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**AN INVESTIGATION INTO THE ROLE OF PROFESSIONAL
AFFILIATION AND HOW THIS MAY EFFECT MORAL
COMPETENCE THROUGH MORAL DILEMMA ANALYSIS**

CLARA BERNADETTE OWEN

A thesis submitted to the University of Huddersfield in partial fulfilment of the requirements
for the degree of Doctor of Philosophy

The University of Huddersfield

September 2019

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Dedication

For my wonderful little nephew Logan, who has brought sunshine into our lives, joy into our hearts and smiles onto our faces xxx

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Abstract

Regressions and stagnations in moral development are increasing being reported within the literature, mainly emanating from medical and healthcare vocations. Reasons surrounding these findings report links to certain educational deficiencies which fail to facilitate moral growth. However, some studies have proposed the occurrence of a moral segmentation effect, through the use of hypothetical moral dilemmas, namely those detailing acts of euthanasia. Utilising the Moral Competence Test (MCT, Lind, 2008a) the present research intended to shed light on this disparity. A total of 247 university students, 118 healthcare professions and 150 non-healthcare professionals were recruited. Questionnaires were mainly completed online, with a small portion of the student sample (38%) being completed online. Research study one examined the theoretical validity of The Moral Competence Test, which was successfully substantiated. Research study two explored moral competence levels of healthcare and non-healthcare vocational fields in education and practice, examined the relationship between moral competence and educational factors and explored the occurrence of a moral segmentation effect. Findings revealed that all vocational fields displayed low moral competence. Interactive and non-interactive teaching methods had a minimal relationship with moral competence. Results indicated the presence of a moral segmentation effect within medical and healthcare professionals and a trend in students. Both medical and healthcare students and professionals obtained lower moral competence scores within the mercy killing scenario. Research study three examined the vigilantism and mercy killing moral dilemmas independently through the application of utilitarianism and deontological philosophies to investigate whether different vocational fields differ in their ethical compositions. Findings revealed medical and healthcare vocational fields displayed a higher rejection if utilitarian arguments and a higher acceptance of deontological arguments in the mercy killing scenario, when compared to non-healthcare vocational fields. No significant differences were noted in the vigilantism scenario. Moral competence positively correlated with utilitarian compositions. Research study four assessed individual differences through the exploration of personality and emotional intelligence and the relationship with vocational choice, moral competence and ethical compositions. Findings within the student samples revealed that business students displayed higher levels of Machiavellianism and narcissism compared to medical and healthcare students. Within practice samples, non-healthcare vocations displayed higher levels of psychopathy than healthcare professionals. No significant differences were found between vocational fields in levels of emotional intelligence. The Dark Triad and emotional intelligence held minimal relations with moral competence scores. Utilitarian compositions were positively related to Machiavellianism, narcissism, psychopathy and negatively with total emotional intelligence. Research study five explored levels of moral distress and its relationship moral competence, ethical compositions, personality, emotional intelligence and ethical climate within UK healthcare environments. Findings revealed that nurses displayed higher levels of moral distress than physicians, though this was not significant. Emotional Reasoning and emotional self-management were negatively associated with moral distress in the nurse sample. Machiavellianism and narcissism held differing roles to moral distress between physicians and nurses. Moral distress negatively correlated with moral competence in the physician sample and a positively in the nurse sample. Moral distress held significant negative correlations with total utilitarian support and positive correlations with total deontological support in the physician sample. The contextual elements and potential biases present in the use of hypothetical moral dilemmas, coupled with vocational affiliation are discussed in detail. Relations to individual differences through the measure of the dark personality traits, emotional intelligence and moral distress occurrence within medical and healthcare practice are also discussed.

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Chapter 1: Research Overview

1.1 Introduction

The good versus bad and right versus wrong binaries are universal ubiquitous themes. Concepts which are prevalent within contemporary society and even resonate from reality to literature and cinematics; who doesn't love a superhero and villain antagonistic rivalry of capricious proportions. It is the palpable antipodal nature of these concepts, which engages and draws in audiences, possibly due to obvious and detectable differences between the two themes. However, not all conundrums faced by individuals or protagonists are as easy to decipher, complex and near to impossible situations arise which challenge individual perceptions and evaluations of what constitutes as good or moral. These scenarios break through the clear distinctions of right and wrong and excel beyond the bounds of possibility. These somewhat nuanced and thought provoking conditions are referred to as moral dilemmas and have also captured the attention and hearts of audiences, authors, and scholars alike.

A moral dilemma usually consists of a short vignette which describes a story containing a level of moral discord, whereby an individual is drawn between opposing moral courses. They manage to bring to light the mismatch between two options, generally pitting deontological and utilitarian ethical compositions against each other, whereby choosing one will transgress the other. Utilitarianism asserts the correct action is one which takes into consideration the interests of all involved and produces the most inclusive and advantageous result for the greater amount of people (Mill, 1879), to maximise benefits and reduce costs through an objective lens (Bentham, 1781). Whereas, deontological domains asserts there are a series of moral guidelines, obligations and responsibilities which individuals must uphold (Waldmann & Dieterich, 2007) in spite of the consequences or circumstantial coincidence (Kant, 2002). Thus, individuals evaluate whether the aspects of their actions fulfil particular moral duties regardless of whether or not those actions lead to a greater outcome (Broeders, van den Bos, Müller, & Ham, 2011).

The divergence between utilitarianism and deontological means appears to mirror the polar effects of right versus wrong, yet the distinction being that both routes embody and portray adequate moral decisions. Take for instance the classic mad bomber scenario a):

A madman who has threatened to explode several bombs in crowded areas has been apprehended. Unfortunately, he has already planted the bombs and they are scheduled to go

off in a short time. It is possible that hundreds of people may die. The authorities cannot make him divulge the location of the bombs by conventional methods. He refuses to say anything and requests a lawyer to protect his Fifth Amendment right against self-incrimination. In exasperation, some high level official suggests torture. This would be illegal, but the official is sure that it will make him tell the truth in time for you to find and defuse the bombs.

Would you choose not to torture the man, as to do so would be illegal and goes against the law, moral obligations and responsibilities, in true deontological standing? Or would you approve to the means of torture to gain information regarding the bombs to save people's lives which produces the most inclusive and advantageous result for the greatest amount of people; in true utilitarian standing. A popular addition to this scenario questions whether you would torture the man's wife so he would reveal the bomb locations, after learning that the bomber can withstand torture. This dilemma depicts an extremely challenging scenario, whereby both routes hold significant virtuous choices. A highly thought provoking scenario surrounding life and death, where individuals may easily sit, discuss and debate for a number of hours over which choice to make, with the range in response being rather varied.

These extreme moral scenarios and accompanying sacrificial style dilemmas such as the popular trolley quandary are very prevalent within the moral domain. Yet, deliberations question the validity and extent this speculative sense of morality can forecast actual behaviour and decision making in real life situations (Bostyn, Sevenhant, & Roets, 2018; Crone & Laham, 2017; Haghani & Sarvi, 2018; Kang, Rangel, Camus, & Camerer, 2011; Tassy, Oullier, Mancini, & Wicker, 2013; Teper, Inzlicht, & Page-Gould, 2011). Individuals may be capable of determining what they ought and should do, but actually undertaking it is an entirely different matter. What we have here are two extreme, arguably juxtaposed points; hypothetical and real life. A moral hypocrisy sought of speak (FeldmanHall et al., 2012). "All people desire the good, but vary greatly in regard to their ability to attain good" (Lind, 2016, p. 13). These styles of dilemmas have been noted to be more comically entertaining, unrealistic and they do not obtain the same psychological processes as moral situations occurring in real life (Bauman, McGraw, Bartels, & Warren, 2014).

Take for instance the comparison with a more realistic and pragmatic scenario b):

You currently hold a position at a university in the science department. You have spent two years working on a proposal for a constructive and promising piece of research.

Furthermore you have enlisted a team of graduate students to assist in the research process which will be hugely beneficial to their future prospects. To complete the research you must apply for funding, however you have recently being informed that university funding is rather limited. Parallel to this you have been asked to review a piece of research for a colleague, which will also require funding, but has received multiple funding over the semester for other research projects.

Do you choose to review the other project in the hope your review will increase the chances of receiving funding for your own project and help fellow graduates, thus not declaring a conflict of interest, arguably supporting the notions of utilitarianism. Or do you choose to declare conflict of interest and not complete the review, in line with deontological notions? This scenario holds a more sober tone and does not hold the extremities, unrealistic qualities and issues of life and death outlined in scenario a). It may be safe to assume that an individuals line of reasoning applied to scenario a) would differ from their line of reasoning applied to scenario b). This could be due to scenario b) not discussing intense issues surrounding life and death. However, it could further be suggested that additional differences emerge based on the level of familiarity, for instance if the context outlined in scenario b) is highly relatable to the reader, perhaps through professional or vocational affiliation. This is best explained in the prospect of story pull, which proposes that people apply various levels of moral reasoning reliant on their familiarity and potential previous involvement which in turn may prime a certain response, dependent on whether individuals identify with the protagonist, whether they have experienced a comparable situation, or they completely grasp the conflict of the dilemma presented (Elm & Weber, 1994).

Next, take a scenario which manages to combine both the life and death extremities outlined in scenario a) with the general yet professionally affiliated context of scenario b). One must question whether an individual with these levels of contextual attachment and familiarity would display similar lines of reasoning to a life and death scenario to those individuals with little contextual insight. A perfect illustration of such a dilemma is that of euthanasia, which has been a primary moral scenario utilised in variations of the Moral Judgement Interview (MJI; Colby & Kohlberg, 1987; Kohlberg, 1964), the Defining Issues Test (DIT; Rest, 1979), and is a central component to the Moral Competence Test (MCT; Lind, 2008a).

