	0.44	0.75
Q27	Even when I'm feeling terribly upset, I can find a way to put it into words	0.54	0.75
Q32	My natural tendency is to put my experiences into words	0.60	0.71
Q37	I can usually describe how I feel at the moment in considerable detail	0.55	0.74
ACTING WITH AWARENESS		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q5	When I do things, my mind wanders off and I am easily distracted (R)	0.33	0.67
Q8	I do not pay attention to what I am doing because I am daydreaming, worrying, or otherwise distracted (R)	0.38	0.66
Q13	I am easily distracted (R)	0.50	0.63
Q18	I find it difficult to stay focused on what's happening in the present (R)	0.37	0.67

ACTING WITH AWARENESS		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q23	It seems I am "running on automatic" without much awareness of what I am doing (R)	0.35	0.67
Q28	I rush through activities without really being attentive to them (R)	0.41	0.66
Q34	I do jobs or tasks automatically without being aware of what I am doing (R)	0.42	0.66
Q38	I find myself doing things without paying attention (R)	0.34	0.67
NON-JUDGING		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q3	I criticise myself for having irrational or inappropriate emotions (R)	0.32	0.71
Q10	I tell myself I shouldn't be feeling the way I'm feeling (R)	0.44	0.69
Q14	I believe that some of my thoughts are abnormal or bad and I shouldn't think that way (R)	0.53	0.67
Q17	I make judgements about whether my thoughts are good or bad (R)	0.37	0.70
Q25	I tell myself that I shouldn't be thinking the way I am thinking (R)	0.43	0.69
Q30	I think some of my emotions are bad or inappropriate and I should not feel them (R)	0.34	0.71
Q35	When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought / image is about (R)	0.45	0.68
Q39	I disapprove of myself when I have irrational ideas (R)	0.41	0.69
NON-REACTIVITY		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q9	I watch my feelings without getting lost in them	0.45	0.53

NON-REACTIVITY		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q19	When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it	0.31	0.60
Q21	In difficult situations, I can pause without immediately reacting	0.40	0.56
Q24	When I have distressing thoughts or images, I feel calm soon after	0.36	0.58
Q29	When I have distressing thoughts or images I am able to just notice them without reacting	0.38	0.57

The FFMQ is comprised of five distinct constructs (Baer et al., 2006), such that factor analysis was completed separately for each construct. The KMO and Bartlett's test is presented for each of the constructs separately in the table below. Factor analysis was therefore deemed to be appropriate given the adherence to these specified criterion. However, the sample size was required for this questionnaire was 192 at a ratio of five respondents to every one question. Such a borderline adherence to this requirement is of concern. In computing the factor analysis, those questions that generated low communalities were removed, and the statistical analysis was repeated. Unfortunately this compromised the Cronbach Alpha for the constructs of acting with awareness and non-judging in that the removal of questions with low communalities effectively reduced the Cronbach Alpha to levels above 0.62. The result of the factor analysis is captured in tables 17 and 18, which only captures the number of components with Eigen values greater than one.

Table 17: KMO and Bartlett's Test for Five Faceted Mindfulness Questionnaire

	OBSERVING	DESCRIBING	AWARENESS	NONJUDGING	NONREACTIVITY
KMO	0.73	0.72	0.68	0.74	0.64
SIG	0.00	0.00	0.00	0.00	0.00

Table 18: Factor Analysis of the Five Faceted Mindfulness Questionnaire

COMPONENT	EIGEN	CUMULATIVE %
OBSERVING	2.11	52.64 %
DESCRIBING	2.24	55.97 %
AWARENESS	2.08	41.51 %
NONJUDGING	2.26	45.27 %
NONREACTIVITY	1.83	45.67 %

An inspection of the scree plots (available in Appendix H) for each of the constructs verifies the existence of a single component. The item to total correlations and factor loadings reveal the presence of a weak correlation between the individual questions and the underlying constructs. The variance explained by each individual construct is greater than 30 percent which is sufficient. As such, a summated score will be used represent each of the five constructs for future statistical analysis. The results of the abovementioned statistical assessments indicate that a trade-off exists between reliability and validity. The requisite removal of questions which was necessary to prove convergent validity unfortunately reduced the reliability of the scale. It was deemed prudent to sacrifice reliability to achieve convergent validity, because a reliably incorrect measure would not add much value. This trade-off may be as a result of the sample size that is potentially too small for factor analysis. As such, there is sufficient evidence of convergent validity. However, the reliability of the scale is of concern.

5.4.   Comparison of the Constructs Ethical Judgement and Intent between Scenarios

Three vignettes were presented to the respondents, with the construct moral intensity possibly being perceived. Since moral intensity was not controlled for, or measured, it was necessary to test whether this construct was perceived if at all. The presence of moral awareness was detected by comparing the average responses to the construct of ethical judgement and ethical intent for each scenario using SPSS one-way between-groups MANOVA (Pallant, 2005). The dependent variables ethical judgement and ethical intent was compared to the independent categorical data referring to the scenario. The underlying assumptions of normality, linearity, outliers, homogeneity and multicollinearity were assessed, and both the assumptions of homogeneity and equal variances were violated.

Pillas Trace is more robust to test for statistical significance when assumptions have been violated, and a significance of 0.00 was determined using this test, though this test did not yet identify which construct yielded statistically significant means across each scenario. Tests between-subjects effect was conducted further, adjusting the significance to 0.25 using Bonferroni adjustment, which indicated that both constructs were statistically significant in the responses across the three scenarios. It is evident from this that the responses across the various vignettes were statistically significant, such that a single summated score would not be used.

5.5. <u>Response Bias</u>

Response biases, such as socially desirable responding, positive self-evaluation and social effectiveness, are a common phenomenon in self-report assessments (Dunkel, Linden, Brown, & Mathes, 2016; Robinson, Shaver, & Wrightsman, 1991).   The presence of this phenomenon, though not controlled for or used to attenuate results, was determined through comparing the means of the respondents' intention with the intention believed to be held by their peers. The mean of the respondents intention in comparison to the opinion of those intentions held by their peers was analysed using the Paired-samples t-test for all three scenarios (Pallant, 2005). The Paired-samples t-test determined whether the difference between the respondents' opinion of self and their opinion of their peers was statistically significant (Pallant, 2005). A significance value of less than 0.05 indicates that there is a statistically significant difference between the means of the respondents' intention versus those believed of their peers.

Table 19: Comparison of the means of Intentions of Self and those of Peers

	MEAN DIFFERENCE	STD. DEV	SIG
SCENARIO 1: SELF & PEERS	0.55	1.92	0.70
SCENARIO 2: SELF & PEERS	1.54	1.68	0.00[*]
SCENARIO 3: SELF & PEERS	1.17	1.66	0.00[*]

Significant at the 0.05 level

From the results in table 19 above, it is clear that the differences between the intention of the respondent to act as those did in the scenarios in comparison to the belief of how their peers would act is statistically significantly different for scenarios two and three only.

Two distinctly different distribution channels were employed in presenting the measurement instrument to respondents. Electronic questionnaires were distributed to prospective respondents via the tool Survey Monkey as one such channel. The alternative was designed such that the researcher was present while respondents were completing the paper-based questionnaire across three sites. Given that the researcher was present when collecting paper-based questionnaires only, the question raised is whether this may have introduced response bias. This was tested for by comparison of the means between the various collection points using ANOVA. The results of the ANOVA analysis revealed that the assumption of homogeneity of variance was not violated, such that the Tukey HSD comparison was appropriate. In comparing the means, only one group was statistically significant in their responses, and this was between the Sasolburg and Wadeville sites with reference to the construct ethical judgement for the second vignette only. The means for all other responses were not statistically significantly different.

5.6. <u>Hypothesis One Analysis: Mindfulness and Ethical Judgement</u>

Chapter three identified the proposed relationship between the constructs of mindfulness and ethical judgement, specifically that these constructs are positively related. The independent variables which represent mindfulness was used to predict the output of the dependent variable ethical judgement, using one-tailed multiple linear regression to verify the existence of such a relationship. However, before proceeding with regression analysis, the assumptions of linearity, multicollinearity and homoscedasticity were scrutinised. Heteroscedasticity was evident given the nature of the scatter plot (available in Appendix I), violating the assumption of equal variance (Hair et al., 2010). However, transformation using the square root, logarithmic function, square or cubic function did not improve either kurtosis or skewness. Such a violation of this common assumption may result in understated results (Hair et al., 2010).

The output of multiple regression differs from that of simple linear regression in that the calculated value of R represents a generalised correlation coefficient, and not the Pearson coefficient. A separate correlation analysis was conducted to determine the Pearson coefficient for each independent variable.

Table 20: Regression and Correlation Results between Mindfulness and Ethical Judgement

SCENARIO 1	R	ADJUSTED R²	ANOVA SIG	COEFFICIENTS SIG	r	SIG
OBSERVING	0.17	0.0 %	0.44	0.04	0.11	0.08
DESCRIBING				0.27	0.03	0.34
AWARENESS				0.49	-0.02	0.38
NON-JUDGING				0.33	-0.03	0.35
NON-REACITIVITY				0.15	0.00	0.50
SCENARIO 2	R	ADJUSTED R²	ANOVA SIG	COEFFICIENTS SIG	r	SIG
OBSERVING	0.25	3.6	0.05*	0.81	0.07	0.18
DESCRIBING				0.21	0.18	0.01**
AWARENESS				0.12	0.21	0.00**
NON-JUDGING				0.66	0.09	0.11
NON-REACITIVITY				0.79	0.19	0.01**
SCENARIO 3	R	ADJUSTED R²	ANOVA SIG	COEFFICIENTS SIG	r	SIG
OBSERVING	0.29	6.0	0.01*	0.82	0.098	0.099**
DESCRIBING				0.74	0.14	0.04**
AWARENESS				0.04*	0.28	0.00**
NON-JUDGING				0.42	-0.013	0.43
NON-REACITIVITY				0.84	0.171	0.01**
ADJUSTED SCENARIO 3	R	ADJUSTED R²	ANOVA SIG	r		
AWARENESS	0.28	7.0 %	0.00*	0.28		

Significant at the 0.05 level

*** Significant at the 0.05 level (1-tailed)*

Multiple regression analysis indicate the presence of a small positive relationship between the independent elements of mindfulness, and the dependent variable ethical judgement, ranging from 0.17 to 0.29. The Pearson Correlation Coefficients were also positive for those elements of mindfulness which were statistically significant ($\rho < 0.05$). However, significant correlations of the individual elements differed between scenarios, and there seems to be

no consistent factor of mindfulness that is significance between all scenarios. The level of predictability, denoted using the symbol R^2, ranged from zero percent to a maximum of seven percent. These models of predictability were statistically significant for scenarios two and three only ($\rho < 0.05$). A finer inspection of the coefficients of the independent dimensions of mindfulness reveal the following for the second scenario: none of the independent variables is statistically significant. This essentially translates into a poor predictive model as the statistical power lies with the constant only. As such, this model has poor predictive properties. On the converse, the coefficient for the independent variable of acting with awareness is statistically significant for scenario three such that this model is deemed appropriate. The predictive model for scenario three (after adjusting the number of independent variables to only include those that are significant) yielded the following equation:

$$y_{Ethical\ Judgment, SC3} = 0.52 \times x_{Awareness} + 3.843 \qquad (2)$$

5.7. <u>Hypothesis 2 Analysis: Mindfulness and Moral Responsibility</u>

Chapter three identified the proposed hypothesis between the constructs of mindfulness and moral responsibility. Specifically that these constructs are positively related, once the construct moral disengagement was inverted to represent the construct moral responsibility. The independent variable of mindfulness was used to predict the output of the dependent variable moral responsibility, using one-tailed simple linear regression to verify the existence of such a positive relationship. However, before proceeding with regression analysis, the assumptions of linearity, multicollinearity and homoscedasticity were scrutinised. A review of the scatter plots (Appendix I) revealed that the assumptions of linearity and homoscedasticity were valid. This supports the justification that skewed data need not have been transformed as the impact is minimised when a sufficiently large sample has been utilised (Hair et al., 2010).

Table 21: Regression and Correlation Results between Mindfulness and Moral Responsibility

	R	ADJUSTED R²	ANOVA SIG	COEFFICIENTS SIG	r	SIG
OBSERVING	0.26	6.9 %	0.02*	0.78	0.06	0.19
DESCRIBING				0.13	0.15	0.02**
AWARENESS				0.78	0.09	0.10
NON-JUDGING				0.00*	0.23	0.00**
NON-REACITIVITY				0.55	0.08	0.14
ADJUSTED	R	ADJUSTED R²	ANOVA SIG	r		
NONJUDGING	0.23	5.5 %	0.00*	0.23		

Significant at the 0.05 level

*** Significant at the 0.05 level (1-tailed)*

The results of this analysis revealed a correlation coefficient of 0.26 which is statistically significant ($\rho < 0.05$). A correlation coefficient of this magnitude indicates that a small positive relationship exists. The percentage of variation in moral responsibility described by the independent variable mindfulness is only 6.9 percent. A coefficient of determination at this level indicates that there is a weak association between these variables. The dimension of non-judging is the independent variable that significantly predicts the level of moral responsibility. The model was therefore adjusted to include this dimension of mindfulness only. The correlation coefficient still revealed the existence of a small positive relationship ($r = 0.23$) with a weak predictive association of 5.5 percent. The equation that best represent the relationship between mindfulness and moral responsibility is:

$$y_{Moral\ Responsibility} = 0.181 \times x_{Awareness} + 5.355 \tag{3}$$

5.8. Hypothesis 3 Analysis: Moral Responsibility and Ethical Intent

Chapter three identified the proposed hypothesis between the constructs of moral responsibility and ethical intent. Specifically that these constructs are positively related, once the construct moral disengagement was inverted to represent the construct moral

responsibility. The independent variable of moral responsibility was used to predict the output of the dependent variable ethical intent, using simple linear regression to verify the existence of such a relationship. However, before proceeding with regression analysis, the assumptions of linearity, multicollinearity and homoscedasticity were scrutinised. A review of the scatter plots (Appendix I) revealed that the assumptions of linearity and homoscedasticity were valid. This supports the justification that skewed data need not have been transformed as the impact is minimised when a sufficiently large sample has been utilised (Hair et al., 2010). The results of this analysis are available in the table 22 below.

Table 22: Regression and Correlation Results between Moral Responsibility and Ethical Intent

SCENARIO	R	ADJUSTED R^2	SIG
SCENARIO 1	0.04	0.0 %	0.59
SCENARIO 2	0.16	2.0 %	0.03[*]
SCENARIO 3	0.24	5.1 %	0.00[*]

Significant at the 0.05 level

The results of this analysis has been separated as per the three vignettes. The first vignette revealed a Pearson Correlation Coefficient of 0.04 which was not statistically significant. Such a result indicates that there is no linear relationship between the constructs of moral responsibility and ethical intent. However, the Pearson Correlation Coefficient of the second and third vignette was determined to be 0.16 and 0.24 which represents a small positive relationship. Both results are statistically significant at the 0.05 level for scenarios two and three. The percentage of variation in ethical intent described by the independent variable moral responsibility is 2.0 percent and 5.6 percent for scenarios two and three respectively. A coefficient of determination at these levels indicates that there is a weak association between these variables. The equations that best represent the relationship between moral responsibility and ethical intent for scenarios two and three are:

$$y_{Ethical\ Intent,SC2} = 0.546 \times x_{Moral\ Responsibility} + 2.226 \qquad (4)$$

$$y_{Ethical\ Intent,SC3} = 0.52 \times x_{Moral\ Responsibility} + 3.072 \qquad (5)$$

5.9. Hypothesis 4 Analysis: Moral Responsibility Mediates the Relationship between Mindfulness and Ethical Intent

Mediation was tested for by analysing the relationships among the variables of mindfulness, moral responsibility and ethical intent. This necessitated the need to summate a total score for mindfulness in order to determine the level of significance for these relationships. Furthermore, ethical intention results for the first scenario was excluded from this analysis as it had already been ascertained to be of insignificant relationship strength or low predication ability.