Research tends to support the notion of a moral regression or moral stagnation occurring within medical and healthcare education and practice. This phenomenon has been documented in research utilising various measures the Moral Judgment Interview (Helkama et al., 2003; Patenaude, Niyonsenga & Fafard, 2003; Self, Schrader, Baldwin & Wolinsky, 1993); the defining Issues Test (Fleisher, Kristjanson, Bourgeois-Law & Magwood, 2003; Hren, Marušić, & Marušić, 2011; Kim, Park, Son & Han, 2004; Morton, Lamberton, Testerman, Worthley, & Loo, 1996; Murrell, 2014; Prescott, Becket, & Wilson, 2014; Self & Olivarez, 1996; Self, Olivarez & Baldwin, 1998; Swisher, 2010); the Moral Competence Test (Agurto et al., 2017; Feitosa et al., 2013; Lind, 2000a; Slovackova & Slovacek, 2007); and other scales (Chalmers et al., 2011; Freitas, Kovaleski, Boing, & Oliveira, 2006; Hebert, Meslin & Dunn, 1992; Self, Baldwin & Wolinsky, 1996). Reasons for which are commonly attributed to educational teaching and opportunities. Namely, how these courses focus more on practical and technical aspects, through the overuse of governing teaching methods which suppresses discussion, role taking and reflection, resulting in students experiencing less peer contact, and higher levels of competition and pressure (Bok, 2001; Coles, 1998; Kohlberg, 1984; Lind, 2000a, 2000b, 2008b, 2016; Sprinthall, Sprinthall & Oja, 1994; Wolf, Balson & Faucet, 1989). Whilst others have reported an occurrence of a moral segmentation, which may be linked to medical and healthcare education through the effect of a hidden curriculum in medical education, the loss of idealism and individuals being drawn more towards a legalistic focus with regards to moral judgment (Hegazi & Wilson, 2013; Schillinger-agati & Lind, 2003).

According to cognitive developmental models, the mental stages of moral judgement competence are referred to as a structured whole. This means that stage are not detached reactions, but rather an overall array of thought, which are consistent across various issues (Colby and Kohlberg, 1987; Lind, 2016). Thus, one must question why these suspected moral segmentations arise. Research has contended the notion of a homogeneity postulate with some studies displaying a direction towards more a heterogeneous claim (Beck, Ileinrichs, & Minnameier, 1998; Krebs, Denton, Vermeulen, Carpendale, & Bush, 1991; Senger, 1985; Zeidler & Schafer, 1984). Rest (1979) notes that individuals attain a set of moral concepts in a stage like order, yet they also attain a set of moral schemas which are related to specific context. This suggests that the level of moral reasoning or principle is highly dependent on the context of the moral problem; context bound competencies. This draws some interesting questions in relation to the hypothetical dilemma based measures being used to examine

moral development within medical and healthcare vocations, more so when discussing issues of life and death, which further highlights the significance of context when interpreting data.

1.2 Statement of the problem

Moral regressions, stagnations or overall low moral competence scores are increasingly being reported within medical and healthcare vocations, mainly circulating within education. This account alone is both alarming and concerning. Yet, the reasons as to why these reports are surfacing remain unclear. It may be due to certain educational deficiencies which fail to facilitate the moral growth of these individuals. However, acknowledging recent information regarding the occurrence of a moral segmentation, it is difficult to decipher whether these declinations can be fully attributed to educational facilities or due to the contextual relevance of the popular euthanasia scenario to the medical profession. Therefore, based on this premise it could be argued that rather than witnessing a regression or stagnation in moral development in healthcare related vocations, it could possibly be a moral segmentation, due to the medical context of the dilemmas presented. Which raises further questions surrounding the use of hypothetical dilemmas in measuring moral competence and further probes whether a dilemma not contextually attached to healthcare vocation would elicit the same response in a healthcare and medical population.

1.3 Significance of study

The present research hopes to contribute to the understanding and current literature on moral development and may offer insights into other fields and jobs with an integral underpinning of morality. To the authors knowledge it will be one of the first to utilise the Moral Competence Test (MCT, Lind, 2008a) within the UK learning environment and practical professions.

It is of huge significance to understand the moral development of potential future leaders (students) in both healthcare and non-healthcare fields, combined with the capability to not put financial or human welfare of others at risk or perform hazardous practises (practical fields). It is crucial to understand whether individuals advancing in medical and healthcare fields are more susceptible to the possibility of a moral regression within the learning environment and to explore and understand possible reasons as to why such incidences are occurring and whether these frequencies hold any practical ramifications; possibly in the form of moral distress

Concerns regarding the welfare of junior doctors and nurses have been recently emanating in the UK media; Health secretary, Jeremy Hunt states *'It is paramount that we address the deep-seated issues relating to junior doctors' morale, wellbeing and quality of life'* (Department of Health, 2016).

1.4 Overall research aims

The overall research aims were to;

- To examine the theoretical validity of The Moral Competence Test against the three validation criteria; hierarchal preference order, a simplex structure, and an affective-cognitive parallelism.
- To explore moral competence levels; between healthcare and non-healthcare vocational fields in education and practice, investigate the dynamics and directions of moral competence across the educational or professional span, and examine the relationship between moral competence and educational factors.
- To assess the moral competence scores independently for the scenario depicting a) an act of vigilantism and b) an act of euthanasia, to explore the occurrence of a moral segmentation between healthcare and non-healthcare vocations.
- To examine the vigilantism and mercy killing moral dilemmas independently through the application of utilitarianism and deontological philosophies to investigate whether different vocational fields differ in their ethical compositions, whether this is dependent on the type of dilemma, and how this effects moral competence scores, as measured by the moral competence test, in the hope to find an explanation for moral segmentations.
- To assess individual differences through the exploration of personality and emotional intelligence and the relationship with both vocational choice and vocational span, and to further explore the extent personality pre-dispositions and levels of emotional intelligence influence moral competence and ethical compositional choice in moral dilemma analysis.
- To explore the levels of moral distress and its relationship moral competence, ethical compositions, personality, emotional intelligence and ethical climate within healthcare environments.

1.5 Definition of key terms

Moral competence: is the ability to make moral judgments (based on inner principles) and act in accordance to these judgments (Kohlberg, 1964), through deliberation and discussion, instead of violence and deceit (Lind, 2016).

Ethical compositions: refers to the philosophical entities of both utilitarianism and deontological stances.

Utilitarianism: the philosophical stance which asserts the correct action is one which takes into consideration the interests of all involved and produces the most inclusive and advantageous result for the greater amount of people, to maximise benefits and reduce costs through an objective lens (Bentham, 1781; Mill, 1879).

Deontological: the philosophical stance which asserts there are a series of moral guidelines, obligations and responsibilities which individuals must uphold in spite of the consequences or circumstantial coincidence (Kant, 2002; Waldmann & Dieterich, 2007).

1.6 Thesis outline

The purpose of this quantitative study was to investigate whether vocational affiliation influences how individuals perceive and evaluate hypothetical moral dilemmas and how this may effect measures of moral competence and the occurrence of a moral segmentation. Chapter two consists of a comprehensive literature review which mainly delineates the various limitations surrounding the use of hypothetical moral dilemmas, further highlighting the less explored potential effects of vocational affiliation and the influence this may have on measures of moral competence through the occurrence of a moral segmentation. With personality, emotional intelligence and moral distress and the relationship these hold with moral competence and ethical compositions being new avenues for exploration. Chapter three outlines the research methodology; summarising the research design and how it was conducted. Chapter's four to eight focus on the analysis and results of the research. This is followed by an overall discussion section presented in chapter nine of the report.

Chapter 2: Literature Review

2.1 Introduction

In the area of moral development, morality, as a whole, can generally be defined as a set of values for how individuals should regard one another, accompanied with acknowledgment to justice, the welfare of others and rights, and principles of right and wrong (Turiel, 1983; Vozzola, 2014). It is centred on value judgments in relation to whether one's own actions support or impair another individual's intentions and interests (Buzgova & Sikorova, 2013). Morality is a significant contributor in shaping human character, through the perception of fairness, performance of cultural norms and the concern for others (Goodenough & Prehn, 2004). Yet, despite these general terms the area of morality is arguably one of the leading contenders in the debates of scholars, researchers and philosophers alike. Speculations within the moral domain still surface regarding the many different aspects of morality, how it develops and how it should be measured. For the purposes of clarity, this report focuses on moral competence and ethical compositions. Moral competence is defined as the ability to make moral judgments (based on inner principles) and act in accordance to these judgments (Kohlberg, 1964), through deliberation and discussion, instead of violence and deceit (Lind, 2016).

2.1.1 The Dual Aspect Theory and Moral Competence

There appears to be discussion regarding the autonomous and heteronomous nature of morality emanating in the literature. As outlined by Lind (2015a); internal (autonomous) delineations portray morality as a concurrence between behaviour with an individual's own moral principles, deriving through practical reason, moral judgement, one's conscience and internal voice. Coupled with external (heteronomous) explanations, where morality is viewed as an agreement between behaviour with the beliefs and norms of external factors, such as culture and society.

Moral competence is the adeptness to comprehend one's individual intricate, diverging moral feelings, to present them to introspective reasoning and to participate in ethical discussion with friends, experts and authorities (Lind, 2000a). A name coined by Kohlberg (1964), as showing the ability to make moral judgments (based on inner principles) and act according to these judgments. Moral competence is the ability to make moral judgments (based on inner principles) and act in accordance to these judgments (Kohlberg, 1964), through deliberation and discussion, instead of violence and deceit (Lind, 2016); which embodies both the internal

(orientations) and external (ability) aspects. Implying, that a democratic citizen should be able to employ and accept arguments as a method of conflict solution; to be able to use generally recognised moral orientations to assess arguments; and possess the ability to do so, even when questioned or challenged by adversaries or by those who are in disagreement (Lind, 2008b).

Contemporary research also embodies democratic premises. Lind (2012) suggests that there are two aptitudes which are essential to democratic inhabitation; the moral judgment competence, the ability to judge and act in agreement with individual moral principle; and moral discourse competence, the capability to manage problems, and solve conflicts, on the basis of universal moral standards, through reflection and discussion rather than violence, deception and power. The actual principle of democracy depends on settling disputes through discussion, built around mutual moral principles, such as integrity, respect and justice, as opposed to force (Lind, 2008b). Democratic ideals are vital for fostering and conserving a democratic society.