In aid of the explanation of the mediation process, the following diagram represents the relationships under discussion.

Figure 11: Proposed Pathways between the constructs of Mindfulness, Moral Responsibility and Ethical Intent
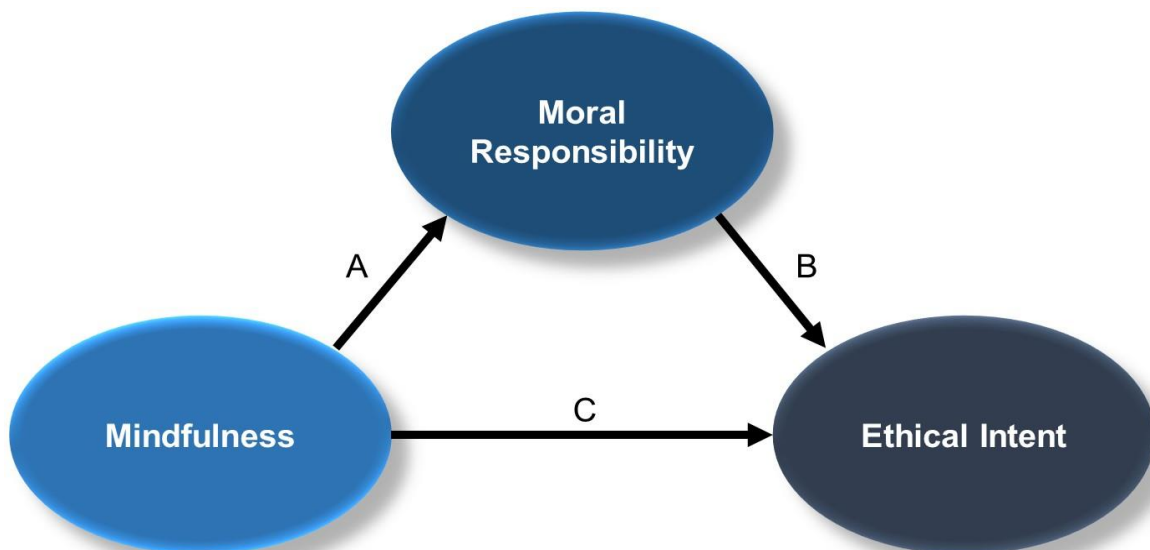
Linear regression was used to analyse the significance of the relationships A, B and C before mediation was determined. Each relationship for both scenarios two and three was statistically significant at a level of 0.05, such that the next step of mediation analysis was engaged in. Mediation analysis entailed utilising both mindfulness and moral responsibility as independent variables to predict the dependent variable ethical intent. The results of this analysis are summarised in the tables below.

Table 23: Mediating influence of Moral responsibility between Mindfulness and Ethical Intent

MODEL	INDEPENDENT VARIABLE	R	ADJUSTED R^2	t-value	BETA	SIG
SCENARIO TWO						
1	Mindfulness	0.174	3.0%	2.382	0.174	0.018*
2	Mindfulness and	0.216	4.7%	2.024	0.149	0.044*
	Moral Responsibility			1.775	0.131	0.078
MODEL	INDEPENDENT VARIABLE	R	ADJUSTED R^2	t-value	BETA	SIG
SCENARIO THREE						
1	Mindfulness	0.209	4.3%	2.885	0.21	0.004*
2	Mindfulness and	0.290	8.4%	2.372	0.17	0.019*
	Moral Responsibility			2.843	0.21	0.005*

* Significant at the 0.05 level

Mediation is only said to occur when the introduction of the second variable holds statistical significance ($\rho < 0.05$). As such, and despite the increase of the probability from 0.018 to 0.044 for the construct of mindfulness, there is no evidence to support mediating effects of moral responsibility for the second scenario given a significance level of 0.078.

Inclusion of both mindfulness and moral responsibility generate an increase in the significance level of the original relationship between mindfulness and ethical intent for the third scenario. This is an increase from 0.004 to 0.019, while the new variable of moral responsibility is present at a significance level below 0.05. However, the new significance level of 0.019 is still below the level of 0.05, such that only partial mediation has said to have occurred.

Mediation analysis is subject to the same assumptions as those of regression analysis. This means that evidence of a linear relationship needs to be determined via visual inspection of the scatter plots. A review of the appropriate scatter plots evidence the existence of linearity and homoscedasticity, both critical assumptions to regression analysis. This supports the justification that skewed data need not have been transformed as the impact is minimised when a sufficiently large sample has been utilised (Hair et al., 2010).

The method of mediation analysis as employed above is the most common method, which happens to have certain limitations. For one, the indirect effect between mindfulness and ethical intent, when introducing moral responsibility, is not determined (Fairchild & Mackinnon, 2009). Secondly, mediation analysis assumes that the causal sequence of variables is correct, and that there exists no reverse causality effects (Fairchild & Mackinnon, 2009). Given these limitations, this method of mediation analysis tends to be underpowered, though the alternative methods of difference-in-coefficients tests and bootstrapping are not without their limitations either (Fritz, Taylor, & MacKinnon, 2013).

5.10. Additional Finding

An additional finding was identified when analysing the relationship of the constructs of moral responsibility and ethical judgement. Specifically, it was identified that the independent construct of moral responsibility as a single summated score also related to the dependent construct of ethical judgement. The results of the linear regression model is captured in the table below.

Table 24: Regression Results between Moral Responsibility and Ethical Judgement

SCENARIO	R	ADJUSTED R^2	SIG
SCENARIO 1	0.00	0.0%	0.99
SCENARIO 2	0.19	3.0%	0.01[*]
SCENARIO 3	0.25	5.9%	0.00[*]

Significant at the 0.05 level

Moral responsibility was not identified as being a relevant construct when reviewing literature in terms of the construct of ethical judgement. Though moral responsibility was identified as being relevant to mindfulness and ethical intent, the results of the linear regression analysis indicate that this gap in the knowledge base was overlooked. The summary of the regression model indicate that moral responsibility is significant in predicting the level of ethical judgement for scenarios two and three. The level of correlation is small and positive at levels of 0.19 and 0.25 for scenarios two and three respectively. A weak association is present between the independent variable of moral responsibility and the dependent variable ethical judgement at levels of 3.0 percent and 5.9 percent respectively. Given that this relationship was overlooked, the question of mediation is raised. Specifically, does the construct of moral responsibility mediate the relationship between mindfulness and

ethical judgement (as with ethical intent)?   Subsequently, mediation analysis was conducted.

Linear regression was used to analyse the significance of the relationships A, B and C before mediation was determined (see figure 11).   Each relationship was statistically significant at a level of 0.05 for scenarios two and three only, such that the next step of mediation analysis was engaged in.   Mediation analysis entailed utilising both mindfulness and moral responsibility as independent variables to predict the dependent variable ethical judgement.   The results of this analysis are summarised in the tables below.

Table 25: Mediating influence of Moral responsibility between Mindfulness and Ethical Judgement

MODEL	INDEPENDENT VARIABLE	R	ADJUSTED R^2	T-VALUE	BETA	SIG
SCENARIO TWO						
1	Mindfulness	0.19	3.7%	2.59	0.19	0.011
2	Mindfulness and	0.25	6.2%	2.14	0.16	0.034
	Moral Responsibility			2.12	0.16	0.036
MODEL	INDEPENDENT VARIABLE	R	ADJUSTED R^2	T-VALUE	BETA	SIG
SCENARIO THREE						
1	Mindfulness	0.17	2.4%	2.29	0.17	0.023
2	Mindfulness and	0.28	8.0%	1.70	0.13	0.091
	Moral Responsibility			3.09	0.23	0.002

Inclusion of both mindfulness and moral responsibility generated an increase in the significance level of the original relationship between mindfulness and ethical intent. The results of the second scenario relate to an increase in significance of 0.011 to 0.034 for the independent variable mindfulness, while the new independent variable of moral responsibility is present at the significance level of 0.036. Given that the significance level of mindfulness has increased, but which is still below the 0.05 significance level, only partial mediation is said to have occurred. The results of the third scenario relates to an increase

in significance for the independent variable of mindfulness from 0.023 to 0.091, while the new variable of moral responsibility is present at a significance level below 0.05. Given that the new significance level between the independent variable of mindfulness and ethical judgement is above the 0.05 level, full mediation is said to have occurred.

It is also necessary to point out at this juncture that the assumptions of mediation analysis, as well as the associated limitations as discussed in section 5.9 are also applicable to these findings.

5.11. <u>Conclusion</u>

A comprehensive overview of the representation of the sample was provided using demographic information. Such information allows the researcher to infer the generalisability of the findings given representativeness of the population within which the study took place.

It was essential that the responses to the vignettes be tested for differences in means. Statistical analysis using MANOVA identified that the responses to the three vignettes were significantly different, such that each hypotheses was analysed for the vignettes separately. At this stage, the presence of response bias by the respondents was also detected, which influences the interpretation of the results of this study. Response bias was identified by statistical analysis that compared the means of the response to the questions of ethical intent. Specifically, respondents indicate the intent they held to behave as those depicted in the vignette, and the intention they believed their peers held. The difference between these responses were statistically significant, indicating the presence of response bias.

Mindfulness and ethical judgement were hypothesised to be positively related. This hypothesis was supported at for scenario three only. The correlation coefficient of 0.28 indicated the existence of a small positive relationship between the dimension of acting with awareness, and ethical judgement. And the measure of variation of the dependent variable explained by the independent variable was seven percent for this model, which highlights the existence of a weak association.

Mindfulness was also hypothesised to be positively related to the construct of moral responsibility. This hypothesis was supported given a correlation coefficient of 0.23, which

indicated the existence of a small positive relationship between the dimension of non-judging and moral responsibility. The measure of variation was 5.5 percent, indicating the presence of a weak association between the independent and dependent variables.

Moral responsibility was hypothesised to be positively related to the construct of ethical intent. This hypothesis was supported for scenarios two and three only given a correlation coefficient of 0.16 and 0.24, which indicated the existence of a small positive relationship. The measure of variation was 2.0 percent 5.6 percent respectively, indicating the presence of a weak association between the independent and dependent variables.

Lastly, moral responsibility was identified to be a mediating variable for the constructs of mindfulness and ethical intent. This hypothesis was supporting using simple linear regression analysis in that the significance of the relationship between mindfulness and ethical intent increased when the independent variable of moral responsibility was introduced. The fact that the increased significance level was still below 0.05 indicates the existence of partial mediation only. The statistical analysis was as described above was replicated for the constructs of mindfulness, moral responsibility and ethical judgement. The results of this analysis revealed that moral responsibility mediated the relationship between mindfulness and ethical judgement as well, though the level of mediation differed between the second and third scenario.

The implications of the aforementioned findings will be discussed in the chapter six.

CHAPTER SIX: DISCUSSION OF RESULTS

6.1. Introduction

A review of the literature as discussed in chapter two identified an opportunity to increase the breadth of knowledge in the fields of positive psychology, decision making and self-concept. More specifically, empirical validation was sought to embed the contribution that the constructs of mindfulness and moral responsibility have on the ethical decision making process, specifically focusing on concepts of ethical judgement and intent. It was deemed necessary to first establish the level of association between constructs before attributing causality. Therefore, it is important to reiterate that causality was not the aim of this study in answering the research propositions raised in chapter two. In summary, the overarching purpose of this study sought to empirically validate the relationship between the four constructs under study. This gave rise to research propositions which were:

- There exists a positive linear relationship between mindfulness as defined by the FFMQ and ethical judgement
- There exists a positive linear relationship between mindfulness as defined by the FFMQ and moral responsibility
- There exists a positive linear relationship between moral responsibility and ethical intent
- The relationship between mindfulness as defined by the FFMQ and ethical intent is mediated by the construct moral responsibility

In answering the research propositions aimed at representing the interaction between the constructs of mindfulness, moral responsibility, ethical judgement and ethical intent, a quantitative study was undertaken. The results of this study was represented in chapter five, which is interpreted in the sections of this chapter that follow.

This chapter is divided into ten sections. The first section discusses the potential influence the representativeness of the sample may have on the results. Thereafter, the measurement instruments reliability and validity is discussed, as this may bear some influence on the results. It is important to note that the sample perceived differences in the level of ethical judgement and intent between scenarios, and the reasons for this is

addressed. And lastly, the results of the individual research questions are discussed, and a summary is presented of the findings.

6.2. <u>Demographics</u>

The demographic profile may have a bearing on the results of this study, which in turn may influence replicability and generalisability of the findings. As such, it is important to acknowledge the existence of such influence, if present.

The modal representation of the sample was that of a white Christian male who earns a gross monthly income of between R 20 000 and R 46 099 per month. The mean age of the sample was also represented as being 38.6 years of age. Of the data captured regarding the sample, the information relating to gender, age, religion and income have no relevance to this study. Gender as a personal attribute has yielded inconclusive aggregate data on the direct influence on the ethical decision making process (Craft, 2013; Lehnert et al., 2015). Age as a demographic variable, has also resulted in mixed outcomes (Craft, 2013; Lehnert et al., 2015), such that this demographic variable has little or no bearing on the results of this study. At the time of this study, the impact of financial earnings on the ethical decision making process has not been explored, and the subsequent influence is indeterminate. Studies which investigated the impact of religious orientation on the ethical decision making process indicate that there is some level of association, but that such a categorisation of religious orientation is an oversimplification (Lehnert et al., 2015). There appears to be a distinction between the role and importance of a specific religious orientation that influences the ethical decision making process. As such, given that this study was not aimed at determining the influence of religion, and that such a distinction was not captured, the impact of this demographic profile is of indeterminate significance.

Cultural influences are fairly pronounced when examining Rests Model (1986) of ethical decision making (Craft, 2013; Lehnert et al., 2015), such that a majority representation of 57 percent Caucasians may influence findings. The sample was comprised of a variety of cultural or ethnic philosophies, which may essentially have attenuated the results due to a wider dispersion of data. An opposing element to such an interpretation is that previous studies only considered differences in national cultures, and not differences in domestic culture, while the sample comprised of individuals from South Africa only. This opposing element may have curtailed the impact of such an attenuation as the possibility of shared

national cultures may exist. As such, the researcher could only speculate as to the influence this demographic profile may have had on these findings. Given the research scope, though such an influence has been acknowledged, the influence of culture falls outside of the scope of this study. It can only be concluded therefore that generalisability and replicability of this study should be debated and scrutinised fully within this context in future studies. Perhaps if one were to replicate this study and compare the results for various ethnic or cultural groups, the influence of this demographic variable can be resolved.

6.3. Reliability and Validity of the Measurement Instruments

The reliability and validity of the research instruments was determined to aid in the interpretation of results. The findings of such an undertaking is summarised below, and the resultant implications are discussed thereafter.

6.3.1. Statistical Analysis

Three measurement instruments were utilised in search of the research aim. These were the Multidimensional Ethics Scale (MES), the Moral Disengagement Scale (MDS) and the Five Faceted Mindfulness Questionnaire (FFMQ). Each measurement instrument was subjected to reliability and validity analysis to determine the appropriateness in answering the research questions.

Reliability for the MES scale, measured in terms of the Cronbach Alpha, ranged from 0.91 to 0.95 between the three vignettes. Adequate convergent validity was demonstrated in that a single factor structure was determined such that summated scores for the concept of ethical judgement were justified. The reliability of the MDS scale was 0.84, while evidence of convergent validity was not demonstrated. Nine underlying constructs were identified using factor analysis, while the original authors identified the existence of a single factor structure for this questionnaire. Furthermore, the questions relating to specific dimensions as per the original questionnaire loaded to each factor in an incoherent pattern. The use of a summated score, necessitated by the fact that moral responsibility was a dependent variable, therefore does not support the assumption of convergent validity. The reliability for the FFMQ ranged from 0.62 to 0.77, while evidence supported the verification of convergent validity.