Research has indicated an inclusive agreement across societies, cultures and countries on fundamental moral ideals, such as respect, justice and democracy (Lind, 1986). Inglehart and Norris (2003) utilised data from the world values survey (1995-2001) on the approval of political and social values in Western and Muslim societies. Results indicated that individuals from various cultures aim to hold democratic ideals, with 68% of both Western and Muslim societies commending democratic performance and 86% of Western citizens and 87% of Islamic citizens valuing democratic ideals.

Though, as noted by Lind (2008b), daily media reports about violent engagements, corruption and other criminal offences still continue to deter this standard, emphasising the disparity between ideals and reality. Customary, universal moral ideals are essential. The stepping stone and qualification towards democratic civil society (Lind, 2012). Lind (2008b) suggests in order to confine the gap between moral ideals of democracy and everyday life; democratic competencies must be fostered throughout education.

The dual-aspect model of moral competence (Lind, 2008a) was constructed on Kohlberg's (1964) definition that moral judgment competence is a person's capability to decide and behave according to moral ideals. The stages of moral judgment were expanded by Kohlberg, Boyd and Levine (1990), outlining morality as a competence or proficiency; not solely just an

attitude. Which separated the affective and cognitive spheres of behaviour (Buzgova & Sikorova, 2013). Likewise, Lind (2015a, 2016) suggests that morality represents characteristics of human behaviour, comprised of two observable aspects; *moral orientations* (attitudes, principles and values) and *moral competence* (moral ability); as outlined in table 2.1.

The Dual Aspect theory asserts that moral behaviour must be defined in provisions of both affective (ideals and emotions) and cognitive (competencies) features, denoting the dual temperament of moral thinking and behaviour (Lind, 2013). The affective and cognitive aspects can be differentiated and measured during moral behaviour (Lind & Wakenhut, 1985). They are viewed as aspects as opposed to components, on the notion that they can be distinguished but not detached from each other (Lind, 2015b). A complete portrayal of an individual's moral behaviour comprises of the moral principles which advises and guides behaviour (affective orientation) and the cognitive aptitudes (structure) that an individual holds when harnessing moral principles in the decision making processes; both features are required to attain an understanding of human behaviour (Lind, 2016). A sufficient measurement of moral competence should assess both processes and should be responsive to both positive fluctuations as a function of moral learning or to descending changes indicative of competence erosion (Lind, 2002).

Table 2.1

The Dual Aspect Layer of the Moral Self

Layer	Affective aspect	Cognitive aspect
Ethical reflection (conscious layer)	Articulated ethical principles	Ethical judgement and reasoning
Overt moral behaviour (unconscious layer)	Moral orientations, as they are manifested in behaviour	Moral competence, as it is manifested in behaviour

From Lind (2016)

2.1.2 Measuring Morality: The Moral Competence Test

Preceding assessments of moral judgment and moral behaviour were predisposed towards capturing moral affects, such as moral orientations, attitudes and values; with seldom recognition towards the evaluation of moral competencies (Lind, 2016). One prominent approach which ventured to measure moral inclinations through the cognitive lens through the utilisation of clinical interviews, was the Moral Judgement Interview (MJI; Colby & Kohlberg, 1987; Kohlberg, 1964).

The primary procedure of the MJI consisted of presenting participants with a series of hypothetical moral dilemmas, one renowned case being the Heinz dilemma, which evokes a moral conflict between saving a life or maintaining the law by not stealing. Participants were then asked a sequence of open-ended questions regarding the protagonist choices with the aim to obtain an insight into the participant's moral reasoning ability. These answers are then extracted into a scoring system and placed into developmental phases and stages. This measure is constructed to stimulate a participant's individual moral comprehension through their own conventions of right and wrong and how these principles are used to explain and validate moral judgments (Colby & Kohlberg, 1987). Questions are created to be more prescriptive as opposed to being prognostic in nature to generate normative decisions focusing on what one should do instead of what one would do (Elm & Weber, 1994).

The works of Kohlberg and the Moral Judgment Interview hold a monumental presence within the realm of moral psychology (Haidt, 2008) and transformed the cognitive aspect of morality into a measurable concept, prior to this the scope of morality was merely restricted to an affective sphere (Lind, 2016).

Nevertheless, this method still encounters many challenges from experimental issues to operational misconceptions. Fundamentals circulate to methodological concerns over the ponderous and inordinate application to large samples (Lind, 2016), the reliance on participants level of honesty which potentially could induce social desirability and respondent bias (Monga, 2007), disregard of vocabulary and syntactic complexity (Walker, de Vries, & Bichard, 1984), and dependence on memory processes for story particulars and unequivocal clarification of reasoning processes which may not be a pertinent measure within certain samples (McGuire, Barbanel, Brüne, & Langdon, 2015).

Moreover, shortcomings surrounding the affirmation of post-conventional deliberation, question the MJI's ability to acknowledge tacit knowledge (Rest, Narvaez, Thoma, & Bebeau, 1999; Snarey, 1985). In view of this, it is considered that not only that individuals are aware of inner and implicit mental processes, but are able to fully disclose aspects of them (Boom, Brugman, & Heijden, 2001; J. Rest et al., 1999). Seeing that the interview process relies on conscious commentaries, individuals may not be cognizant of their mental composition (Hooshyari, Delavar, Minael, & Eskandari, 2018). It is an attempt to measure unconscious reasoning through a conscious extraction, mainly through explanatory verbal reports which many believe to be unreliable and dubious (Rest et al., 1999; Lind, 1989, 2016; Hooshyari et al., 2018). It seems this approach was entangled in a web of methodological difficulties, whilst clinical interviews are considered to be more suited than behaviouristic speculations when understanding the complexities of moral dispositions (Lind, 2016).

Despite the MJI prominent impact within the domain of moral psychology, issues regarding whether or not moral dispositions can be measured in an objective and scientific manner still surface. The procedure places too much reliance on the investigators intuition and as a result can be easily biased (Lind, 2016). The majority of research employing psychometric tests tend to focus on the conscious commentaries circling around moral values and attitudes (Lind, 2008b), while these tests are considered to be objective, they do not permit the assessment of internal underlying features of individual behaviour (Lind, 2016). Lind and Nowak (2015) challenge the external assessment measures of a defined internal moral competence; a paradox of concepts, if you will. They argue that no further development within the realm of moral psychology and education will be permissible, unless the means of measuring moral competence is completely united with the internal definition.

Experimental questionnaires such as Lind's Moral Judgement Test (MJT), now referred to as the Moral Competence Test (MCT; Lind, 2008a) aim to measure structural disposition in an unbiased and objective manner. Whereby, a participant's moral competence is scaled in reference to the participant's own moral orientations (Lind & Nowak, 2015). Moral competence is constructed into the primary basis of test composition and scoring. It presents two moral dilemmas, participants are asked to evaluate the protagonist's action; showing a commitment to particular opinions about the matters presented. For each dilemma, participants are presented with six arguments in favour and six against the actions in the story. They are then asked to indicate whether they accept or reject these arguments. All

arguments were selected to represent six moral orientations, as identified by Kohlberg (1984) in a normative hierarchy; one for and one against in the each of the two dilemma stories. Building on Kohlberg's initial methodology, it aims to overcome the disparity between psychological theory and methodology, by examining ability and capability, and not just solely affective factors, such as attitudes and values (Lind, 2015c).

The Moral Competence Test (MCT) it is viewed more as an experimental behaviour design, as opposed to a psychometric test (Lind 2016), constructed entirely on theoretical considerations (Lind, 2013). Thus, response reliability or inaccuracy are related to an individual cognitive makeup, as opposed to measurement fallacies (Lind, 2001). The MCT has not undergone item analysis or reliability testing (Lind, 2001), at least not in the conventional sense. It has been validated and verified through extensive literature reviews, expert ratings and cross cultural validation studies; all of which are grounded on the research based criteria.

The first being that moral orientations are both innate and universally encountered which forms a hierarchal preference order as indicated in normative theory, irrespective of age, gender, education and social background (Kohlberg, 1964; Lind, 2016; Rest, 1973). Kohlberg's (1964) hierarchy of moral orientations has also been recognised across various cultures, age groups and social classes (Lind, 1985; Slovackova & Slovacek, 2007; Feitosa et al., 2013; Lind, 2016). A comparison between university students and prisoners showed a noticeable similarity, both groups accepted the alike moral orientations and correspondingly rejected other orientations (Lind, 2016). Which denotes a level of universal agreement that particular dilemmas entail consideration and discussion at a higher stage of moral principles when it comes to reasoning of moral problems. Though, slight transpositions have been noted between Type 5 and Type 6 and between Type 1 and Type 2 moral orientations, which can be evident when analysing the two scenarios separately, as Type 6 reasoning becomes more prominent in the mercy killing scenario and Type 5 in the vigilantism scenario (Lind, 2016). This indicates that although considered universal and stable moral orientations may be dependent on the type of moral dilemma presented (Lind, 2016).

The second criteria is the quasi-simplex structure of inter-correlations of moral orientations, meaning that adjacent moral orientations should correlate more highly than distant moral orientations (Lind, 2016). This infers a developmental sequence and a simplex structure as

outlined by Kohlberg (1958). This means for instance that Type 6 moral orientations will correlate more highly to Type 5 moral orientations and less with Type 1 moral orientations.

The third criteria asserts an affective cognitive parallelism, moral orientations and moral competence should correlate systematically and are in parallel, a correlational parallelism (Piaget & Inhelder, 1969). The hierarchal preference order of the six Kohlbergian moral orientations have been upheld and substantiated in numerous studies utilising the MCT, in varying sample types, e.g. prisoners (Wischka, 1982; Lind, 2002, 2016), as well as various cultures (Schillinger, 2006; Lind, 2002, 2016). These theoretical criteria have been used to test the validation of the MCT and have been met with success; moreover a minimum of thirty foreign language versions have been validated and certified, promoting cross cultural validity (Lee, 2005; Lerkiatbundit, Utaipan, Laohawiriyanon & Teo, 2006; Schillinger, 2006; Slovackova & Slovacek, 2007; Feitosa et al., 2013; Biggs & Colesante, 2015; Lind, 2016; Abbasi et al., 2017; Agurto et al., 2017). Revisions of the Moral Competence test to other languages or cultures go through a laborious authentication procedure in alignment with cognitive developmental theory in which certification is required (Lind, 2016).