6.3.2. Interpretation of Results

The MES scale measures the perception of ethicality of a given situation and as such is used to measure the concept of ethical judgement. Three dimensions of ethical judgement form the basis of the MES scale as per the original authors, and numerous studies have been able to fairly replicate this finding (Cohen et al., 1993). Cohen et al. (1993) identified the existence of four underlying dimensions in a marketing environment, while Gökçe (2014) verified the existence of four underlying dimensions within an educational environment. So how is it that the results of the factor analysis only identified the existence of a single underlying structure? There are only three possible reasons for this. Vignettes are scenarios that outline an ambiguous ethical dilemma, which pose questions to respondents to identify differences in judgement. Mudrack and Mason (2013) highlight the significant impact that the details encompassed within a vignette has on the results of any study. The consequence being that insights may most probably be situation-specific and applicable only to the vignettes in question. The single dimensionality of the results may also have arisen due to the sample size. As mentioned earlier in chapter five, a sample size of 300 responses was ideal, while only 191 responses were obtained. A smaller than ideal sample size may have increased the possibility of overfitting the data, such that results are only sample specific (Hair et al., 2010). However, statistical power increases at a declining rate above sample sizes of 150 such that the impact of a sample size less than 300 may have only had a minor impact (Hair et al., 2010). It is also important to understand the limitations involved in applying factor analysis techniques. The process is fraught with subjectivity with respect to the choice of techniques and methods applied (Hair et al., 2010). Given the research methodology, a less than ideal sample size, and the subjective nature of the factor analysis process, this study identified the existence of a single structure only. And given these limitations, one needs to be discriminating in generalising the results of this study to various contexts. Then again, one may argue though that a single underlying construct indicates that there is significant potential for future studies. The underlying construct identified in this study relates more to a relativist or deontological perspective of ethics, and not that of utilitarianism. As such, a replication of this study aimed at quantifying these relationships under a utilitarianism lens may result in higher predictive values, supporting the hypotheses identified.

Methods of moral justification are employed to disengage moral responsibility within ethical scenarios. To represent the concept of moral responsibility, the MDS was utilised, and

inverted. Only one underlying factor was identified by the original authors, even though the scale had been divided into eight dimensions (Bandura et al., 1996). A single factor structure was supported by Reynolds, Dang, Yam and Leavitt (2014) when confirmatory factor analysis was conducted. However, this particular study identified the existence of nine underlying dimensions within the results of the administered questionnaire. Again, divergence from other studies may be attributable to the less than ideal sample size (which should have been in excess of 480 responses) and the subjective nature of factor analysis (Hair et al., 2010). Conversely, there exists the possibility that error variance attributable to unreliability, or measurement error, was excessive due to as yet unexplained phenomenon (Hair et al., 2010). This clearly indicates that the higher than expected measurement error influenced the outcome of this study, which may very well have undermined the significance of the findings. Replication of the administration of the MDS in the South African context will reconcile these differences and determine if there was indeed error variance attributable to the methodology employed, or whether there exists an unidentified factor of influence. Alternatively, the divergence in findings may also be attributable to as yet undefined or unexplored factors, or constructs that were not controlled for such as framing effects, emotional state, moral learning, moral emotions or values, organisational power and ethical blindspots (Lindebaum, Geddes, & Gabriel, 2016). There is scope to also probe these aspects to determine their impact on the MDS.

Furthermore, it is crucial that the limitation of the use of the MDS be discussed, which highlights the opportunity present to further enhance future studies aiming to replicate the research questions identified in this article. The MDS assumes that moral knowledge is present, and that given a specific context an individual chooses to employ disengagement tools (Reynolds et al., 2014). As such, this measure does not accurately depict the stable traits of a person, and only representing an attenuation of moral knowledge (Reynolds et al., 2014). Perhaps alternative measures of moral responsibility would yield more concrete results.

The FFMQ was used to measure the state and traits of mindfulness. The reliability of the total score was 0.85, while the individual dimensions ranged from 0.62 to 0.77. A low reliability score for acting with awareness, rated at 0.69, was also uncovered by Aguado et al. (2015). Convergent validity was also demonstrated in studies conducted by Aguado et al. (2015), Goldberg et al. (2015) and Bear et al. (2006). All studies mentioned above also

identified the existence of multifaceted construct of mindfulness. The general trend of the studies mentioned is the existence of low reliability for some of the dimensions, which has been replicated in this study. One can only infer that the questionnaire was well received and in agreement with findings of previous studies. Differences in levels of mindfulness when utilising the FFMQ between experienced and novice mediators' yields incongruent data. Given that this study was premised on the virtues of mindfulness attained through practice, there is further scope and opportunity to improve on this research design. This study must be replicated when this difference is correctly captured using an enhanced questionnaire, resulting in the difference in predictive power being quantified between these groups.

6.4.   Statistically Significant Difference in Perceived Ethical Judgement and Intent

Ethical judgement and intent were measured using the MES in conjunction with three vignettes. MANOVA results indicated the existence of statistically significant differences between the means of these constructs between the three vignettes. The analysis and interpretation of this finding is discussed in the remainder of this section.

6.4.1. Statistical Analysis

The results of the MANOVA for the constructs of ethical judgement and intent indicate the existence of statistically significant differences at the 0.05 level between the vignettes. Such a finding can only be attributable to peripheral factors which impacted on the constructs of ethical judgement and intent. Discernment as to these peripheral factors is discussed in the subsequent paragraph.

6.4.2. Interpretation of Results

The differences in means between scenarios could be assigned to numerous factors. Trevino (1986) established the existence of individual and situational factors that influenced the ethical decision making process, while Jones (1991) introduced the concept of moral intensity which has been proven to influence this process as well. However, the most likely candidate in this study is moral intensity given that the vignettes were devoid of organisational contextual cues. This deduction is deemed to be rational if one were to delve into the contents of the vignettes. The first vignette described a personal behaviour of

betraying a personal confidence. Responses varied widely, such that responses were clearly indicative of the person's world view or perception. One can almost deduce that subjects responded "automatically" to this question, without really considering the consequences of the actions posed within the vignettes. However, the second and third vignettes contained information relating to the violation of a social norms, namely that of deception and corruption. Could it be then that individuals responded using cognition (or mindfulness)? But let's muse on this thought for a moment. Is this the only reason? One possibility is that social desirability, as evidenced in the study, could have influence subjects responses (Robinson et al., 1991). Since this trait was only measured, and not controlled for, one is unable to opt for either reasoning. To improve on future studies, controlling for social desirability should be an absolute requirement when investigating the relationship between these constructs. This will develop the body of knowledge of mindfulness and ethical judgement and intent without misgivings.

Identification of differences between scenarios was crucial to ensure credible results from the analysis of the research questions. Bearing this in mind, the subsequent sections discuss the hypotheses generated in chapters two and three separately for each vignette.

6.5. <u>Hypothesis One: Mindfulness and Ethical Judgement</u>

Awareness of an ethical dilemma represents the first stage of the ethical decision making process (Craft, 2013). However, awareness in this context only describes the act of becoming aware. Mindfulness involves the virtuous progression away from the use of heuristics and intuition to a state of constant awareness, involving metacognitive processes (Jankowski & Holas, 2014; Kuan, 2012). There exists the possibility that mindfulness as a virtuous trait describes the mechanism of improving awareness, and not just the act of becoming aware (Craft, 2013). As such, the possibility that mindfulness as a trait may usurp the act of awareness in Rests Model (1986) was identified. This connection facilitated the development of the first hypothesis.

The first hypothesis identified in chapters two and three postulated the existence of a positive correlation between the constructs of mindfulness as the independent variable, and ethical judgement as the dependent variable. The null hypothesis therefore stated that there exists no positive linear relationship between these variables, while the alternative hypothesis stated that such a positive linear relationship is present. The acceptance of

either the null or alternative hypothesis is discussed in section 6.5.1 below, which is then expounded upon to glean insights useful to organisations.

6.5.1. Statistical Analysis

Multiple linear regression analysis was performed to establish the characteristics of the relationship between the constructs of mindfulness and ethical judgement. As mentioned previously, the results varied between vignettes to the extent that the null hypothesis was accepted for vignettes one and two. Mindfulness did however predict 7 percent of variance in the construct of ethical judgement for the third vignette at a significance level of 0.05.

6.5.2. Interpretation of Results

Interestingly, the alternate hypothesis was only accepted for the third vignette at a statistical significance level of 0.05. The low level of predictive power for the third vignette may be owing to a number of reasons. As mentioned in section 6.3, the factor analysis highlighted potential operationalisation errors associated with data collection. The sample size specified for adequate factor analysis was met, but measurement error could have been reduced by an increased sample size. However, a sample size of 191 respondents gives sufficient weight to the conclusion that the assumed relationship does not exist.

The results of the factor analysis highlight that the concept of ethical judgement was answered as a single construct. This ramification may be ascribed to the content of the vignettes (as discussed in section 6.3). A richer understanding of the relationship between mindfulness and ethical judgement could be achieved if associations were to be established for the various philosophies of ethical judgement. Specifically, mindfulness may have higher levels of predictive power for the philosophy of utilitarianism, which is an important concept of mindfulness (Amaro, 2015; Lindahl, 2015; Purser & Milillo, 2015; Verhaeghen, 2015). As such, a replication of this study may yet yield meaningful results if the methodology is improved on.

One caveat that should be mentioned at this point is the variation of perceived levels of ethical judgement between vignettes. As discussed in section 6.4, this may very well be attributable to the construct of moral intensity. This raises a very interesting question. Why would it be that the predictive power of ethical judgement increases while using mindfulness as the independent construct at increasing levels of moral intensity? Could the very nature

of such a phenomenon not support the concept that mindfulness increases cognitive reasoning, with moral intensity activating this process? Of course, the low level of predictive power, purported to be 7 percent, and although statistically significant, does not add practical benefit to management theory (Hair et al., 2010). However, there is a significant opportunity for future research which needs to investigate the relationship between mindfulness and moral intensity. Furthermore, as causality has not been established in this study, the aim of establishing correlation only indicates that further investigation is required to establish which of the constructs of mindfulness or moral intensity is responsible for causality. It is however the opinion of the researcher that mindfulness may act as a moderator between the concepts of ethical judgement and moral intensity, and this should be verified in future studies. As yet unknown constructs may also be influencing the ethical decision making process, and these need to be identified in future studies as well.

6.6. <u>Hypothesis Two: Mindfulness and Moral Responsibility</u>

A divergence between the Western and Buddhist perspectives centers on the concept of the ethical nature of mindfulness (Purser & Milillo, 2015; Williams & Gantt, 2012). Specifically, moral responsibility for self and others is a central tenant of the Buddhist concept of mindfulness (Amaro, 2015; Lindahl, 2015; Purser & Milillo, 2015; Verhaeghen, 2015). As such, the second hypothesis was deduced by connecting these to constructs with the Buddhist perspective in mind.

The second hypothesis identified in chapters two and three proposed the existence of a positive correlation between the constructs of mindfulness as the independent variable, and moral responsibility as the dependent variable. The null hypothesis therefore stated that there exists no positive linear relationship between these variables, while the alternative hypothesis stated that such a positive linear relationship is present. The acceptance of either the null or alternative hypothesis is discussed in section 6.6.1 below, which is then elucidated upon to comprehend useful insights for organisations.

6.6.1. Statistical Analysis

Multiple linear regression analysis was performed to establish the characteristics of the relationship between the constructs of mindfulness and moral responsibility. The alternate hypothesis was accepted given the results of this analysis. Mindfulness predicted 5.5 percent of variance in the construct of moral responsibility at a significance level of 0.05.

6.6.2. Interpretation of Results

A low level of prediction, established to be 5.5 percent, is not of practical benefit to managerial theory (Hair et al., 2010). However, the researcher believes that the determined level of prediction has been understated given the lack of convergent validity of the MDS (as discussed in section 6.3). This has been attributed to a less than ideal sample size, as well as to measurement errors. Furthermore, the MDS measures attenuation of the construct of moral knowledge, and does not represent the stable trait of moral responsibility (Mudrack & Mason, 2013a). Perhaps this may explain the low levels of prediction determined in this study. A scale more suited to measure the concept of moral responsibility may generate findings that have greater significance to management theory. Therefore there appears to be a significant opportunity to improve on this study if a more appropriate instrument is used to measure moral responsibility.

6.7. <u>Hypothesis Three: Moral Responsibility and Ethical Intent</u>

Ethical intent refers to a resolve to act on the morally "right" judgement (Craft, 2013), while moral responsibility refers to an intentional obligation to behave or act in a way that reduces harm (Purser & Milillo, 2015; Williams & Gantt, 2012). Such a comparison between these two constructs infers that if one were in the process of developing an intention on how to act or behave, then a belief that one is obligated to behave in alignment with the moral judgement will strengthen the original intention. Such an interpretation of the constructs of moral responsibility and ethical intent generated the third hypothesis of this study.

The third hypothesis identified in chapters two and three proposed the existence of a positive correlation between the constructs of moral responsibility as the independent variable, and ethical intent as the dependent variable. The null hypothesis therefore stated that there exists no positive linear relationship between these variables, while the alternative hypothesis stated that such a positive linear relationship is present. The acceptance of either the null or alternative hypothesis is discussed in section 6.7.1 below, which is then elucidated upon to comprehend useful insights for organisations.

6.7.1. Statistical Analysis

Multiple linear regression analysis was performed to establish the characteristics of the relationship between the constructs of moral responsibility and ethical intent. As mentioned previously, the results varied between vignettes to the extent that the null hypothesis was

accepted for vignettes one. Mindfulness did however predict 2 percent of variance in the construct of ethical intent for the second vignette at a significance level of 0.05, and 5.6 percent of the variance in the construct of ethical intent for the third vignette at a significance level of 0.05.

6.7.2. Interpretation of Results

A low level of prediction, established to be at 2 and 5.6 percent, is not of practical benefit to managerial theory (Hair et al., 2010). However, the researcher believes that the determined level of prediction has been understated given the lack of convergent validity of the MDS (as discussed in section 6.3). The reasons for this issue have been addressed in section 6.6.2, which discussed the appropriateness of the measurement tool. The contents of the vignettes may also have contributed to the establishment of low levels of correlation and prediction (as discussed in section 6.3). Therefore there appears to be a significant opportunity to improve on this study if a more appropriate instrument is used to measure moral responsibility, and the operational issues of the methodology be improved upon.

As with the concept of ethical judgement, there appears to be variation in predictive power between the vignettes. This quite possibly may be attributed to the construct of moral intensity. Again, this raises questions as to the relationship between moral responsibility, moral intensity and ethical intent. And given that moral responsibility relates to the construct of mindfulness, one needs to include this variable in the analysis. Perhaps structural equation model may more accurately identify the relationships between these four constructs. This represents an opportunity to enlarge the existing body of knowledge relating to Rests Model (1986) of ethical decision making.

6.8. Hypothesis Four: Moral Responsibility Mediates the Relationship between Mindfulness and Ethical Intent

If moral responsibility is related to both mindfulness and ethical intent (as determined in hypothesis two and three), then the next question that arose was how mindfulness and ethical intent were related? Using the sniper analogy as mentioned in chapter two, one can be mindful and of ultraistic or selfish intent (Monteiro et al., 2015). However, if one feels obligated to act in the best interest of yourself and others, then a discernable relationship

between mindfulness and ethical intent may become apparent. Such interpretation led to the development of the fourth and final hypothesis.

The fourth hypothesis identified in chapters two and three proposed that moral responsibility mediated the relationship between the constructs of mindfulness as the independent variable, and ethical intent as the dependent variable. The null hypothesis therefore stated that there exists a mediating influence between these variables, while the alternative hypothesis stated that such mediation is present. The acceptance of either the null or alternative hypothesis is discussed in section 6.8.1 below, which is then elucidated upon to comprehend useful insights for organisations.

6.8.1. Statistical Analysis

Multiple linear regression was employed to ascertain the relationship characteristics between the three constructs of mindfulness, moral responsibility and ethical intent. Initial testing of relationships between constructs revealed significant correlations between the construct of mindfulness and moral responsibility, mindfulness and ethical intent, and moral responsibility and ethical intent. Such testing is a prerequisite before mediation analysis could be initiated. Thereafter, multiple regression analysis determined the level of relationship between mindfulness and ethical intent to be 0.004. When the concept of moral responsibility was included in the regression analysis, the significance level of the relationship between mindfulness and ethical intent increased to 0.019. This model also indicated that the significance level between moral responsibility and ethical intent was 0.005, below that of 0.05. This too is a prerequisite in drawing meaningful conclusions of mediation. The predictive power of the model essentially doubled from 4.3 percent to 8.4 percent when moral responsibility was included as an independent variable, along with mindfulness, when determining the measure of the dependent variable ethical intent.

6.8.2. Interpretation of Results

At this point, the issues regarding the measurement tools and vignettes utilised will not be addressed again. A caveat to remember while reading this section; one must keep in mind the operational issues as discussed in previous sections which may well have generated modest results.

Increase of significance level, but which is still below 0.05, indicates the presence of partial mediation. Perhaps there exists truth to the precept of the Buddhist community that moral responsibility is a foundation of the virtue of mindfulness. How foreign is such a concept though? Social-cognitive neuroscience, which is a relatively new field, has confirmed the neural configuration of the social nature of human beings (Grossmann, 2015). In fact, our very survival as a species relied on our ability to cooperate, to feel obligated to behave favourably towards one another. Such a finding of the significance of moral responsibility when considering ethical intent verifies our intuitive comprehension of the social fabric of society. Unfortunately in this study, the low levels of prediction do not add practical benefit to management theory, but which may be attributed to poor execution of the research methodology and the use of the MDS. Therefore, the researcher urges one to replicate this study with corrections to the methodology included, along with a more appropriate operational definition of moral responsibility. Such a finding may empirically validate our intuitive understanding of human behaviour.

6.9. Additional Finding

It was deemed prudent to investigate whether the relevance of investigating the relationship between mindfulness, moral responsibility and ethical judgement had been overlooked. By conducting linear regression analysis, an opportunity to further the contribution of this study was detected given the existence of a significant relationship. This finding raised the question relating to mediating effects, such that mediation analysis was also completed. The statistical analysis and interpretation of the data is presented in the sections to follow.

6.9.1. Statistical Analysis

Multiple linear regression was employed to ascertain the relationship characteristics between the three constructs of mindfulness, moral responsibility and ethical judgement. Initial testing of relationships between constructs revealed significant correlations between the construct of mindfulness and moral responsibility, mindfulness and ethical judgement, and moral responsibility and ethical judgement. Such testing is a prerequisite before mediation analysis could be initiated. Thereafter, multiple regression analysis determined the level of relationship between mindfulness and ethical judgement to be 0.011 for the second vignette, and 0.023 for the third. When the concept of moral responsibility was included in the regression analysis, the significance level of the relationship between mindfulness and ethical judgement increased to 0.034 and 0.091 for the second and third

vignettes respectively. Both models also indicated that the significance level between moral responsibility and ethical judgement was 0.036 and 0.002, below that of 0.05. This too is a prerequisite in drawing meaningful conclusions of mediation. The predictive power of the first model essentially doubled from 3.7 percent to 6.2 percent when moral responsibility was included as an independent variable. Interestingly, the predictive power of the second model almost trebled from 2.9 percent to 8 percent when moral responsibility was included as an independent variable.

6.9.2. Interpretation of Results

As mentioned previously, the issues regarding the measurement tools and vignettes utilised will not be addressed again. A caveat to remember while reading this section; one must keep in mind the operational issues as discussed in previous sections which may well have generated modest results.

Is it really a surprise that moral responsibility is an important construct in forming ethical judgements? Ethical intent refers to a belief that one ought to act on a moral judgement. As Trevino (1986) identified, there are various factors that either align the judgement with the intention, or that act upon these two constructs which leads to misalignment. The ability to justify any action, to ourselves and to others, is undeniable (Lowell, 2012). As such, it is self-evident that the relationship between moral responsibility and ethical judgement is relevant. The strength of the predictive power of moral responsibility and mindfulness on ethical judgement and ethical intent is of the same order of magnitude.   But what is interesting is that full mediation occurred between the constructs of mindfulness and ethical judgement for the third vignette, while only partial mediation occurred when considering ethical intent as the dependent variable. This may be an anomaly owing to the flaws identified in the research methodology, or there might be a core truth evidenced by this finding. Moral responsibility plays a larger role in forming ones judgement, and that it influences the intent to ensure that alignment exists.

6.10. <u>Summary of Findings</u>

The preceding chapter discussed the various relationships uncovered in this study. These relationships are depicted in a diagrammatic form below to support clear comprehension.

Figure 12: The Relationship Characteristics between Constructs

Full Mediation

$$\rho_C = 0.023$$

$$\rho_{AB} = 0.091$$

Ethical Judgment

$$\rho_{Total} = 0.001$$

$$\rho_B = 0.001$$

$$\rho_A = 0.007$$

Mindfulness

Moral Responsibility

$$\rho_{Total} = 0.000$$

$$\rho_B = 0.001$$

Ethical Intent

$$\rho_C = 0.004$$

$$\rho_{AB} = 0.019$$

Partial Mediation
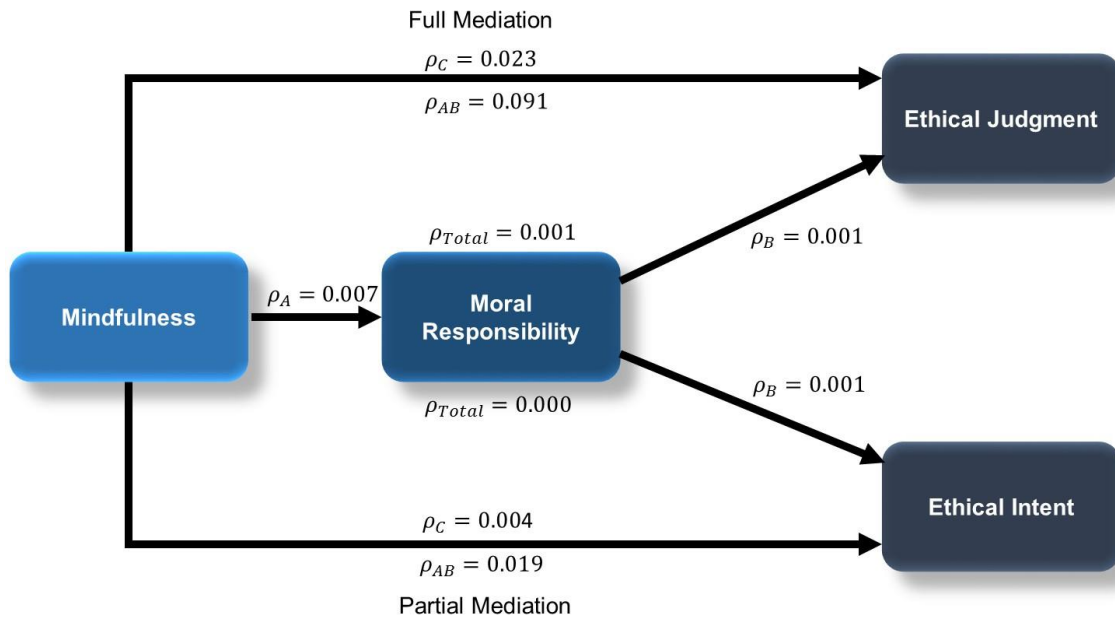
Source: Authors own

The results revealed low predictive power for all relationships. However, this may be attested to issues relating to data collection, use of research instruments and the choice of vignettes. The implication thereof will be discussed in the subsequent chapter.

CHAPTER SEVEN: CONCLUSION

7.1. <u>Introduction</u>

The divergent views of mindfulness raised questions relating to the ethical foundation of mindfulness. Specifically, the Buddhist conceptualisation of virtuous practices of mindfulness is rooted in an obligatory perspective to reduce or minimise pain and suffering (Purser & Milillo, 2015). Literature lingers on the qualitative aspects of this topic, preventing such an understanding from being embedded as reputable management theory through quantification of relationships. Lehnert et al. (2015) highlighted that there are insufficient quantitative studies aimed at quantifying the relationship between mindfulness, moral obligation, and ethical decision making.

It was imperative to quantify the relationship between these constructs, with specific emphasis being placed on two elements of ethical decision making, ethical judgement and intent. This study therefore was theory building by:

- Establishing the strength and direction of the relationship between the constructs of mindfulness and ethical judgement
- Establishing the strength and direction of the relationship between the constructs of mindfulness and moral responsibility
- Establishing the strength and direction of the relationship between the constructs of moral responsibility and ethical judgement
- Establishing the strength and direction of the relationship between the constructs of moral responsibility and ethical intent
- Determining whether moral responsibility mediated the relationship between mindfulness and ethical judgement
- Determining whether moral responsibility mediated the relationship between mindfulness and ethical intent

A conceptualisation of these findings is best depicted in the figure below to ease comprehension.

Figure 13: The Relationship Characteristics between Constructs

Full Mediation

$\rho_C = 0.023$

$\rho_{AB} = 0.091$

Ethical Judgment

$\rho_{Total} = 0.001$

$\rho_B = 0.001$

Mindfulness

$\rho_A = 0.007$

Moral Responsibility

$\rho_B = 0.001$

$\rho_{Total} = 0.000$

Ethical Intent

$\rho_C = 0.004$

$\rho_{AB} = 0.019$

Partial Mediation
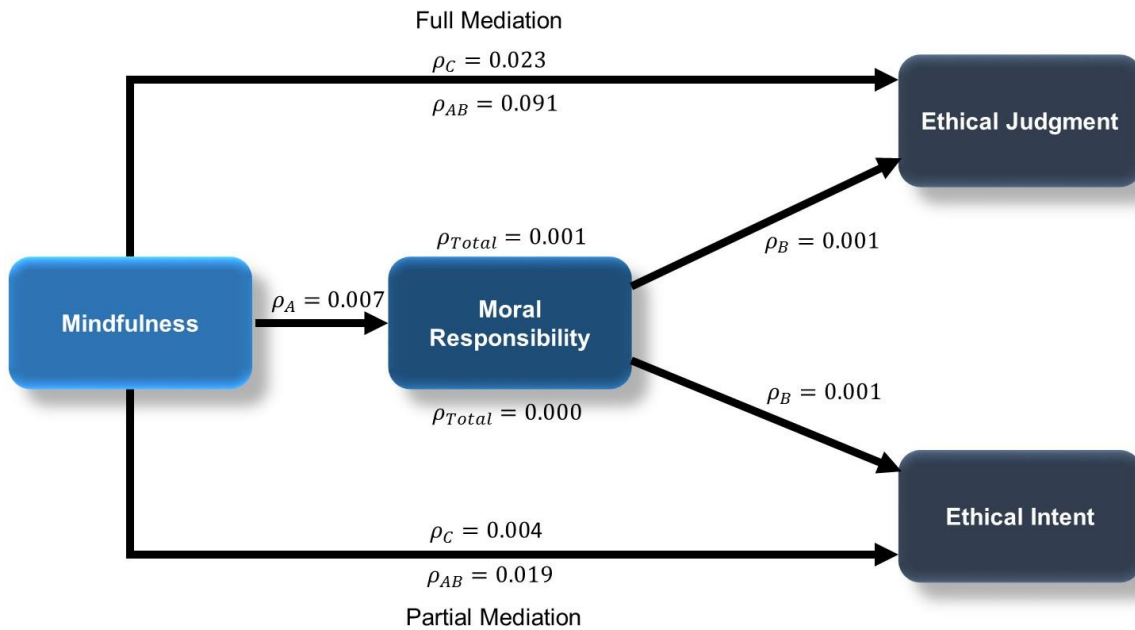
Source: Authors own

Statistical relation between all constructs was demonstrated, of which the outcome indicated the presence of small positive relationships with weak predictive associations. The mediating influence of moral responsibility corroborates our intuitive understanding of social cohesion which is essential to our survival as a species. Unfortunately the low level of predictive power at this point has no relevance or implications for management theory. However, at this point this has been attributed to numerous operational issues that arose, and that there is a significant opportunity to replicate the study in a meaningful and consequential way.

7.2. Theoretical Contribution of this Study

The aim of this study was to identify the strength and direction of the relationship characteristics between constructs. Causality is therefore indeterminate without further investigation. This study identified that mindfulness was able to predict approximately seven percent of the variance in two elements of the ethical decision making process, which represented a small positive relationship with weak association. Mindfulness was able to predict only 5.5 percent of the variance in determining levels of moral responsibility. The predictive power of moral responsibility ranged from 3.0 to 5.9 percent in determining the

level of ethical judgement, while the level of ethical intent ranged from 2.0 to 5.1 percent, between vignettes two and three. Partial mediation between mindfulness and ethical intent was demonstrated when moral responsibility was introduced. Interestingly, full mediation was demonstrated between mindfulness and ethical judgement when introducing moral responsibility for the third vignette, while only partial mediation occurred for the second vignette. The disparity in findings between vignettes is assumed to be attributable to a variable that was not measured.

The logical inference to such disparity is attributable to the presence of moral intensity or further constructs, which was not measured or controlled for. However, the increase in relationship strength between constructs as moral intensity is believed to have increased raises relevant questions. Is causality to changes in ethical decision making attributable only to the construct of moral intensity, which is influenced by constructs such as mindfulness and moral responsibility? And to what extent would various levels of mindfulness and moral responsibility influence this causal relationship? Given the premised use of cognition in defining the ethical decision making process in this study, it could be argued that moral intensity is what activates cognitive function, and not mindfulness. However, such a statement can only be verified once a more accurate representation of mindfulness can be developed given the shortcomings of the five faceted mindfulness questionnaire. As such, this study raised more questions than were answered, and these can only addressed through further inquiry.

7.3. Practical Applications of Study

The introduction of mindfulness based programs has already been shown to yield numerous benefits for employees and employers. Benefits that accrue to practitioners of mindfulness are improved emotion regulation, self-awareness, learning, working memory, increased engagement, and lower burnout rates (Hyland et al., 2015). However, the practical implications of this study also indicates that mindfulness does relate to the ethical decision making process, albeit that the contribution is small. This implies that a practical application of mindfulness within an organisational context needs to be considered, specifically in lieu with leadership development programs, training and development. Implementation of such programs will improve the level of decision making, and assist employees, managers and leaders to employ metacognitive process.

7.4. Recommendations for Future Research

The findings of this study contribute to our understanding of the ethical decision making process, which at this stage has no practical significance to management theory. However, if this study were to be replicated with appropriate vignettes, and enhanced operational measurement of moral responsibility, this may no longer be the case. As such, it is crucial that these relationships be reinvestigated and reinforced.

More importantly, such a reproduction may significantly contribute to management theory if response bias is controlled for, and the construct of moral intensity be introduced. Mediating and moderating influences, and the establishment of causality between the constructs of mindfulness, moral responsibility, moral intensity, ethical judgement and intent may be established using alternative research designs and statistical analysis tools.

Such a contribution may demonstrate relevance to the existing body of management theory.

7.5. Conclusion

Ultimately this study established the existence of low predictive properties between constructs with little relevance for practical applications. Empirical validation of such relationships are limited, and this study contributed mostly by highlighting pitfalls in operationalising constructs. The concept of moral responsibility is still relevant, and should be included in future research. As such, intrepid researchers may improve on this study while replicating the conceptual understanding of constructs.