To ensure that the use of the MCT has been utilised correctly and to check for any anomalies, the theoretical validity of the MCT will be checked against three of the validation criteria (Lind, 2016), i) moral orientations form a hierarchal preference order, ii) moral orientations inter-correlate to form a simplex structure, and iii) affective-cognitive parallelism. This will be conducted within both student populations and practice populations to examine the level and extent of universal agreement surrounding dilemma analysis in Chapter four of the report.

2.2 Moral development: from Education to Practice

Higher education has been suggested to be essential in the development of individual and professional identity (Myry, Juujärvi, & Pessa, 2013), by fostering ethically perceptive individuals competent in the application of principled moral reasoning (Flaherty & Doyle, 2014). Moral development has been shown to be a predictor of professional ethical identity development (Lloyd-hazlett & Foster, 2017). Literature reviews, such as King and Mayhew (2002) examined 172 studies which utilised the defining issues test and concluded moral development is a product of higher education whether by design or unintentionally. This is supported by a further review by Pascarella and Terenzini (2005), who reported substantial support for moral development within higher education, with the high amount of studies

conducted and the multiplicity of the samples examined. Pascarella (2006) notes that research on the impact of college and postsecondary experience on students is increasing at a remarkable rate.

2.2.1 The Effects of Education on Moral Development

There is a plenteous amount of evidence to suggest that facets, such as moral reasoning skills, increase throughout the higher education years (Cummings, Dyas, Maddux, & Kochman, 2001; Doyle & O'Flaherty, 2013; Foster & LaForce, 1999; Gfellner, 1986; Gielen & Markoulis, 2001; Kitchener, King, Davison, Parker & Wood, 1984; McNeel, 1994; Myyry et al., 2013; Paradice & Dejoie, 1991; Rest & Thoma, 1985; Rose, 2012; Shaver, 1985, 1987; Swaner, 2004). The educational experience as a whole is thought to promote moral growth and development in prosocial aspects. With life and vivacity emanating from both inside and outside the classroom, it is pulsating with compelling learning opportunities (Liddell & Cooper, 2012).

Participation in extracurricular activities outside of the classroom have been reported to have positive effects on the development of particular psychosocial areas (Brown-liburd & Porco, 2011; Hood, 1984). Brandenberger and Bowman (2015) collected data from over 14,000 undergraduate students and reported that primary college encounter forecast development on prosocial factors, leading forecasters include more active based learning, diversity engagement and the interaction with various perspectives. Klimenko, Surde, Muir, and Fuaad (2018) utilised the Moral Competence Test (Lind, 2008a) and demonstrated that participation in online courses which do not explicitly cover moral content cultivated moral growth, offering further support to the positive effects of higher education on moral reasoning. The research further reported that engagements in group discussions increased moral competence scores, confirming that positive peer interaction can positively influence student development.

Further studies have shown negative interactions with diverse peers is associated with low levels of development in moral reasoning (Mayhew & Engberg, 2010). Working within groups, allows for discourses and interaction to take place between students crucial for both moral and prosocial development (Schuitema, Dam, & Veugelers, 2008), as well as reflective practices and moral exemplar methods (D. Christensen, Barnes, & Rees, 2007), diversity courses (Mayhew, Seifert, & Pascarella, 2012; Parker III, Barnhardt, Pascarella, & Mccowin, 2016) perspective taking (Mayhew et al., 2012), the use of more active and reciprocal based

methodologies (Carmichael, Schwartz, Coyle, & Goldberg, 2019; Mouratidou, Goutza, & Chatzopoulos, 2007; Solum, Maluwa, Tveit, & Severinsson, 2016; Torabizadeh, Homayuni, & Moattari, 2018), and integrated ethics courses (Baykara, Demir, & Yaman, 2015; Desplaces, Melchar, Beauvais, & Bosco, 2007; Flynn & Buchan, 2016; Friedrich et al., 2017; Holm et al., 1996; Park, Kjervik, Crandell, & Oermann, 2012; Self & Olivarez, 1996; Welton, Lagrone, & Davis, 1994). Though the effects of ethical interventions on the moral development of students remains inconclusive (Arfaoui, Damak-ayadi, Ghram, & Bouchekoua, 2016; Burks & Sellani, 2008; Khatiban, Falahan, Amini, Farahanchi, & Soltanian, 2018; Murrell, 2014; Schmailing & Blume, 2016; Traiser & Eighmy, 2011)

Though these experiences may vary from institution to institution. Educational administrators may need to pattern experiences specific to campus environments to enhance moral development (Hanson & Moore, 2014; Hanson et al., 2017; Mayhew, 2012). Maeda, Thoma, and Bebeau (2009) reported that variations in individual moral reasoning may be accountable to the educational and broader regional contexts.

Conversely, not all agree that educational endeavours aid moral development, some studies have reported no relationship between education and moral development (Bouhmama, 1988; Galotti, 1988; Mustapha & Seybert, 1989), whilst others claim that university education in general does not facilitate moral growth (Hummel, Pfaff, & Rost, 2018). Concerns are circulating regarding the ethical values and behaviours of high school and undergraduate students (Traiser & Eighmy, 2011); namely how students may be cultivating less altruistic attitudes and more consumed with self-serving ambitions (Bok, 2001). Mechler and Bourke (2011) found higher levels of autonomy to be associated with low moral judgment development scores in a sample of undergraduate students. Interestingly, Rana and Perveen (2014) suggest that mobile phones may cause declines in the moral values of students. Ferrell, Fraedrich and Ferrell (2008) conducted a survey of 25,000 high school students, results indicated that 62% of the sample disclosed cheating on an exam, 35% stated they had shoplifted and 25% admitted cheating to succeed in sports.

To elucidate the relationship between education and moral development, numerous studies have endeavoured to examine differences in moral reasoning between different academic disciplines; results of which have been determined to be inconclusive (King & Mayhew, 2002). St. Pierre, Nelson and Gabbin (1990) reported that students on accounting or other related business subjects, displayed lower levels of post-conventional moral reasoning, when

compared with psychology, mathematics and social work students. Covey (2006) in a study of undergraduate students found that 75% reported cheating in order to increase their chances of graduate acceptance. Alike, McCabe, Butterfield and Trevino (2006) found comparable results, with 56% of business students owing up to cheating at least once within an academic year, as opposed to 47% of non-business students. Dissimilarly, Snodgrass and Behling (1996) reported no such differences between business and non-business academics. (B. H. Kim & An, 2017) found there were no significant differences in moral development between nursing and advertising students. Cory (2015) reported subtle differences in moral disengagement levels between business and science undergraduate students.

Kohlberg and Kramer (1969) reported the possibility of higher education encouraging moral regression as opposed to moral growth, finding that one fifth of students in their middle class sample decreased in moral maturity scores. This discovery has sparked many deliberations. Firstly, it dissents the invariant assumption held heavily in the cognitive developmental stage model and secondly, opposes the fundamental parallelism of both cognitive and moral advancement, which emphasises the requirement and practicality of educational efforts (Lind, 1985).

Lind (1985) conducted a study examining the possibility of a moral regression, questioning whether these findings indicate an actual regression, or whether they present an overturned form of progression, obscured by research method errors. The sample of the two year longitudinal study included 844 German university students from various fields of study. Despite, the fact that a two year study may not have been effective when studying a six stage development model, the findings supported Kohlberg's assumption of stage invariance, with a slight progression towards a higher competency to judge social dilemmas. Suggesting, the results in Kohlberg and Kramer's (1969) study were not true signs of regression and that higher education induces moral progression.

2.2.2 Moral regressions in medical and healthcare vocations

The most notable area of concern with regards to a moral regression or stagnation surrounds the medical and healthcare curriculum and vocation. The results of which are slightly inconclusive, yet generally support the notion of a moral regression throughout education. Undoubtedly, it is vital and useful to understand how the assessment criteria and tools have been applied, possibly influencing the understanding of these issues.

Studies utilising version of the moral Judgement Interview (MJJ; Colby & Kohlberg, 1987; Kohlberg, 1964) generally support reports of regression or a stagnation in moral reasoning throughout medical education. Self et al. (1993) reported that a typical expected increase in moral reasoning did not occur over the four years of medical education, indicative of a stagnation in moral development. Helkama et al. (2003) reported that within the first two years of medical education moral reasoning scores significantly decreased. Patenaude et al. (2003) noted a levelling in the moral development scores of medical students, again indicative of a moral stagnation, the authors go on to suggest that a possible hidden medical curriculum in medical education which may inhibit moral development of its student.

Research employing the Defining Issues Test (DIT; Rest, 1979) is more robust and have accessed professional practice also, yet for this reason results are slightly more variegated. Murrell (2014) found no significant difference in moral reasoning between curricular year and medical education and noted no progress in the four year educational span. This unchanging moral development over a period of four years within medical education has been documented in further research (Self & Olivarez, 1996; Self et al., 1998). Other studies have also noted little or no differences between curricular years though whether this is a result of a moral stagnation remains unclear (Morton et al., 1996; Fleisher et al., 2003; Kim et al., 2004). Hren et al. (2011) in a longitudinal study demonstrated that students regressed from post conventional to maintaining social norms schema based reasoning, after entering the clinical part of the curriculum. Research into related healthcare vocations also support the possibility of a regression. Prescott, Becket and Wilson (2014) reported that the moral reasoning of pharmacy students in UK was higher in the first year of study compared to students final year. Swisher (2010) noted that physical therapists mean post conventional scores were lower than previous research into nurses, students and physicians.

On the contrary, a selection of studies using the Defining Issues Test (Rest, 1979) have also reported increases in moral reasoning throughout healthcare and medical education. Auvinen, Suominen, Leino-kilpi and Helkama (2004) reported that final year nursing students displayed higher moral judgment than first year students. Latif (2009) noted that pharmacy students displayed significant levels of moral development throughout the educational span. Self, et al. (1998) showed an increase in moral reasoning scores throughout medical education, but was partially explained by the introduction of a first semester medical ethics course involving small group discussion on moral development. Lee, Moon, Kim, Son and Hong (2006) reported a decrease in moral reasoning scores between the third and fourth year

of study, these increased again in the fifth and sixth year of medical education, which suggests that a regression or stagnation in educational year may occur but may increase through the introduction of clinical practice.

Other research utilising less conventional measures generally support the stagnation and regression claims proposed to occur with healthcare and medical education. Self, et al. (1996) compared the levels of moral reasoning, using the Sociomoral Reflection Measure (Gibbs & Widaman, 1982) of first year medical students ($n = 30$), with their levels of moral reasoning four years after, prior to graduation. It demonstrated that the experience of medical students appears to hinder an increase in moral reasoning development. Freitas et al. (2006) reported low levels of moral development in a sample of dental students; utilised a version of the Heniz dilemma. Hebert et al. (1992) noted that ethical sensitivity scores tend to decrease after the second year of medical training at undergraduate level. Chalmers et al. (2011) reported a regression and levelling in moral reasoning within a sample of final year medical students. However, transitions into professional practice may support the claim that moral development may increase through the introduction of clinical practice. Baldwin and Bunch (2000) in a sample of orthopaedic surgeons reported a heterogeneity in scores, ranging from what is expected at the level of junior high students to that of moral philosophers. The authors go on to highlight that this level of variability poses great difficulty to plan educational ethics courses.

Measures of moral development, usually attempt to measure moral attitudes and so questions emanate with regards to whether the results of such studies, actually display a true regression in moral competence. Efforts to measure moral competence scores of students and professionals alike, in sync with the Dual Aspect theory has been attempted. Outcomes of which yield similar and equally concerning results.

Lind (2000a) examined the question whether moral judgement competence develops or regresses during medical education and whether such regression is related to certain aspects of medical curriculum; through exploration of a six year longitudinal study and two cross sectional studies. Interestingly, a noteworthy descent was identified in moral judgment competence. Medical students display a significant regression, particularly within the first two years of study. It has been noted that competence scores of non-medical students can acquire substantially higher scores than medical students.

Further studies support this claim. Slovackova and Slovacek (2007), collected data from 380 medical students and reported that medical students C-index decreased according to age and the number of years study undertaken. Feitosa et al. (2013) explored medical students in the first semester and eighth semester of study within Brazil and Portugal. A regression in moral competence was noted from the first to the eighth semester within the Brazil students and a moral stagnation within the Portuguese population, although the latter finding was not significant. It was also found, that those students in the oldest age range exhibited lower C-scores. However, the validity and interpretation of these results should be treated caution as they are unable to claim a decline in moral judgement competence, due to the non-longitudinal study designs. Furthermore, Agurto et al. (2017) assessed the moral competence of physicians in Chile and found that moral competence scores varied widely though averaged at 20,9, which is the least amount needed to liaise in a social environment (Lind, 2016). The research also reported a positive influence of postgraduate studies and noted a significant decrease in moral competence between 16 and 20 years of practical experience.

This phenomenon has been suggested to be associated with a lack of educational opportunities and a learning environment which fails to support a student's moral development. Researchers conclude that moral development, does not occur within medical schools, it may remain stationary or even regress (Self & Baldwin, 1998). Lind (2000b) noted that medical students express a high level of moral competence at the start of their studies, but within the first two years it plateaus or regresses. The regression may be followed then by a slow increase in competence towards the end of their studies. It has been noted that despite a greater requirement for morally adept individuals in this profession, throughout learning more emphasis is placed on the practical and technical aspects of the role and less on the moral and human development facets (Wolf, et al., 1989; Lind, 2000a). Medical students cynical attitudes increase, have less contact with peers, less time participating in group work and feel a higher level of competition and pressure (Wolf et al., 1989; Lind, 2000a, Coles, 1998 ; Bok, 2001). Coles (1998) notes that medical education entails too much information and fosters unsympathetic attitudes. Lind (2000b), suggests that medical education offers too limited opportunities for taking up roles, which is a crucial element for the development of moral competence. Teaching may be restrained to declarative text book knowledge (Lind, 2008b). Park et al. (2012) expressed concerns regarding the lack of recognition about the significance of teaching ethics on nursing courses, which is essential for students to develop skills for ethical decision making, moral sensitivity and moral reasoning.

Furthermore, governing teaching methods such as lectures and testing declarative text book knowledge only requires attention and listening (Lind 2008b; Lind, 2016); depressing discussion, role taking, responsibility and guided reflection (Kohlberg, 1984; Sprinthall et al., 1994; Lind, 2000b; Lind, 2008b; Lind, 2016). It appears evident that the development of moral proficiencies are likely to be dependent on the delivery of supportive systems united with prospects which are built on responsibility and guidance, critical for moral development (Lind, 2000b). Higher education which nurtures an interchange of perspective on social issues, reasoning and institutional principles of student integrity and responsibility may be vital factors in moral development (King & Mayhew, 2002).

The institution of medicine is, unquestionably, a moral industry and thus, the moral development of medical students should be considered a primary concern (Wiggleton et al. 2010). Medical doctors are placed in a role of authority early on in their career and are expected to make highly significant decisions, regarding life and wellbeing (Lind, 2000a; Hegazi & Wilson, 2013). Therefore, it must be asked whether the regression in moral competence can be related to deficiencies in the present healthcare and medical education or whether these reported deteriorations are stated for other reasons.

2.2.3. Moral Segmentations

Hegazi and Wilson (2013) collected data over two consecutive years, from 2011 ($n = 394$) to 2012 ($n = 486$), from the School of Medicine at the University of Sydney, Australia. Findings, disputed perspectives on the trajectory route and growth of moral reasoning, a negative correlation was found between the C-index score and with both age and years of study. However, it was connoted, that the results did not indicate a true regression, but were context specific; rather reflective of a moral segmentation. The leading reduction in scores was related to the mercy killing scenario, as opposed to the vigilantism scenario. The authors go on to suggest that possible explanations circulate around the effect of a hidden curriculum in medical education, the loss of idealism and individuals being drawn more towards a legalistic focus with regards to moral judgment. This legalistic tendency was also reported by Murrell (2014) further noting that medical students failed to show a tendency towards post conventional reasoning but displayed higher preferences for conventional means, an inclination to think within a set of rules.

This insight draws some interesting questions in relation to the hypothetical dilemma based measures being used to examine moral development within medical and healthcare vocations. This illustrates the significant of context when interpreting data. According to cognitive developmental models of moral development, the mental stages of moral judgement competence are referred to as a structured whole. This means that stages are not detached reactions, but rather an overall array of thought, which are consistent across various issues. Colby and Kohlberg (1987) reported that out of a possible nine dilemmas participants attained their most dominant stages approximately three thirds of the time, indicating a general consistency in modes of thought.

A comparison between university students and prisoners showed a noticeable similarity, both groups accepted the alike moral orientations and correspondingly rejected other orientations (Lind, 2016). Which denotes a level of universal agreement that particular dilemmas entail consideration and discussion at a higher stage of moral principles when it comes to reasoning of moral problems. Though, slight transpositions have been noted between Type 5 and Type 6 and between Type 1 and Type 2 moral orientations, which can be evident when analysing the two scenarios separately, as Type 6 reasoning becomes more prominent in the mercy killing scenario and Type 5 in the vigilantism scenario (Lind, 2016). This indicates that although considered universal and stable moral orientations may be dependent on the type of moral dilemma presented (Lind, 2016). Bataglia, Schillinger-Agati and Lind (2003) notes that due to certain features of the mercy killing scenario in the MCT, such as it discusses a life and death situations, it may be slightly more demanding and stage six reasoning may be more clearly preferred over stage five reasoning, when compared to the vigilantism scenario. Yet, the authors assert that both dilemmas should elicit moral competence in a similar way and that moral segmentation should not occur.

However, research has contended the notion of a homogeneity postulate with some studies displaying a direction towards more a heterogeneous claim. Rest (1979) notes that individuals attain a set of moral concepts in a stage like order, yet they also attain a set of moral schemas which are related to specific context. This suggests that the level of moral reasoning or principle is highly dependent on the context of the moral problem; context bound competencies. Krebs et al. (1991) further contend that moral judgement is not organised in a homogeneous formation and support the claim that individuals are morally flexible and evoke different stages in respond to different dilemmas. Beck et al. (1999) created business specific dilemmas and found individual patterns of moral reasoning are context sensitive. More

recently, Handziska (2006) compared a revised version of the MCT with socio-political issues with the regular version of the MCT, in a sample of Macedonian adolescents. Findings displayed lower moral competence levels on the revised version, suggesting that reasoning about socio-political issues within a time of crisis negatively influences moral competence. Further reports have also opposed the homogenous assumptions (Zeidler & Schafer, 1984; Senger, 1985).

Schillinger-Agati & Lind (2003) documented a moral segmentation and reported that students applied dissimilar levels of moral competence dependent on the type of dilemma presented; further analysis revealed that participants had lower moral competence scores on the mercy killing scenario. The authors suggested that religion could be probable explanation, though Bastaglia and Schillinger-Agati (2002) in a separate study reported that both religious and non-religious groups displayed higher moral competence in the vigilantism scenario as opposed to the mercy killing scenario. Overall, the authors concluded that moral segmentation of this kind was due to the cultural context and characteristics of the Brazilian population, further claiming that the issue of euthanasia is rarely discussed in detail. On a further note, the opinion commitment strength was examined and it was found that participants who extremely disagreed with the mercy killing scenario had lower moral competence compared to those who only moderately opposed it. Lind (1985) also found variances between those who extremely opposed the issue compared to those who moderately opposed. This suggest that individuals who are against euthanasia find it extremely challenging to judge and deliberate on the topic (Lind, 2000).

As, a result of this finding, Bataglia et al. (2003) developed a new judges dilemmas for Brazilian culture, which involved comparable moral principles to the mercy killing scenario, but discussed issues of torture; findings revealed that segmentation did not occur. At the time of writing Bataglia et al. (2003) also contended that no studies within Europe had reported a moral segmentation.