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APPENDICES

Appendix A: Letter of Consent
Appendix B: Sample Frame
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Appendix E: Reliability and Construct Validity of the complete MES
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Appendix A: Letter of Consent

TO WHOM IT MAY CONCERN

Date: 17 May 2016

Subject: Ethics Clearance Research

Dear Sir/ Madam

This letter serves to confirm that Ms Cherise Smalls who is an employee has been granted permission to send questionnaires to the Omnia Group (Pty) Ltd employees for her Ethics Clearance research.

For any further clarity, do not hesitate to contact me.

Yours faithfully

KRamoupi

Khabo Ramoupi
Group HR Director

creating customer wealth by leveraging knowledge

Omnia Group (Pty) Ltd
Reg No. 2006/013996/07

Omnia House
Epsom Downs Business Park
13 Sloane Street
Epsom Downs Bryanston 2021
South Africa

PO Box 69888
Bryanston
2021
South Africa

T +27 11 709 8888
F +27 11 706 4022
www.**omnia**.co.za
info@**omnia**.co.za

Directors • C Appollis, Z Elias, HD Humphris (Managing Director), JB Keenan, WG Koonin, RK Ramoupi

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Appendix B: Sample Frame

A total of 844 persons were identified as members of the sample frame from two of the three divisions within Omnia. The following persons were randomly selected using the excel random number generator function:

Table A 1: Sample Members in the BME and Fertiliser Divisions

Random Numbers Selected from BME and Fertiliser (excluding Duplicates)									
287	606	515	714	52	663	247	84	426	756
749	524	217	151	207	159	399	228	451	366
28	301	751	801	361	347	119	827	705	384
818	764	545	152	407	271	465	830	189	677
339	255	642	146	510	279	505	434	429	667
832	212	22	274	477	50	707	425	699	467
14	562	628	486	587	487	54	469	251	403
636	134	294	682	571	3	374	182	326	178
735	809	124	130	698	122	787	611	142	776
48	224	138	369	780	513	797	678	544	47
111	41	837	209	222	820	305	346	7	104
696	569	173	828	410	797	599	332	248	529
320	488	200	481	732	424	759	605	258	470
223	393	750	674	385	676	838	220	408	70
447	282	763	23	9	96	462	319	183	654
445	78	726	363	97	555	76	843	226	619
593	283	708	378	171	494	527	738	824	603
753	86	188	541	648	452	160	834	537	335
448	647	414	578	136	493	534	681	105	845
44	362	340	364	280	117	276	75	337	132
706	608	499	639	67	392	840	157	517	417
690	194	720	461	51	286	420	807	31	718
181	145	737	268	112	577	409	621	293	710
232	702	428	318	411	176	630	438	833	165
270	401	660	502	330	163	11	155	479	572
457	296	444	669	177	15	744	169	148	262
519	423	760	692	633	253	227	175	234	721
656	10	484	29	436	285	288	803	315	137
59	565	637	94	93	311	39	770	103	416

A total of 408 persons were identified as members of the sample frame from the third division. The following persons were randomly selected using the excel random number generator function:

Table A 2: Sample Members in the Protea Division

Random Numbers Selected from Protea (excluding Duplicates)									
262	196	317	64	207	188	144	381	217	264
216	345	401	11	193	163	277	130	313	120
26	65	161	33	67	16	88	40	362	138
241	211	238	322	86	250	125	37	122	69
91	70	284	214	215	132	187	38	297	129
380	230	28	57	66	249	406	56	372	200
53	376	90	224	167	283	63	6	342	34
344	360	235	113	172	203	226	39	108	363
21	404	75	60	303	306	361	386	179	323
147	150	379	166	116	278	85	274	286	318
295	336	373	373	266	183	32	73	126	232
304	279	153	402	165	45	334	273	259	15
74	319	195	191	409	348	194			

Appendix C: Survey Questionnaire

Dear Participant

Mindfulness, Ethical Judgement, Responsibility and Ethical Intent: A Virtue Ethics Perspective

I am a 2016 student in the Masters of Business Programme in the Department of Business, University of Pretoria. You are invited to volunteer to participate in this research project on Mindfulness, Ethical Judgement, Responsibility and Ethical Intent: A Virtue Ethics Perspective. This letter gives information to help you to decide if you want to take part in this study. Before you agree you should fully understand what is involved. If you do not understand the information or have any other questions, do not hesitate to ask. You should not agree to take part unless you are completely happy about what we expect of you.

The purpose of the study is define the relationship between the four constructs of mindfulness, ethical judgement, responsibility and ethical intention.

We would like you to complete a questionnaire. This may take about 30 minutes. Cherise Small will collect the questionnaire from you before you leave the designated venue. It will be kept in a safe place to ensure confidentiality. Please do not write your name on the questionnaire. This will ensure confidentiality. Cherise Small will be available to help you with the questionnaire or to fill it in on your behalf.

The Research Ethics Committee of the University of Pretoria, Faculty of Health Sciences, telephone numbers 012 3541677 / 012 3541330 granted written approval for this study.

Your participation in this study is voluntary. You can refuse to participate or stop at any time without giving any reason. As you do not write your name on the questionnaire, you give us the information anonymously. Once you have given the questionnaire back to us, you cannot recall

your consent. We will not be able to trace your information. Therefore, you will also not be identified as a participant in any publication that comes from this study.

In the event of questions asked, which will cause emotional distress, then the researcher is able to refer you to a competent counselling.

Note: The implication of completing the questionnaire is that informed consent has been obtained from you. Thus any information derived from your form (which will be totally anonymous) may be used for e.g. publication, by the researchers.

We sincerely appreciate your help.

Yours truly,
Cherise Small

Contact Details:

Researcher	*Supervisor*
Cherise Small	Charlene Lew
082 699 5747	011 771 4284

SECTION A: DEMOGRAPHICS

Please answer the following demographic information:

1. What is your gender?

   Male: ☐   Female: ☐

2. What is your age?

   …………………..

3. What is your Ethnicity?

   White: ☐   Black: ☐   Coloured: ☐   Asian: ☐

   Indian: ☐   Other: …………………

4. What is your religious orientation?

   Christian: ☐   Muslim: ☐   Buddhist: ☐   Jewish: ☐

   Hindu: ☐   Athiest: ☐   Spiritual: ☐   Other: …………

5. What is your income bracket (in terms of gross monthly income)?

   Less than R 4 599 per month: ☐

   Between R 4 600 and R 12 299 per month: ☐

   Between R 12 300 and R 19 999 per month: ☐

   Between R 19 999 and R 46 099 per month: ☐

   More than R 46 100 per month: ☐

SURVEY QUESTIONNAIRE

Section B: Ethical Judgement and Intent							
Scenario 1: A manager has three employees that report to him/herself. The office is small and members of various departments mingle. One afternoon, one of the managers' friends tells him/her that one of his/her employees is unhappy with his/her management style. In response: he/she confronts the employee about this statement.							
Instructions: Do you believe that the action to confront the employee is: *Please rate your answers using the scale provided*							

No.	Ethical Judgement	Strongly Agree	Agree	Agree Slightly	Neutral	Disagree Slightly	Disagree	Strongly Disagree
1	Just							
2	Fair							
3	Culturally Acceptable							
4	Individually Acceptable							
5	Traditionally Acceptable							
6	Acceptable to my Family							
7	Self Promoting							
8	Self Sacrificing							
9	Personally Satisfying							
10	Produces the Greatest Utility							
11	Maximises Benefits while Minimising Harm							
12	Leads to the Greatest Good for the Greatest Number							
13	Violates an Unwritten Contract							
14	Obligated to Act this Way							
15	Violates an Unspoken Promise							
	Ethical Intent	**Very High**	**High**	**Slightly High**	**Neutral**	**Slightly Low**	**Low**	**Very Low**
16	The probability that I would undertake this action is							
17	The probability that my peers will undertake the same action is							

Section B: Ethical Judgement and Intent							
Scenario 2: A manager realizes that the projected quarterly sales figures will not be met, and thus the manager will not receive a bonus. However, there is a customer order which if shipped before the customer needs it will ensure the quarterly bonus but will have no effect on the annual sales figures. Action: the manager ships the order to ensure earning the quarterly sales bonus.							
Instructions: Do you believe that the action to ship the order is: *Please rate your answers using the scale provided*							

No.	Ethical Judgement	Strongly Agree	Agree	Agree Slightly	Neutral	Disagree Slightly	Disagree	Strongly Disagree
1	Just							
2	Fair							
3	Culturally Acceptable							
4	Individually Acceptable							
5	Traditionally Acceptable							
6	Acceptable to my Family							
7	Self Promoting							
8	Self Sacrificing							
9	Personally Satisfying							
10	Produces the Greatest Utility							
11	Maximises Benefits while Minimising Harm							
12	Leads to the Greatest Good for the Greatest Number							
13	Violates an Unwritten Contract							
14	Obligated to Act this Way							
15	Violates an Unspoken Promise							
	Ethical Intent	**Very High**	**High**	**Slightly High**	**Neutral**	**Slightly Low**	**Low**	**Very Low**
16	The probability that I would undertake this action is							
17	The probability that my peers will undertake the same action is							

Section B: Ethical Judgement and Intent

Scenario 3: A new company applies for a tender or offers to render services to a manufacturing organisation. The buyer of the manufacturing company is good friends with the owner of the new company, but because the company is new, it does not have all the relevant documents required to become a vender. Action: The buyer loads the new company as a vendor

Instructions: Do you believe that the action to load the company as a vendor is:

Please rate your answers using the scale provided

No.	Ethical Judgement	Strongly Agree	Agree	Agree Slightly	Neutral	Disagree Slightly	Disagree	Strongly Disagree
1	Just							
2	Fair							
3	Culturally Acceptable							
4	Individually Acceptable							
5	Traditionally Acceptable							
6	Acceptable to my Family							
7	Self Promoting							
8	Self Sacrificing							
9	Personally Satisfying							
10	Produces the Greatest Utility							
11	Maximises Benefits while Minimising Harm							
12	Leads to the Greatest Good for the Greatest Number							
13	Violates an Unwritten Contract							
14	Obligated to Act this Way							
15	Violates an Unspoken Promise							
	Ethical Intent	**Very High**	**High**	**Slightly High**	**Neutral**	**Slightly Low**	**Low**	**Very Low**
16	The probability that I would undertake this action is							
17	The probability that my peers will undertake the same action is							

No.	Questions	Strongly Disagree	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Strongly Agree
	Section C: Moral Disengagement							
	Instructions: Please rate each of the following statements using the scale provided.							
1	It is alright to fight to protect your friends							
2	Slapping and shoving someone is just a way of joking							
3	Damaging some property is no big deal when you consider that others are beating people up							
4	A member of a group should not be blamed for the trouble the group causes							
5	If someone is under bad conditions they cannot be blamed for behaving aggressively							
6	It is okay to tell small lies because they don't really do any harm							
7	Some people deserve to be treated like animals							
8	If someone at work causes trouble and misbehave at work it is their managers fault							
9	It is alright to beat someone who bad mouths your family							
10	To hit obnoxious members of society is just giving them "a lesson"							
11	Stealing some money is not too serious compared to those who steal a lot of money.							
12	A person who only suggests breaking rules should not be blamed if other people go ahead and do it							
13	If kids are not disciplined they should not be blamed for misbehaving.							
14	People do not mind being teased because it shows interest in them.							

No.	Questions	Strongly Disagree	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Strongly Agree
15	It is okay to treat badly somebody who behaved like a "worm."							
16	If people are careless where they leave their things it is their own fault if they get stolen.							
17	It is alright to fight when your group's reputation is threatened.							
18	Taking someone's stationary without their permission is just "borrowing it."							
19	It is okay to insult a work colleague because beating him/her is worse.							
20	If a group decides together to do something harmful it is unfair to blame any person in the group for it.							
21	People cannot be blamed for using swear words when all their colleagues do it.							
22	Teasing someone does not really hurt them.							
23	Someone who is obnoxious does not deserve to be treated like a human being							
24	People who get mistreated usually do things that deserve it.							
25	It is alright to lie to keep your friends out of trouble							
26	It is not a bad thing to "get high" once in a while							
27	Compared to the illegal things people do, taking some things from a store without paying for them is not very serious							
28	It is unfair to blame a person who had only a small part in the harm caused by a group.							

No.	Questions	Strongly Disagree	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Strongly Agree
29	People cannot be blamed for misbehaving if their colleagues pressured them to do it.							
30	Insults among colleagues do not hurt anyone							
31	Some people have to be treated roughly because they lack feelings that can be hurt							
32	People are not at fault for misbehaving if their managers force them too much.							

No.	Questions	Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true
Section D: Five Facet Mindfulness Questionnaire
Instructions: Please rate each of the following statements using the scale provided.
1	When I am walking, I deliberately notice sensations of my body moving					
2	I am good at finding words to describe my feelings					
3	I criticise myself for having irrational or inappropriate emotions					
4	I perceive my feelings and emotions without having to react to them					
5	When I do things, my mind wanders off and I am easily distracted					
6	When I take a shower or bath, I stay alert to the sensations of water on my body					
7	I can easily put my beliefs, opinions, and expectations into words					
8	I do not pay attention to what I am doing because I am daydreaming, worrying, or otherwise distracted					
9	I watch my feelings without getting lost in them					
10	I tell myself I shouldn't be feeling the way I'm feeling					
11	I notice how foods and drinks affect my thoughts, bodily sensations, and emotions					
12	It is hard for me to find the words to describe what I am thinking					
13	I am easily distracted					
14	I believe that some of my thoughts are abnormal or bad and I shouldn't think that way					
15	I pay attention to sensations, such as the wind in my hair or sun on my face					
16	I have trouble thinking of the right words to express how I feel about things					

	Questions	Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true
17	I make judgements about whether my thoughts are good or bad					
18	I find it difficult to stay focused on what's happening in the present					
19	When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it					
20	I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing					
21	In difficult situations, I can pause without immediately reacting					
22	When I have a sensation in my body, it is difficult for me to describe it because I cannot find the right words					
23	It seems I am "running on automatic" without much awareness of what I am doing					
24	When I have distressing thoughts or images, I feel calm soon after					
25	I tell myself that I shouldn't be thinking the way I am thinking					
26	I notice the smells and aromas of things					
27	Even when I'm feeling terribly upset, I can find a way to put it into words					
28	I rush through activities without really being attentive to them					
29	When I have distressing thoughts or images I am able to just notice them without reacting					
30	I think some of my emotions are bad or inappropriate and I should not feel them					
31	I notice visual elements in art or nature, such as colours, shapes, textures or patterns of light and shadow					
32	My natural tendency is to put my experiences into words					

	Questions	Never or very rarely true	Rarely true	Sometimes true	Often true	Very often or always true
33	When I have distressing thoughts or images, I just notice them and let them go					
34	I do jobs or tasks automatically without being aware of what I am doing					
35	When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought/image is about					
36	I pay attention to how my emotions affect my thoughts and behaviour					
37	I can usually describe how I feel at the moment in considerable detail					
38	I find myself doing things without paying attention					
39	I disapprove of myself when I have irrational ideas					

Appendix D: Code Data Book

A code data book was developed to assist with data coding. The code data book is best presented using the table below.