However, more recently in the works of Feitosa et al. (2013) in a sample of medical students documented a moral segmentation as moral competence scores were higher in the worker dilemma. Also as previously mentioned Hegazi and Wilson (2013) also reported a moral segmentation within medical students when analysing the mercy killing scenario, with legalistic tendencies (see also Murrell, 2014). Possible explanations for these results turn to the influences of medical organisational culture on the moral development of medical and

healthcare students, as it documents a transformation from post-conventional on one's own accord towards more conventional and legalistic orientations (Hegazi & Wilson, 2013). Patenaude et al. (2003) noted that medical students upon entry displayed higher levels of ethical consideration in decision making process, which reduced over the three year educational span. Ham (2004) found that when comparing nursing students and experienced nurses, new graduated nurses primarily acted based on moral codes, over time they conformed to environmental pressures and the expectations of others; there was a significant negative correlation between years of experience and the level of principled thinking.

Yet, if the reported moral regressions or stagnations within medical and healthcare professions are due to the occurrence of a moral segmentation as a result of context specifics detailed within the use of hypothetical dilemmas. It could be anticipated that no such aspects occur within other vocations. Nevertheless, researchers also express concern in relation to business and economical courses. Media reports of economic crises and corporate scandals have circulated back to education, with the concern that managers lack moral judgement competence (Hummel et al., 2016). It could be anticipated that educated managers or directors, of whom behave unmorally in practical settings are unresponsive of ethical issues, as a result of their education (Desplaces et al., 2007). Theories schooled in business education are said to produce moral misbehaviour (Elegido, 2009), with the primary focus being on profit maximisation, at the expense of promoting moral decision making abilities (Hummel et al., 2016); financial obligation being the priority. Hyland (2011) suggests that egocentric outlooks within business practice, can lead to substantial consequences. Hummel et al. (2016) reported that business and economic students exhibited the lowest moral competence score, out of six other faculties; but further concluded that university education in general does not support student moral development. On the contrary, Krick et al. (2016) reported no differences in the moral competence scores between business students with students of other subject areas.

2.3 The use of Moral Dilemmas and embedded Ethical Compositions

Whether the methodological design choice consists of clinical interviews as proposed by the Moral Judgement Interview or contemporary experimental questionnaires such as the Moral Competence Test, hypothetical moral dilemmas have been a popular choice for scholars exploring moral dispositions. Abstract driven hypothetical scenarios have acquired a collective recognition as a convenient method when exploring decision making in particular

situations deemed unethical or unattainable and based on the notion that forthcoming hypothetical plans are encapsulated within difficult real life decisions (Haghani & Sarvi, 2018; Kang et al., 2011). They are a constructive instrument to examine the dynamics of fundamental internal processes which comprise the grounds of moral disposition (Christensen & Gomila, 2012; Greene, 2007; Haidt & Graham, 2007; Hauser, Cushman, Young, Jin, & Mikhail, 2007; Nichols & Knobe, 2007). As a result, scholars through the construction of a number of moral dilemmas utilise and rely on these exchangeable hypothetical standpoints.

2.3.1 Ethical Compositions and related characteristics

A moral dilemma consists of a short vignette which describes a story containing a level of moral discord, whereby an individual is drawn between opposing moral courses. It manages to bring to light the mismatch between the two options and following consequences. The conflict arises usually due to the fact that both routes have significant moral explanations to aid decisions (Christensen & Gomila, 2012). Cognitive ability and its role in moral judgement has been a focal point within moral development domains for an extensive time. Whereas, descendant theories acknowledged and endorsed the roles of emotion and intuition (Haidt, 2001). More recently some theories have constructed a combination of these two standpoints (Greene, Sommerville, Nystrom, Darley, & Cohen, 2001), suggesting that cognitive and emotion centred arrangements are encompassed in moral reasoning.

The dual process paradigm (Greene et al., 2001) suggests that moral judgment is propelled by two structures conversely, one being more rational construction deriving on cost-benefit calculations, the other considered more quick paced and emotionally driven. Whereby, the philosophical depiction of utilitarian and deontological concepts have been integrated and involve an effective system comprising of both cognitive and affective assessments. Affective activations to notion of harm being compatible with deontology and cognitive calculations of consequence being coherent with utilitarian conventions. Greene, Morelli, Lowenberg, Nystrom, and Cohen (2008) provided support for an interference effect between controlled cognitive processes and utilitarian evaluations. Hutcherson, Montaser-Kouhsari, Woodward, and Rangel (2015) noted that emotional and utilitarian evaluations are calculated separately yet laterally, they are then unified into a comprehensive moral reasoning.

One prevalent method to investigate this theory are the sacrificial series dilemmas (Foot, 1967). The use of these style of dilemmas and most alike capture the conflict between the contrasting philosophical stances or ethical compositions, utilitarianism (consequentialist)

and deontological normative ethics (duty based ethics); generally the decision to save more lives at the expense of less or following moral rules such as not to kill (Bostyn et al., 2018; Broeders et al., 2011).

Utilitarianism is a moral concept asserting that the correct action is one which takes into consideration the interests of all involved and produces the most inclusive and advantageous result for the greater amount of people, to maximise benefits and reduce costs through an objective lens (Bentham, 1781; Mill, 1879). A cost benefit calculation regulated by positive and negative assessments of consequences which ultimately serves the greater good (Greene, 2007; Broeders et al., 2011). Utilitarianism is a combination of hedonism and consequentialism. Hedonistic utilitarianism determines the correctness of an action based solely on the amount of pleasure it produces and the amount of pain it reduces, this pleasure can take many forms such as happiness or benefit (Bentham, 1971). This is also referred to as the greatest happiness principle which defines moral acts as ones which endorse utility, which is happiness minus pain (Mill, 1879). These decisive routes are considered to be structured, contemplative and coherent as opposed to deontological means which are viewed as being more innate, instinctive and emotionally charged (McDonald, Defever, & Navarrete, 2017). Li, Xia, Wu, and Chen (2018) reported that analytic thinking styles associated with utilitarian tendencies.

In truth, deontological domains embody a different outlook entirely, which asserts there is a series of moral guidelines, obligations and responsibilities which individuals must uphold in spite of the consequences or circumstantial coincidence (Kant, 2002; Waldmann & Dieterich, 2007). Thus, individuals evaluate whether the aspects of their actions fulfil particular moral duties regardless of whether or not those actions lead to a greater outcome (Broeders et al., 2011).

Moral dilemmas are said to develop when individuals anticipate the opposing forces of utilitarian and deontological philosophies, each of which are thought to be produced by specific cognitive channels within the mind (Green et al., 2001; Greene, 2007, Greene, 2013; McDonald et al., 2017). These deliberations are driven by embedded moral orientations e.g. not to harm others. Moral orientations are suggested to be innate and universally encountered (Lind, 2016). A comparison between university students and prisoners showed a noticeable similarity, both groups accepted the alike moral orientations and correspondingly rejected other orientations (Lind, 2016). Which denotes a level of universal agreement that particular

dilemmas entail consideration and discussion at a higher stage of moral principles when it comes to reasoning of moral problems. Kohlberg's (1964) hierarchy of moral orientations has also been recognised across various cultures, age groups and social classes (Lind, 1985; Slovackova & Slovacek, 2007; Feitosa et al., 2013; Lind, 2016). Moral orientations are 'the internal force which directs and energises behaviour' (Lind, 2016, pg. 53). These can impact hypothetical moral decisions even when the option to impose harm would aid the greater good (FeldmanHall et al., 2012).

An extensive amount of research supports the idea that the dismissal of harm is connected to affective systems and that the admission of harm which serves the greater good is linked to cognitive channels. Enikolopou, Medvedeva and Voronstova (2019) reported an increase in utilitarian preferences were associated with decreases in the ability to recognise emotions of others, being able to assess individual emotion and the ability to control emotion.

Deontological thinking seems to be generally directed by negative affect (Amit & Greene, 2012; D M Bartels, 2008; Greene et al., 2008; Greene, Nystrom, Engell, Darley, & Cohen, 2004; Greene et al., 2001). Christensen, Flexas, Calabrese, Gut and Gomila (2014) found deontological outlooks to be more emotionally charged, but participants were not necessarily quicker in judgment speeds. Saavendra, Mola, Gancedo & Reyna (2015) conducted a systematic review on moral emotions in social dilemmas and reported that anger and disgust usually inhibits behaviour.

The violation of a moral principle can be emotionally disturbing (Milgram & Sabini, 1978; Haidt, 2003). Decisions within the sacrificial dilemmas tend to be driven by a decision to minimise unpleasant emotional states (Pletti, Lotto, Tasso, & Sarlo, 2016; Tasso, Sarlo, & Lotto, 2017). Gawronski, Conway, Armstrong, Friesdorf and Hütter (2018) reported that alternatively instead of an aversion to causing harm, the emotional reaction motivating deontological outlooks, are more likely provoked by the idea of violating a moral norm. While a decrease in deontological judgements and an increase in utilitarian responses tend to be guided by positive affect (Valdesolo & DeSteno, 2006), though different affective structures may have specific cognitive corollaries (Strohmingner, Lewis, & Meyer, 2011).

Alternatively, Manfrinati, Lotto, Sarlo, Palomba, and Rumiati (2013) noted that emotional responses are present in both deontological and utilitarian responses. Zhao, Harris, and Vigo (2016) found trait anxiety to hold a unique utilitarian tendency. Sarlo, Lotto, Rumiati, and Palomba (2014) reported that anxiety and unease influence behavioural choices and emotion

related cortical activity in the footbridge sacrificial dilemma. Skoe, Eisenberg, and Cumberland (2002) reported that upset was related to how important the participants perceived them and how difficult they were.

Generally, utilitarian thought processes are considered to be more logical and calculated through the deliberation of various outcomes (Duke & Bègue, 2015; McDonald et al., 2017). Research tends to support the notion that utilitarian decisions are the morally appropriate option as they are more reflective and less emotionally arbitrated (Foot, 1967; Greene et al., 2001; Nichols & Mallon, 2006; Quinn, 1989; Tassy et al., 2011; Valdesolo & DeSteno, 2006). This level of cognitive skill and restraint has been associated with time and working memory capacity. Suter and Hertwig (2011) found that faster response times were associated with more deontological responses, suggesting that under time pressure individuals are less likely to provide utilitarian outputs. Moore, Clark, and Kane (2008) reported that individuals with higher working memory capacity were more likely to choose utilitarian outcomes.

Though, not all see utilitarian moral decisions as reflective of deliberation, overall portraying the morally correct action. Others have associated utilitarian responses with a diminished perception of responsibility (Franklin, McNally, & Riemann, 2009); higher explicit hope to gain power (Sussenbach & Moore (2015); impaired social cognition (Duke & Bègue, 2015); greater levels of anger; and testosterone (Montoya et al., 2013; Ugazio, Lamm, & Singer, 2012). A large body of research link utilitarian inferences to a reduced aversion to carrying out harmful acts, a lack of empathetic concern, and subclinical psychopathy and Machiavellianism (Aktas, Yilmaz, & Bahçekapili, 2017; Bartels & Pizarro, 2011; Gleichgerrcht & Young, 2013; Kahane, Everett, Earp, Farias, & Savulescu, 2015; Koenigs, Kruepke, Zeier, & Newman, 2012; Koven, 2011; Patil, 2015; Rozil, Svegar & Kardum, 2018; Takamatsu & Takai, 2019; Wiech et al., 2013).

2.3.2 Caveats, limitations and potential biases

Despite the stature and prominence of hypothetical choice data within the realms of moral psychology. Deliberations question the validity and extent this speculative sense of morality can forecast actual behaviour and decision making in real life situations (Bostyn et al., 2018; Crone & Laham, 2017; Haghani & Sarvi, 2018; Kang et al., 2011; Tassy et al., 2013; Teper et al., 2011). Individuals may be capable of determining what they ought and should do, but actually undertaking it is an entirely different matter. What we have here are two extreme, arguably juxtaposed points; hypothetical and real life. A moral hypocrisy sought of speak

(FeldmanHall et al., 2012). “All people desire the good, but vary greatly in regard to their ability to attain good” (Lind, 2016, p. 13). The aspiration for good might or virtue signalling (Everett et al., 2016) might actually be what is being measured and captured in hypothetical choice data.

This disparity between hypothetical decision making and real life action has not gone undetected within the realm of moral psychology. Bauman et al. (2014) affirm that sacrificial dilemmas in particular the popular trolley quandary, are more comically entertaining as opposed to sobering, they are unrealistic, and they do not obtain the same psychological processes as moral situations occurring in real life. Patil, Cogoni, Zangrado, Chittaro and Silani (2014) compared moral judgements between a virtual reality environment and textual descriptions, and found utilitarian judgments to be more prominent in the virtual setting, despite non-utilitarian judgments being reported in the same dilemma in the textual settings. Francis et al. (2017) verified this and found higher utilitarian preferences in the virtual environment compared to traditional measures, noting that questionnaire assessments are contextually impoverished. This suggests emphasises the possible incongruence between a simulated moral decision and moral judgment, and that the contextual staging of moral dilemmas is a significant factor for consideration. Furthermore, Bostyn et al. (2018) assessed the extent hypothetical dilemmas reflect real life decisions, through false electric shocks administered to a mouse. The authors concluded that hypothetical dilemmas are not reflective of actual behaviour and hold trivial predicative value, possible reasons include an individual’s lack of experience with the anticipated dilemma leading to a distortion in judgment.

Research from varied domains offers significant evidence proposing that humans are biased in their hypothetical valuations (Blumenschein, Blomquist, Johannesson, Horn, & Freeman, 2008; Murphy, Allen, Stevens, & Weatherhead, 2005). The construction of sacrificial style hypothetical moral enquiries may in fact impede any development on the understanding of moral cognition, as it is highly unlikely that not only are individuals less likely to encounter these extreme scenarios, if they did the types of utilitarian decisions presented to them in the dilemma stories would be a rare occurrence in real life (Knutson et al., 2010).

Like any other complex system moral cognition is highly dependent on multifaceted cognitive channels which assimilates socio-emotional factors, for instance contextual cues, rewards or punishments, previous experiences or consequences (Bandura, 1989).

Contemporary research focusing on reputational concern, self-preservation and social impressions provide new insights into the link between these elements and decision making in moral dilemmas. Rom, Weiss and Conway (2017) found that participants appraised individuals who embraced deontological outcomes as being warmer, but less competent than those who supported utilitarian outlooks. Rom and Conway (2018) noted that self-preservation forms moral dilemma judgements, which stem from more than cognitive and affective processes, further concluding that multifaceted social considerations may play a casual role in moral dilemma assessments. Lee, Sul and Kim (2018) reported that reputational concern coupled with the judgement of others could lead to a sequence of objective orientated behaviour for the self-preservation of warmth, and in turn this may increase deontological reasoning in moral dilemmas. More recently, Reynolds, Knighten and Conway (2019) conducted an experiment on self-awareness through the manipulation of mirror presence and found that deontological choices are partially bound by self-awareness and individual image concern. Moreover, deontological moral choices have also been linked to partner choice selections (Everett, Pizarro, & Crockett, 2016) and perceptions of trust (Sacco, Brown, Lustgraaf, & Hugenberg, 2017), whereas utilitarian choices have been connected with unfavourable character appraisals (Uhlmann, Zhu, & Tannenbaum, 2013).

Individual perceptions may further lead to stereotypes and prejudice. Fiske, Cuddy and Glick (2007) reported that individuals who are perceived as being warm and competent obtain consistent positive emotions, on the contrary those who are viewed as being deficient in warmth and competence elicit negativity; these capacities may lead to interpersonal and intergroup social cognition. This in/out group variable tends to be overlooked and under reported within lines of scientific enquiry, but displays a great potential as it uncovers a routine bias within individual mental capacity (Christenson & Gomila, 2012). Cikara, Farnsworth, Harris and Fiske (2010) through neuroimaging found that in a context of a dilemmas where one person was sacrificed to save five people, participants were more likely to save in-group members considered to be warm and competent, whereas it was deemed morally acceptable to sacrifice extreme outgroup members rated as less competent and less warm. The authors overall concluded that intergroup biases and even stereotypes impact neural systems significantly when making moral decisions.

A further bias involves the prospect of story pull, which proposes that people apply various levels of moral reasoning reliant on their familiarity and potential previous involvement which in turn may prime a certain response, dependent on whether individuals identify with

the protagonist, whether they have experienced a comparable situation, or they completely grasp the conflict of the dilemma presented (Elm & Weber, 1994). For instance, Magowan and Lee (1970) reported higher levels of moral reasoning when participants indicated higher levels of experience and familiarity with the dilemma proposed. Therefore it is imperative that researchers even when analysing hypothetical choice data are aware of such intricacies.

Furthermore, variations in the contextual elements of a moral dilemma may impact moral decisions. For instance, there is an increasing amount of evidence suggesting that if moral dilemmas are considered to be more 'up close and personal' in terms of proximity and level of involvement results may shift from utilitarian stances to being more deontological in substance (Y. Chan, Gu, Ng, & Tse, 2016). Cecchetto, Lancini, Rumiati and Parma (2019) controlled body odours and found that the presence of body odours influenced participants perception of potential victims in the scenario, people identified the victims as more real which triggered harm avoidance. It seems that when individuals have to be more physically involved the less likely willing they are to inflict harm in hypothetical dilemmas. This could partially be due to these acts requiring the execution of an action rather than the construction of a theoretical decision (Ugazio et al., 2012).

This alteration is highlighted most in the comparison between the traditional trolley dilemma and the footbridge dilemma. Participants in the trolley dilemma are most likely to kill one person to save the lives of five others, they do this by choosing to flip a switch. However, in the footbridge dilemma there is a collective unwillingness to harm another by physically pushing them in front of the trolley, despite saving more lives (Greene et al., 2001).

Explanations for this alteration circulate to instinctual emotional and physiological drives. Greene (2008) using functional magnetic resonance imaging found that both emotional responses and aversion to cause harm increased in up close and personal dilemmas. Skoe et al. (2002) noted that emotions play a fundamental role in moral cognition, as the more upset participants reported the more difficult and important they found scenarios. McDonald et al. (2017) stated that physiological arousal could in fact be part of the affective processes which overall purpose is to prevent harmful actions against others. Alternatively some research as highlighted an increase utilitarian decision if the number of people involved in the decision increases and if participants are close to the victim (Cao et al., 2017; Migliore et al., 2019). Thus it would seem that alterations to levels of proximity, the degree of physical involvement and even the level of familiarity with the proposed victims can influence moral decision making.

Moreover, the paradoxical relationship between utilitarian prospects and undesirable traits such as psychopathy have sparked many deliberations over measurement concerns. Research suggests a minimal relationship between the judgements set out in sacrificial hypothetical dilemmas and true utilitarian stances (Kahane, 2015). The use of sacrificial dilemmas have been suggested to unsuccessfully distinguish between those individuals who sanction utilitarian choice due to reduced emotional reactivity and those who sanction genuine welfare based utilitarian ethics (Bartels & Pizarro, 2011). Rosas, Viciano, Caviedes and Arciniegas (2019) found that some participants in their study expressed genuine moral concerns in their utilitarian responses. Other note that choosing to endorse harm in the context of hypothetical dilemmas does not equate to an impartial concern for the greater good (Kahane et al., 2015). Therefore, it is not that utilitarian is directly associated with negative anti-social traits like psychopathy and lower empathic concern, but rather how utilitarianism is being measured as it does not reflect true utilitarian views and outlooks.

Whilst others report that the strong connection between emotions, whether a deficit or stimulation, and how individuals judge moral dilemmas may have been overemphasised, Horne and Powell (2016) noted that moral dilemmas do induce a strong emotional reaction, but further contended that this was only weakly associated with moral judgment.

FeldmanHall et al. (2012) revealed a contradictory perception, they reported that participants were more likely to inflict harm for momentary gain under real conditions than under hypothetical conditions, on the contrary to what participants believed people would do. This reveals not only the stark difference between thinking and action but highlights that the influence of harm aversion dissipates as bearing motivational influences such as financial profit become more prominent. Bialek, and De Neys (2016) reported that participants with higher deontological outlooks were slower and less confident about their decisions when solving conflict dilemmas, which proposes that they were possibly considering both deontological and utilitarian aspects, further implying that deontological choices may be more informed than previously considered. Further suggesting that there isn't a line normative gauge that can fully apprehend individual perceptions regarding moral dilemmas (Nichols & Mallon, 2006).