Table D 1: Code Data Book

DEMOGRAPHIC LABEL	CODING	REVERSE QUESTIONS
LOCATION	1 = Sasolburg Site, 2 = Wadeville Site, 3 = Head Office, 4 = Electronic Submissions (email and Survey Monkey)	Not Applicable
GENDER	1 = Female, 2 = Male	Not Applicable
ETHNICITY	1 = White, 2 = Black, 3 = Coloured, 4 = Asian, 5 = Indian, 6 = Other	Not Applicable
RELIGION	1 = Christian, 2 = Muslim, 3 = Buddhist, 4 = Jewish, 5 = Hindu, 6 = Atheist, 7 = Spiritual, 8 = Other* *Buddhism, Judaism, and Spirituality were incorporated into the "Other" category given the low response rate*	Not Applicable
INCOME	1 = Less than R 4 599, 2 = R 4 600 – R 12 299, 3 = R 12 300 – R 19 999, 4 = R 19 999 – R 46 099, 5 = more than R 46 100 (All in gross monthly income)	Not Applicable
QUESTIONNARE	**CODING**	**REVERSE QUESTIONS**
MES ETHICAL JUDGEMENT	1 = "Strongly Agree" to 7 = "Strongly Disagree"	None
MES ETHICAL INTENT	1 = "Very High" to 7 = "Very Low"	None
MDS	1 = "Strongly Disagree" to 7 = "Strongly Agree"	All questions were reversed to represent the construct of moral responsibility
FFMQ	1 = "Never or very rarely true" to 5 = "Very often or always true"	Questions 3, 5, 8, 10, 12, 13, 14, 16, 17, 18, 22, 23, 25, 28, 30, 34, 35, 38 and 39 were reverse coded

Appendix E: Reliability and Construct Validity of the Complete MES

The reliability and validity of the MES was determined before questions were removed. The output of these analyses which included all questions is captured in the tables below.

Table E 1: Internal Consistency of the MES

	SCENARIO 1	SCENARIO 2	SCENARIO 3
ALPHA	0.86	0.85	0.79
N	173	177	177

Table E 2: Item-Total Correlations of the MES

SCENARIO 1: DO YOU BELIEVE THE ACTION		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q1	Was just	0.763	0.835
Q2	Was fair	0.779	0.833
Q3	Was culturally acceptable	0.767	0.835
Q4	Was individually acceptable	0.783	0.833
Q5	Was traditionally acceptable	0.747	0.836
Q6	Was acceptable to my family	0.740	0.836
Q7	Was self-promoting	*0.197*	0.861
Q8	Was self-sacrificing	*-0.092*	0.873
Q9	Personally Satisfying	*0.171*	0.863
Q10	Produces the greatest utility	0.707	0.839
Q11	Maximises benefits while minimising harm	0.718	0.836
Q12	Leads to the greatest good for the greatest number	0.739	0.836
Q13	Violates an unwritten contract	*-0.266*	0.880
Q14	Person was obligated to act this way	0.493	0.848
Q15	Violates an unspoken promise	*-0.242*	0.880
SCENARIO 2: DO YOU BELIEVE THE ACTION		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q1	Was just	0.758	0.824
Q2	Was fair	0.774	0.823
Q3	Was culturally acceptable	0.713	0.826

SCENARIO 2: DO YOU BELIEVE THE ACTION	ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q4 Was individually acceptable	0.718	0.824
Q5 Was traditionally acceptable	0.729	0.825
Q6 Was acceptable to my family	0.708	0.826
Q7 Was self-promoting	*0.231*	0.849
Q8 Was self-sacrificing	*-0.035*	0.862
Q9 Personally Satisfying	*0.160*	0.855
Q10 Produces the greatest utility	0.682	0.828
Q11 Maximises benefits while minimising harm	0.651	0.828
Q12 Leads to the greatest good for the greatest number	0.647	0.829
Q13 Violates an unwritten contract	*-0.157*	0.870
Q14 Person was obligated to act this way	0.468	0.838
Q15 Violates an unspoken promise	*-0.185*	0.871
SCENARIO 3: DO YOU BELIEVE THE ACTION	**ITEM-TOTAL CORRELATION**	**ALPHA (IF DELETED)**
Q1 Was just	0.609	0.767
Q2 Was fair	0.591	0.771
Q3 Was culturally acceptable	0.604	0.762
Q4 Was individually acceptable	0.665	0.759
Q5 Was traditionally acceptable	0.630	0.760
Q6 Was acceptable to my family	0.683	0.762
Q7 Was self-promoting	*0.260*	0.790
Q8 Was self-sacrificing	*0.071*	0.807
Q9 Personally Satisfying	*0.095*	0.805
Q10 Produces the greatest utility	0.608	0.763
Q11 Maximises benefits while minimising harm	0.518	0.770
Q12 Leads to the greatest good for the greatest number	0.659	0.762
Q13 Violates an unwritten contract	*0.003*	0.810
Q14 Person was obligated to act this way	0.475	0.773
Q15 Violates an unspoken promise	*-0.024*	0.813

Table E 3: Factor Loading per question

SCENARIO 1: DO YOU BELIEVE THE ACTION		FACTOR ONE LOADING
Q1	Was just	0.88
Q2	Was fair	0.90
Q3	Was culturally acceptable	0.84
Q4	Was individually acceptable	0.90
Q5	Was traditionally acceptable	0.82
Q6	Was acceptable to my family	0.83
Q10	Produces the greatest utility	0.78
Q11	Maximises benefits while minimising harm	0.83
Q12	Leads to the greatest good for the greatest number	0.84
SCENARIO 2: DO YOU BELIEVE THE ACTION		**FACTOR ONE LOADING**
Q1	Was just	0.87
Q2	Was fair	0.88
Q3	Was culturally acceptable	0.84
Q4	Was individually acceptable	0.82
Q5	Was traditionally acceptable	0.86
Q6	Was acceptable to my family	0.82
Q10	Produces the greatest utility	0.79
Q11	Maximises benefits while minimising harm	0.75
Q12	Leads to the greatest good for the greatest number	0.73
SCENARIO 3: DO YOU BELIEVE THE ACTION		**FACTOR ONE LOADING**
Q1	Was just	0.82
Q2	Was fair	0.79
Q3	Was culturally acceptable	0.77
Q4	Was individually acceptable	0.81
Q5	Was traditionally acceptable	0.78
Q6	Was acceptable to my family	0.82
Q10	Produces the greatest utility	0.75
Q11	Maximises benefits while minimising harm	0.68
Q12	Leads to the greatest good for the greatest number	0.82

Appendix F: Factor Loading of all questions in the MDS

The factor loading per component is captured in the table below for ease of reference.

Table F 1: Factor Loading per component

QUESTION	ORIGINAL DIMENSION	1	2	3	4	5	6	7	8	9
Q5	Displacement	0.52								
Q9	Moral Justification	0.68								
Q10	Euphemism	0.56								
Q19	Advantageous Comparison	0.85								
Q21	Displacement	0.69								
Q23	Dehumanisation	0.66								
Q24	Attribution	0.49								
Q32	Attribution	0.64								
Q3	Advantageous Comparison		0.60							
Q29	Displacement		0.81							
Q30	Distortion		0.54							
Q31	Dehumanisation		0.61							
Q6	Distortion			0.65						
Q7	Dehumanisation			0.73						
Q12	Diffusion			0.42						
Q15	Dehumanisation			0.70						
Q13	Displacement				0.61					
Q16	Attribution				0.74					
Q17	Moral Justification				0.55					
Q14	Distortion					0.80				
Q22	Distortion					0.60				
Q2	Euphemism						0.77			
Q11	Advantageous Comparison						0.62			

QUESTION	ORIGINAL DIMENSION	1	2	3	4	5	6	7	8	9
Q20	Diffusion							0.82		
Q28	Diffusion							0.49		
Q18	Euphemism								0.53	
Q26	Euphemism								0.72	
Q1	Moral Justification									0.84
Q4	Diffusion									0.47

Appendix G: Reliability and Construct Validity of the complete FFMQ

The reliability and validity of the FFMQ was determined before questions were removed. The output of these analyses which included all questions is captured in the tables below.

Table G 1: Internal Consistency of the FFMQ

	OBSERVING	DESCRIBING	AWARENESS	NON-JUDGING	NON-REACTIVITY	FFMQ
ALPHA	0.70	0.77	0.69	0.72	0.63	0.85
N	189	189	189	189	189	189

Table G 2: Item-Total Correlation of the FFMQ

OBSERVING		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q1	When I am walking, I deliberately notice sensations of my body moving	0.31	0.70
Q6	When I take a shower or bath, I stay alert to the sensations of water on my body	0.45	0.66
Q11	I notice how foods and drinks affect my thoughts, bodily sensations, and emotions	*0.29*	0.70
Q15	I pay attention to sensations, such as the wind in my hair or sun on my face	0.50	0.65
Q20	I pay attention to sounds, such as clocks ticking, birds chirping, or cars passing	0.36	0.68
Q26	I notice the smells and aromas of things	0.41	0.67
Q31	I notice visual elements of the art or nature, such as colours, shapes, textures or patterns of light and shadow	0.56	0.64
Q36	I pay attention to how my emotions affect my thoughts and behaviour	*0.29*	0.70
DESCRIBING		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q2	I am good at finding words to describe my feelings	0.55	0.74

DESCRIBING		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q7	I can easily put my beliefs, opinions, and expectations into words	0.38	0.77
Q12	It is hard for me to find the words to describe what I am thinking (R)	0.36	0.77
Q16	I have trouble thinking of the right words to express how I feel about things (R)	0.53	0.74
Q22	When I have a sensation in my body, it is difficult for me to describe it because I cannot find the right words (R)	0.442	0.75
Q27	Even when I'm feeling terribly upset, I can find a way to put it into words	0.52	0.74
Q32	My natural tendency is to put my experiences into words	0.51	0.74
Q37	I can usually describe how I feel at the moment in considerable detail	0.55	0.74
ACTING WITH AWARENESS		**ITEM-TOTAL CORRELATION**	**ALPHA (IF DELETED)**
Q5	When I do things, my mind wanders off and I am easily distracted (R)	0.33	0.67
Q8	I do not pay attention to what I am doing because I am daydreaming, worrying, or otherwise distracted (R)	0.38	0.66
Q13	I am easily distracted (R)	0.50	0.63
Q18	I find it difficult to stay focused on what's happening in the present (R)	0.37	0.67
Q23	It seems I am "running on automatic" without much awareness of what I am doing (R)	0.35	0.67
Q28	I rush through activities without really being attentive to them (R)	0.41	0.66
Q34	I do jobs or tasks automatically without being aware of what I am doing (R)	0.42	0.66

ACTING WITH AWARENESS		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q38	I find myself doing things without paying attention (R)	0.34	0.67
NONJUDGING		**ITEM-TOTAL CORRELATION**	**ALPHA (IF DELETED)**
Q3	I criticise myself for having irrational or inappropriate emotions (R)	0.32	0.71
Q10	I tell myself I shouldn't be feeling the way I'm feeling (R)	0.44	0.69
Q14	I believe that some of my thoughts are abnormal or bad and I shouldn't think that way (R)	0.53	0.67
Q17	I make judgements about whether my thoughts are good or bad (R)	0.37	0.70
Q25	I tell myself that I shouldn't be thinking the way I am thinking (R)	0.43	0.69
Q30	I think some of my emotions are bad or inappropriate and I should not feel them (R)	0.34	0.71
Q35	When I have distressing thoughts or images, I judge myself as good or bad, depending what the thought / image is about (R)	0.45	0.68
Q39	I disapprove of myself when I have irrational ideas (R)	0.41	0.69
NONJUDGING		**ITEM-TOTAL CORRELATION**	**ALPHA (IF DELETED)**
Q4	I perceive my feelings and emotions without having to react to them	***0.20***	0.63
Q9	I watch my feelings without getting lost in them	0.44	0.56

NONJUDGING		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q19	When I have distressing thoughts or images, I "step back" and am aware of the thought or image without getting taken over by it	0.35	0.59
Q21	In difficult situations, I can pause without immediately reacting	0.43	0.56
Q24	When I have distressing thoughts or images, I feel calm soon after	0.34	0.59
NONJUDGING		ITEM-TOTAL CORRELATION	ALPHA (IF DELETED)
Q29	When I have distressing thoughts or images I am able to just notice them without reacting	0.35	0.59
Q33	When I have distressing thoughts or images, I just notice them and let them go	*0.25*	0.62

Appendix H: Scree Plots

A scree plot produced by SPSS is used to confirm the output of a rotated factor analysis. The scree plots for each of the measurement instruments is available in the figures below.

Figure H 1: Scree Plot for Factor Analysis of MES (Scenario 1)
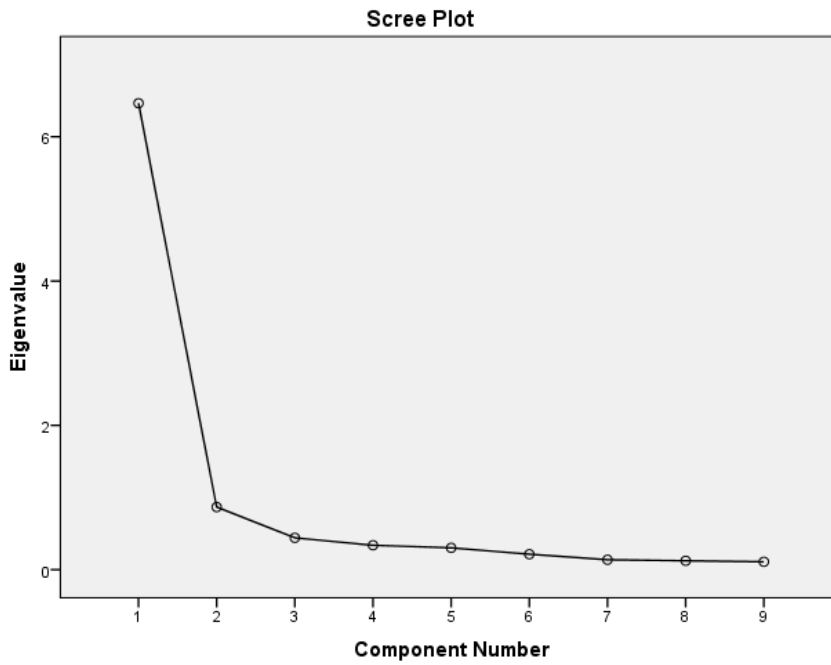
Figure H 2: Scree Plot for Factor Analysis of MES (Scenario 2)
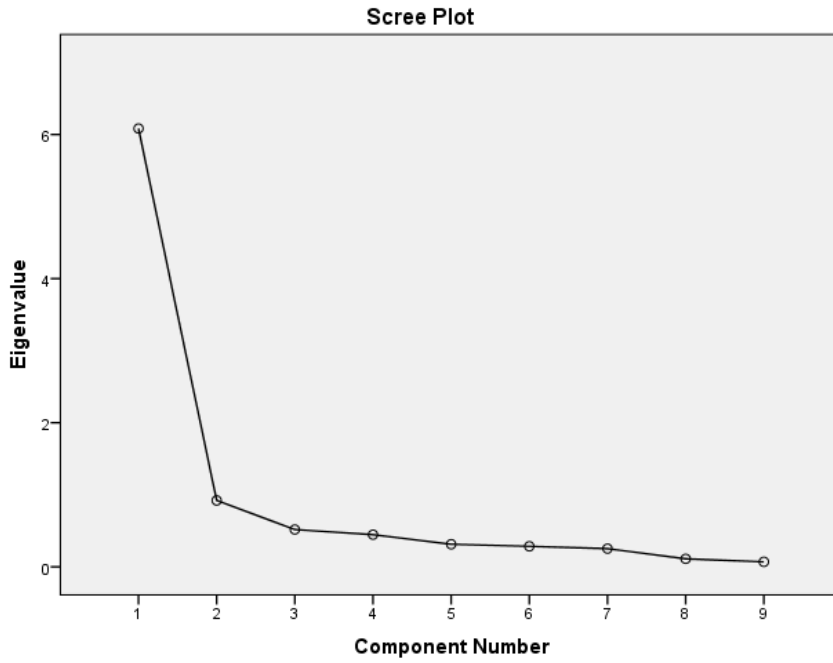
Figure H 3: Scree Plot for Factor Analysis of MES (Scenario 3)
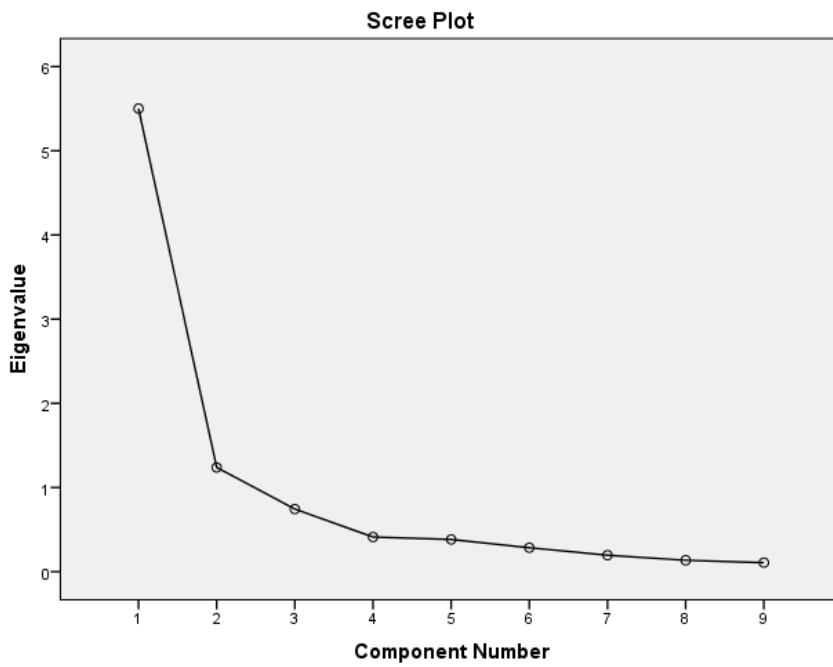
Figure H 4: Scree Plot for Factor Analysis of MDS
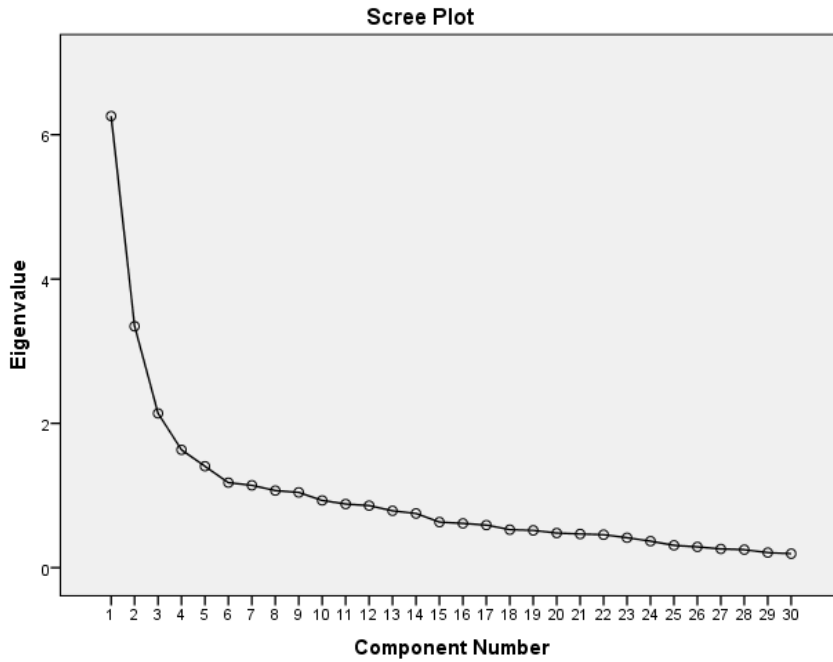
Figure H 5: Scree Plot for Factor Analysis of FFMQ
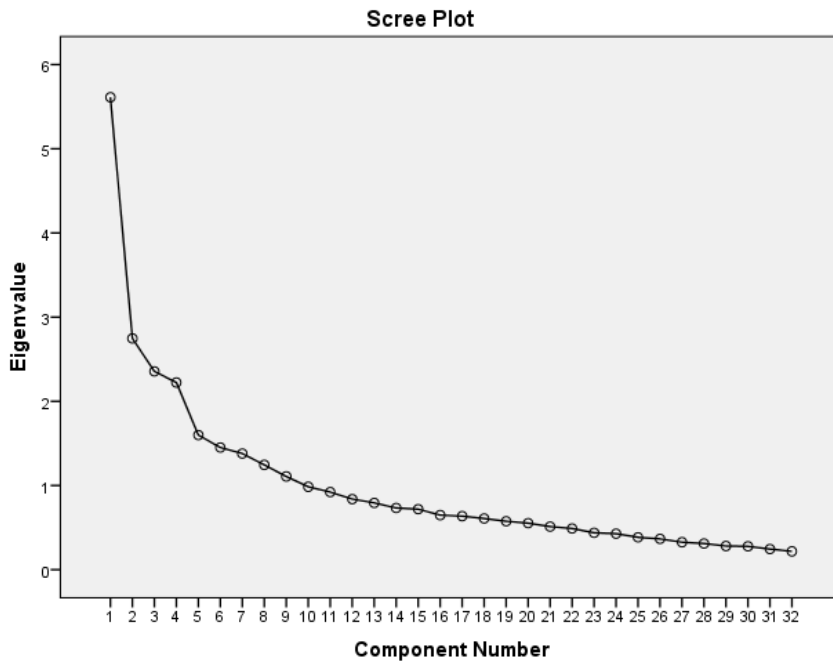
Appendix I: Scatter Plots

Inspection of scatter plots highlight the existence of linearity, multicollinearity and homoscedasticity. The scatter plots for each relationship is available in the figures below.

Figure I 1: Scatter plot between variables Mindfulness and Ethical Judgment (Scenario One)
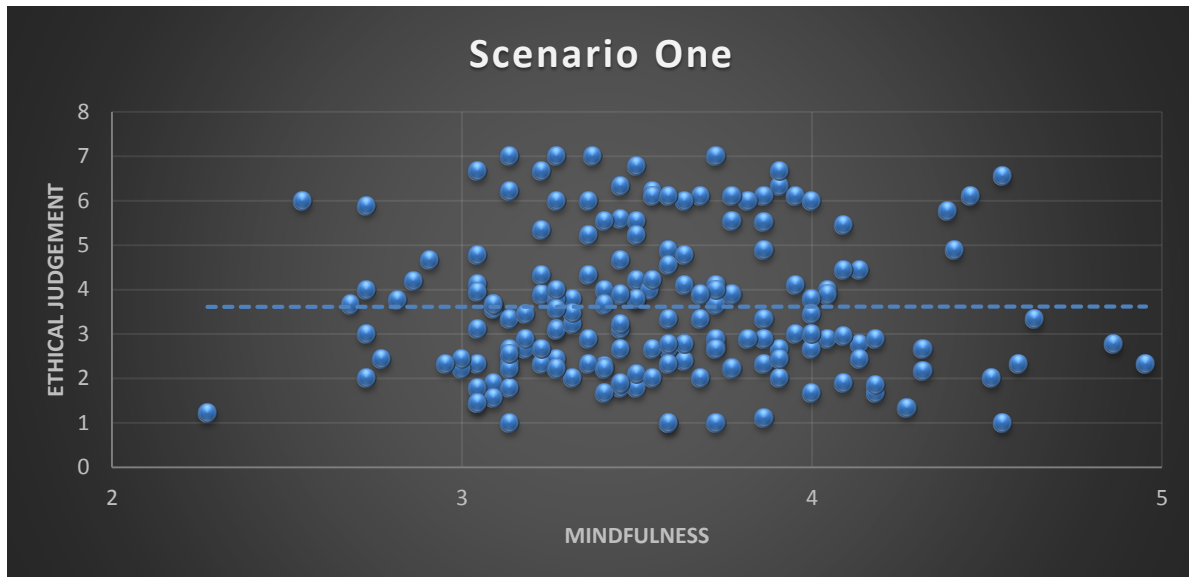
Figure I 2: Scatter plot between variables Mindfulness and Ethical Judgment (Scenario Two)
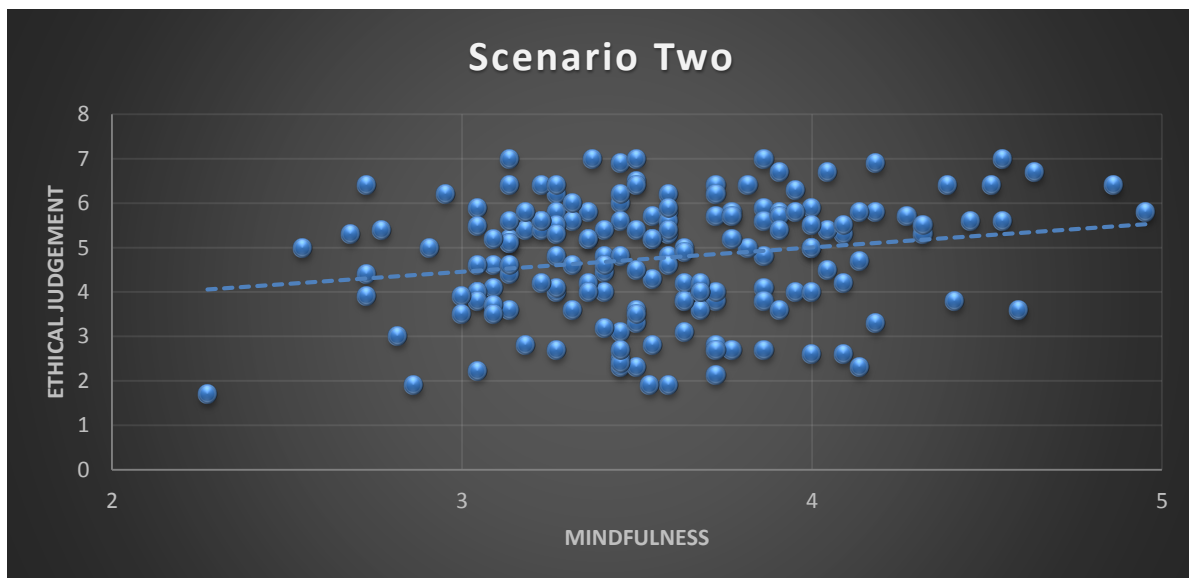
Figure I 3: Scatter plot between variables Mindfulness and Ethical Judgment (Scenario Three)
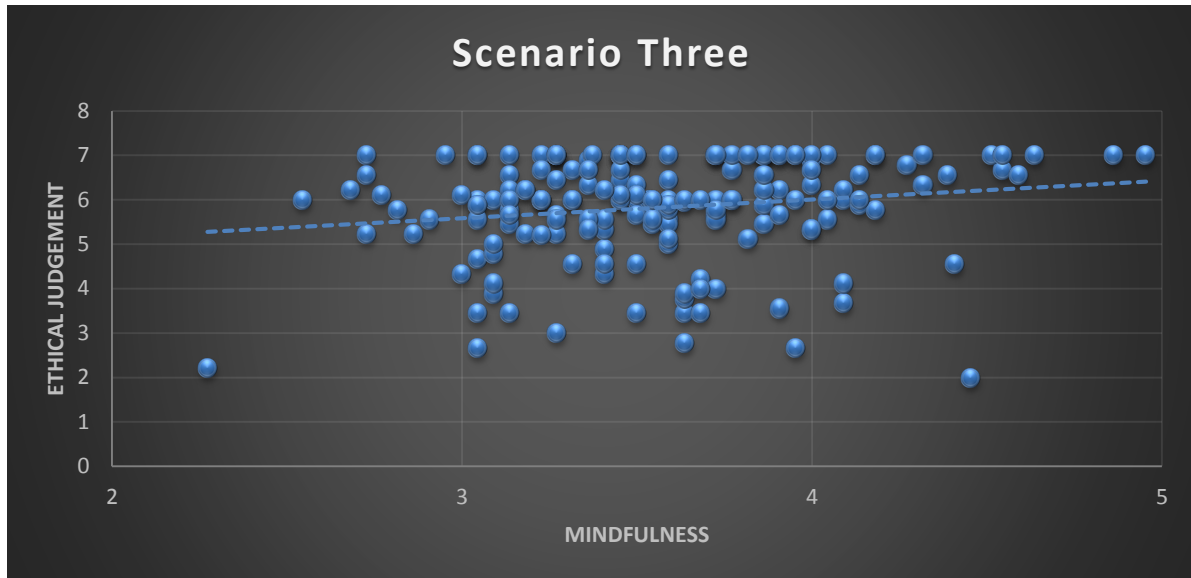
Figure I 4: Scatter plot between variables Mindfulness and Ethical Intent (Scenario One)
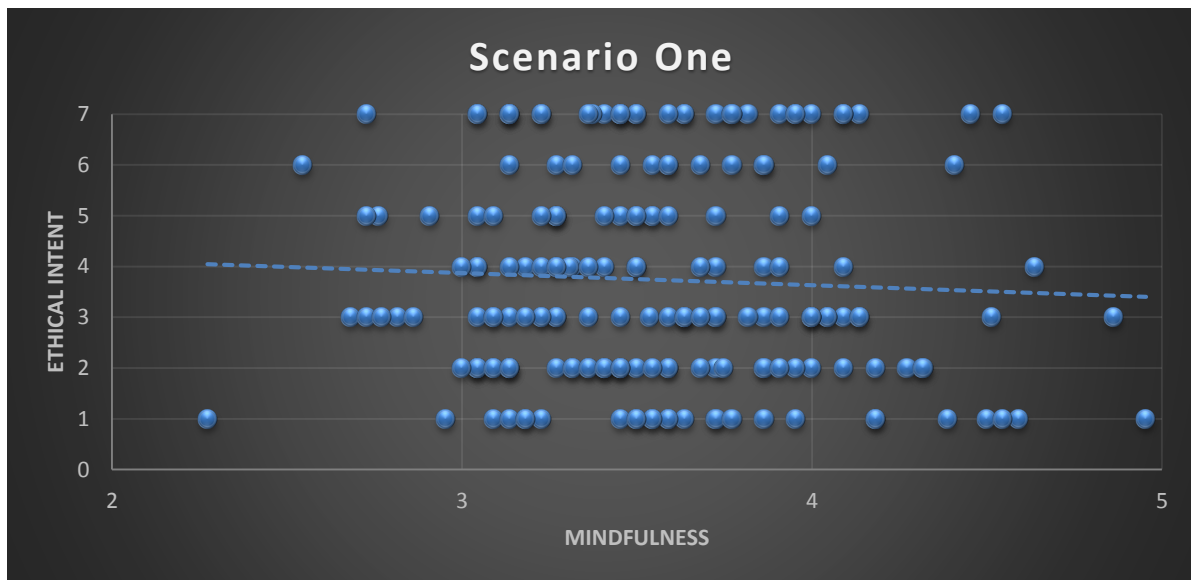
Figure I 5: Scatter plot between variables Mindfulness and Ethical Intent (Scenario Two)
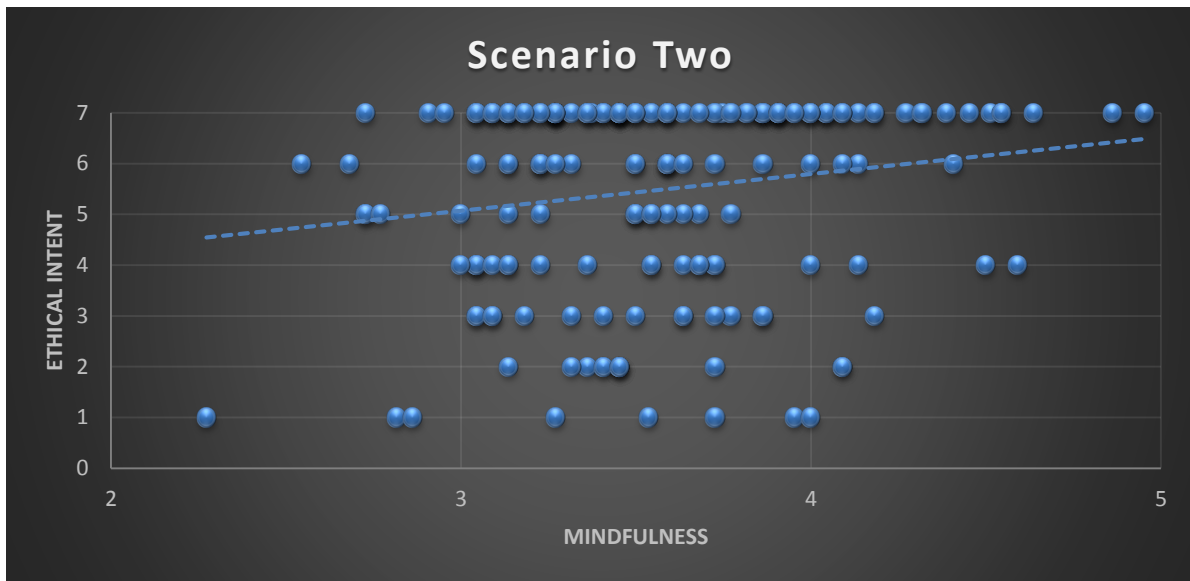
Figure I 6: Scatter plot between variables Mindfulness and Ethical Intent (Scenario Three)
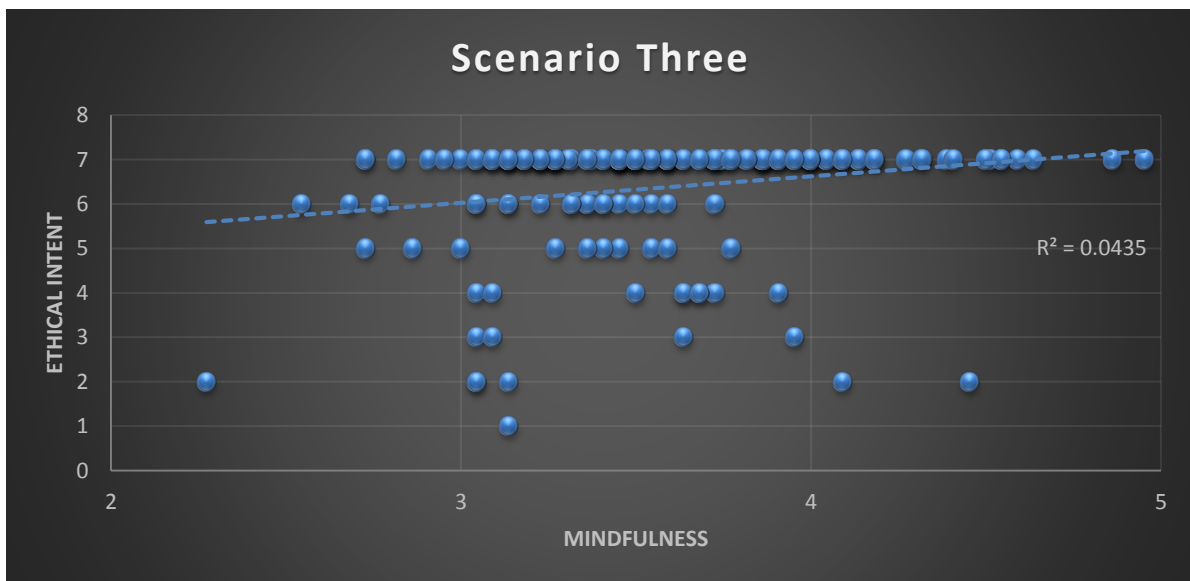
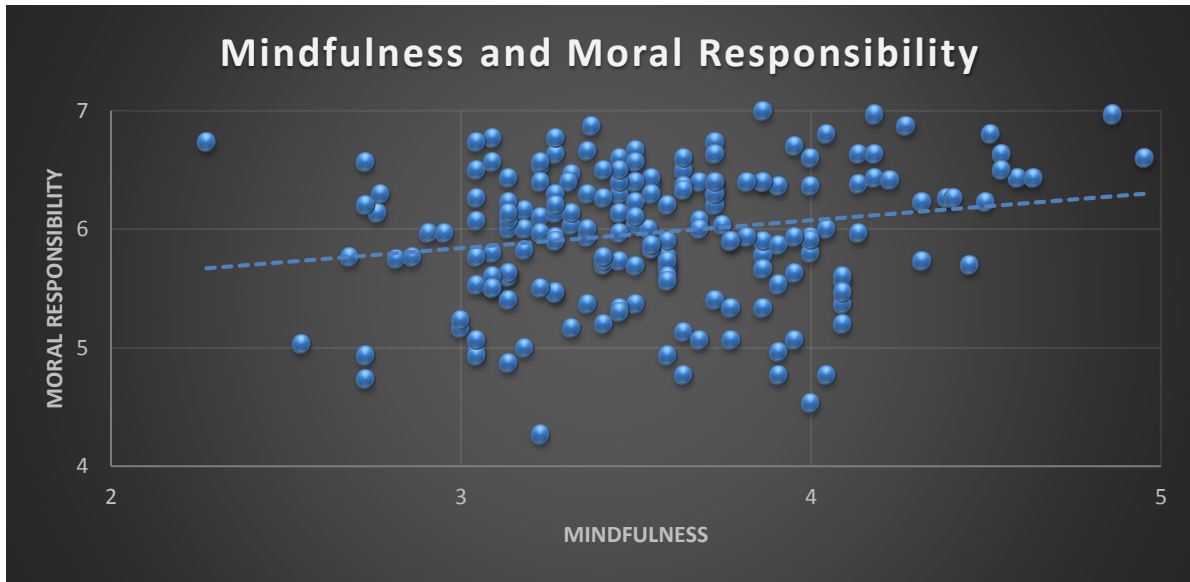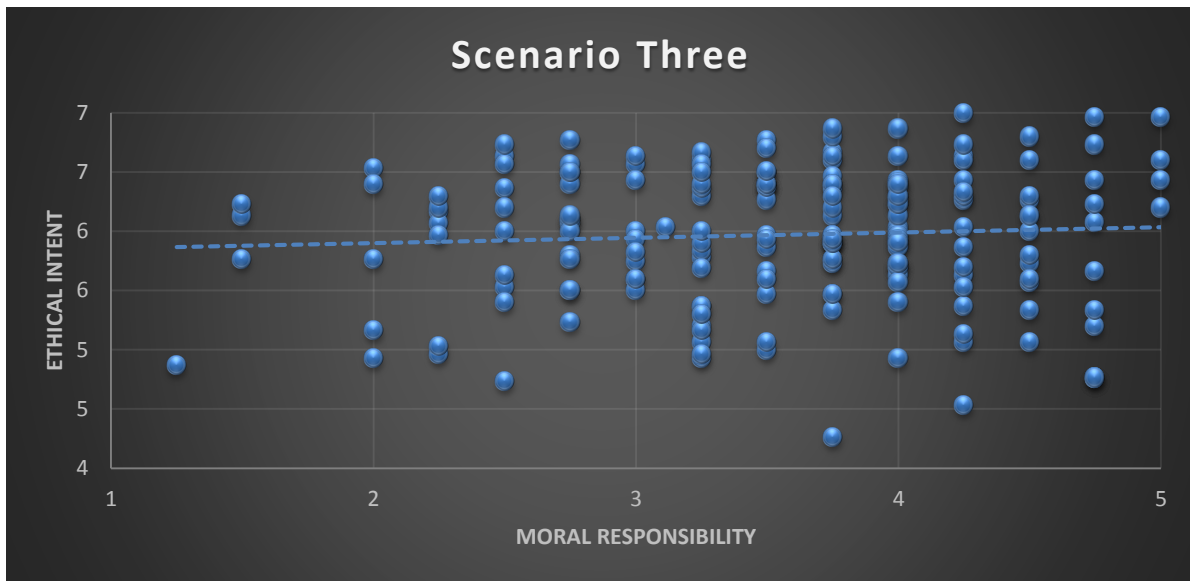**Figure I 7: Scatter plot between variables Mindfulness and Moral Responsibility**

Mindfulness and Moral Responsibility

Figure I 8: Scatter plot between variables Moral Responsibility and Ethical Intent (Scenario One)

Scenario One

Figure I 9: Scatter plot between variables Moral Responsibility and Ethical Intent (Scenario Two)

Figure I 10: Scatter plot between variables Moral Responsibility and Ethical Intent (Scenario Three)

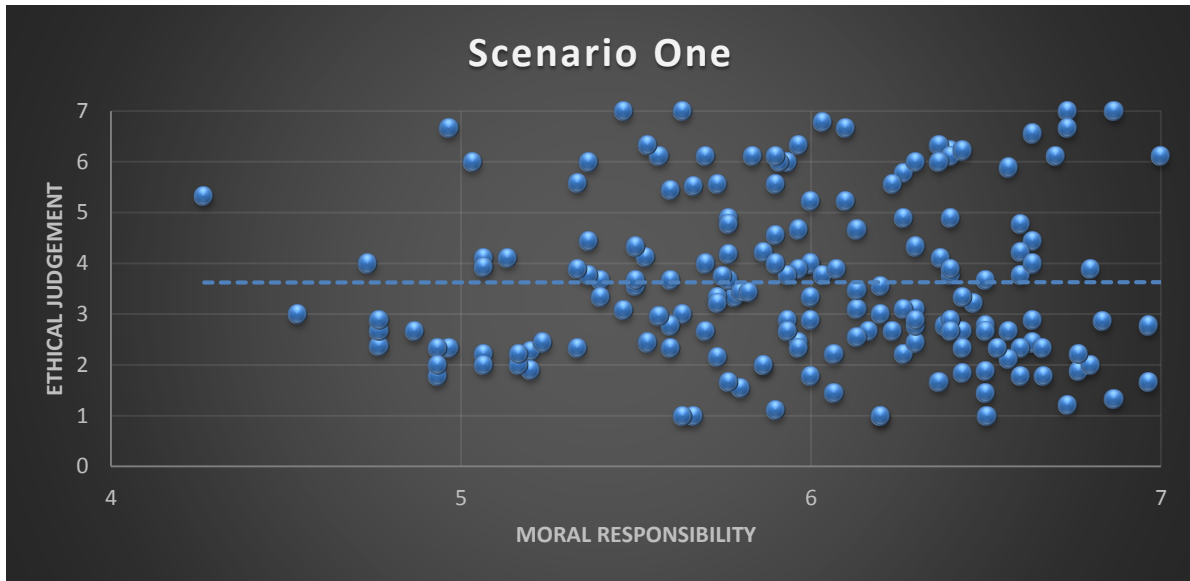**Figure I 11: Scatter plot between variables Moral Responsibility and Ethical Judgement (Scenario One)**

Figure I 12: Scatter plot between variables Moral Responsibility and Ethical Judgement (Scenario Two)
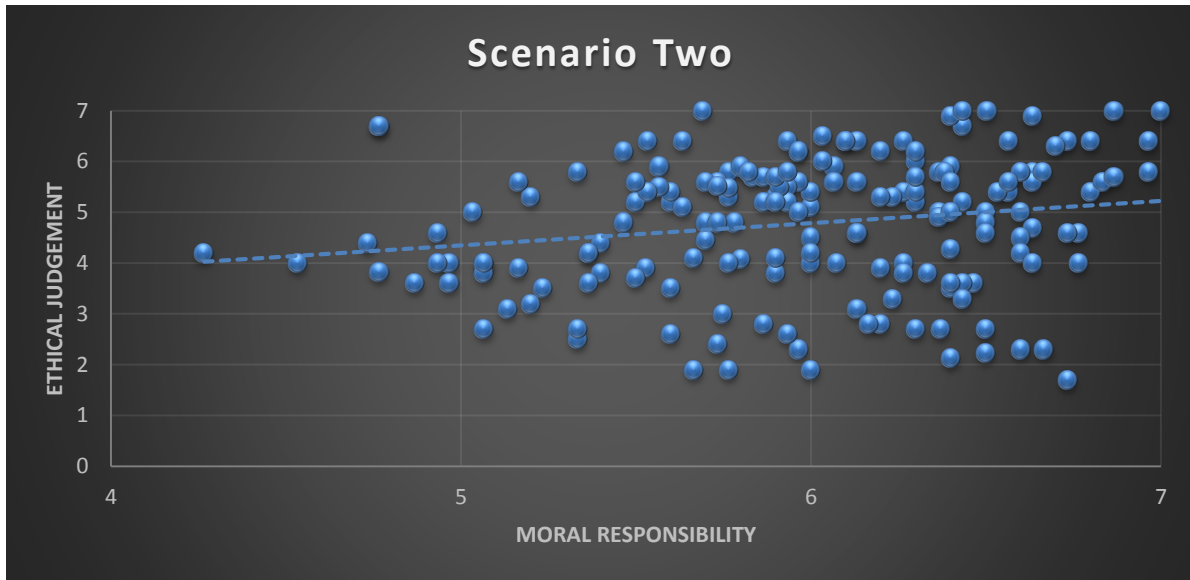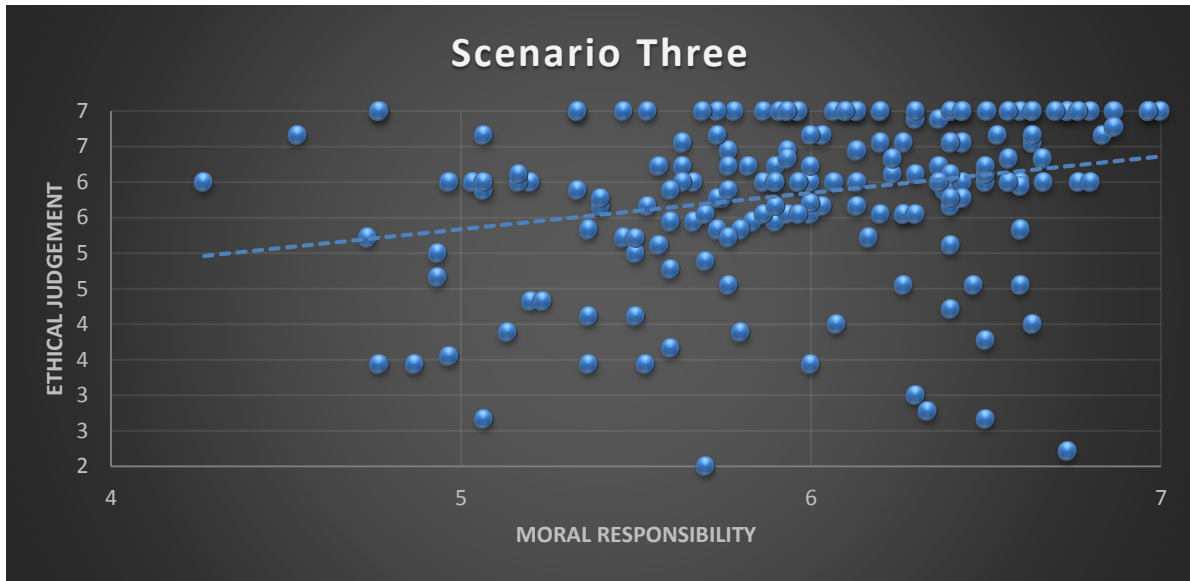
Figure I 13: Scatter plot between variables Moral Responsibility and Ethical Judgement (Scenario Three)

Appendix J: Turnitin Report

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Appendix K: Ethical Clearance Approval Letter

Dear Cherise Small

Protocol Number: **Temp2016-00965**

Title: **Ethical Clearance Application**

Please be advised that your application for Ethical Clearance has been APPROVED.

You are therefore allowed to continue collecting your data.

We wish you everything of the best for the rest of the project.

Kind Regards,

Adele Bekker