Moreover, individual moral judgments are not exclusively guided by the definite application of moral values and can in some cases be influenced by apparent extraneous variables (Lee et al., 2018b). Friesdorf, Conway and Gawronski (2015) reported gender differences in moral dilemma judgements, with men indicating a stronger preference for utilitarian outcomes than

women, possible reasons being related to differences in affective reaction to harm as opposed to cognitive calculations of consequence. More recently, Armstrong, Friesdorf and Conway (2019) reported that women score higher on deontological inclinations, more so when the choice involved a restraint from a harmful action, rather than action, concluding that gender differences in deontological tendencies are driven by both harm and action aversion. Furthermore, religion has also been noted to influence moral choice in dilemmas involving harm, Szekely, Opre and Miu (2015) reported factors such as seeking religious guidance and social desirability predicted deontological tendencies. Hannikainen, Machery and Cushman (2018) reported that younger participants increasingly endorse utilitarian choices within sacrificial dilemmas.

Further research into the variations of moral dilemma construction and environmental influences have found that even the most subtle changes can have a significant impact on individuals level of moral decision making. This includes framing effects through word choice (Petrinovich & O'Neil, 1996); the legal status of the judged action (Barbosa & Jiménez-leal, 2017; Pletti, Sarlo, Palomba, Rumiati, & Lotto, 2015); subjective beliefs in outcome possibilities (Kortenkamp & Moore, 2014; Shou & Song, 2017); and transient changes in mood from environmental influences (Valdesolo & DeSteno, 2006). Nakamura, Ito, Honma, Mori and Kawaguchi (2014) reported that physical coldness reduced empathic concern for a sacrificial victim and as a result increased utilitarian choices. More recently, Spears, Fernández-Linsenbarth, Okan, Ruz and González (2018) assessed the effects of disfluency on moral decision making, through the manipulation of font (easy to read/ difficult to read) and found that processing disfluency activates more analytic style thinking boosting performance on logic and cognitive based tasks and were more associated with utilitarian responses. Whereas, Weippert et al. (2018) reported that induced exertion and fatigue were associated with more non-utilitarian response, possibly due to limitations to prefrontal mediated executive means.

Variations in the type of dilemma utilised could also provoke fluctuations in judgment. According to Lind (2016) there is a universal tendency that certain dilemmas, particularly those which discuss life or death matters require deliberations at the higher stage of moral principles (Type 5 and Type 6). Therefore higher forms of moral converse are more morally sufficient than lower ones when undertaking difficult moral problems. One dilemma which captures this notion almost perfectly is euthanasia and Physician aided suicide (PAS). Euthanasia is the purposeful ending of life in order to ease suffering and PAS is when a

healthcare provider willingly provides a patient with knowledge or the means to take their own life. This highly debated topic has governed domains for decades, whose eminence prevails at the core of the compounded crossroads of law, medicine, politics, ethics and moral philosophy. A single distinguishing feature of this dilemma when compared with other hypothetical scenarios is the real life applicability. Attitudes towards euthanasia and PAS have been noted to advance over time (Attell, 2017) as euthanasia is being legalised in a growing number of countries (Bahník & Vranka, 2018; Gostin & Roberts, 2016) as The Netherlands, Belgium and Luxemburg and with PAS being legalised in US states such as Washington DC, California, and Colorado.

Within UK medical ethics euthanasia and PAS continue to govern discourse due to possible attitude changes of the majority of the public, which leads to frequent endeavours concerning legislative amendments (Hains & Hulbert-Williams, 2013). Though, research suggests conveyed attitudes are often readily malleable and impressionable (T. Wilson & Hodges, 1992). Responses to attitude based surveys can be influenced by a range of unintentional factors such as the survey methodology, e.g. question wording, affective influences and their transient impact on decision making, and the yearning for consistency with responses (Andrade & Ariely, 2009; Schwarz, 2007; Skoe et al., 2002). This apparent pliability of both individual and public attitudes alike creates an apprehension surrounding the legalisation of euthanasia (Bahník & Vranka, 2018). This discordance further fuels the continuing conflicting attitudes faced within society.

The actual act of euthanasia is deemed to rest on the shoulders of medical professions in terms of responsibility and action, for this reason research believes it is imperative to explore the attitudes and standpoints of medical professionals (Dany et al., 2015). The acknowledgement and approval of euthanasia varies to a great extent on a global level. Notable differences emerge in the conceptions surrounding euthanasia between healthcare providers and communal levels. On an international level physicians tend to be more objectionable (Dany et al., 2015; Grassi, Magnani, & Ercolani, 1999; Lavoie et al., 2015; Pasterfield, Wilkinson, Finlay, Neal, & Hulbert, 2006). In a literature review, McCormack, Clifford and Conroy (2015) found UK doctors are more likely to dispute the induction of both voluntary euthanasia and physician assisted suicide. There seems to be a noticeable disparity between the attitudes of the general public and healthcare professional stances. It is claimed that 82% of the UK public support the choice of assisted dying for terminally ill patients (Dignity in Dying, 2019) whilst the British Medical Association (BMA) opposes all

forms of assisted dying (British Medical Association, 2017). In other European countries, Dany et al. (2015) found that 96% of the French public were in favour of euthanasia, whilst less than 50% of physicians opposed it.

Frequent predictors of the opposition of euthanasia and PAS among health care professionals are higher religious affiliation (Barnett, Cantu, & Galvez, 2018; Broeckaert, Gielen, Van, & Van den Branden, 2009; Caddell & Newton, 1995; DeCesare, 2000; Grassi et al., 1999; Hains & Hulbert-Williams, 2013; McCormack et al., 2012; Moulton, Hill, & Burdette, 2006; Ozcelik, Tekir, Samancioglu, Fadiloglu, & Ozkara, 2014; Portenoy et al., 1997; K. G. Wilson et al., 2007); greater activity in palliative care procedures (Lavoie et al., 2015; Marini, Neuenschwander, & Stiefel, 2006; Peretti-Watel, Bendiane, & Moatti, 2005); higher educational levels (Caddell & Newton, 1995; Terkamo-Moisio et al., 2017); diminished empathy (Portenoy et al., 1997) and an internal locus of control (Hains & Williams, 2013). Though research has managed to capture personal views of healthcare practitioners which tend to differ on the topic with themes on respect for autonomy and quality of life (Bergs, Dierckx de Casterle, & Gastmans, 2005; Miller et al., 2004). Valuing patients end of life wishes seem to be extremely important to physicians and in turn significantly impacts their motivation to endorse euthanasia practices as they feel devoted to relieve suffering and to endorse a peaceful death (Georges, The, Onwuteaka-Philipsen, & van der Wal, 2008; Lavoie et al., 2015). Legal perspectives may also impact attitudes on euthanasia, Smets et al. (2011) found Belgian physicians support euthanasia for terminal patients and view it as good end of life care. Dany et al. (2015) found that physicians strongly opposed euthanasia until they encountered a particular real life case, which refined their judgement, possibly due to the level of personal familiarity.

Although the act of euthanasia is illegal in most countries research indicates that requests from patients and family members fall between 20.5 % and 25% within physician samples (Parpa et al., 2010; Subba et al., 2016). Attending to these requests has been shown to be very challenging for healthcare professionals (Georges et al., 2008). Medical organisations illustrate a well-defined opposition to aid in dying within company ethical guidelines and acknowledge the difficulties placed on practitioners and offer advice on how to deal with such enquiries (General Medical Council, 2015). Thus given the fact that a higher portion of healthcare professionals are not in favour of euthanasia in its forms it would appear that professional identity reinforced through company ethics seems to take the reins on opinion, moving away from an individual persona to a more collective professional stance and outlook

on the topic. Terkamo-Moisio et al. (2017) highlighted a noticeable divergence between ethical guidelines which lace nursing communities and individual nurse attitudes. It seems that nurses deem euthanasia as an agreeable avenue, despite the domains ethical policies.

2.4 Individual Differences

Personality, emotional intelligence and moral development each signify primary domains of psychological research. Some suggest that empirical understanding of moral development within the framework of personality is dense (Walker & Henning, 1997; Williams, Orpen, Hutchinson, Walker & Zumbo, 2006). Providing the significance of personality and moral development to behaviour and decision-making, this division offers an important area of study, casting light on the subjective aspect of moral development and personality when deciphering perceptions of moral behaviour.

2.4.1 Moral Concepts

Numerous personality collections have been put forward to explore the disparity in human personality. One of the most prominent being the Big-Five factors of personality (McCrae & Costa, 1985). Linking extraversion, agreeableness, conscientiousness, openness to experience to moral reasoning (Dollinger & LaMartina, 1998; Cawley, Martin & Johnson, 2000; Varghese & Raj, 2014; Williams et al., 2006) suggesting that qualities such as acceptance and dutifulness are vital to individual moral decision making abilities. Supporting the notion that basic personality traits are applicable to an individual's moral decision making abilities, as personality is frequently linked to how individuals reasons and rationalised behaviour, due its associations with cognitive forms (Sijtsema, Garofalo, Jansen, & Klimstra, 2019).

Recently an additional personality cluster is of keen interest; the Dark Triad. This consists of three socially undesirable characteristics: narcissism, psychopathy and Machiavellianism. Narcissism is characterised by an unjustified feeling of grandiosity and an unusual sense of entitlement; psychopathy is defined by a lack of empathy, remorse, impulsivity, deception and manipulation (Hare, 1999; Jones & Paulhus, 2014), and Machiavellian behaviour exhibits itself as having a callous effect, a strategic calculating orientation and manipulative tendencies.

Yet, despite the dark traits recent rise in statue, little research has been conducted on the association of the dark traits with more constructive and positive concepts, such as moral development. As research has highlighted the traits have associations with counterproductive

work behaviours (Jonason, Slomski, & Partyka, 2012; Spain, Harms, & Lebreton, 2014); mating (Jonason, Li, & Buss, 2010); empathy (Jonason & Krause, 2013); and deception (Jonason, Lyons, Baughman, & Vernon, 2014). In relation to the moral domain, more recently positive associations between the dark triad and moral disengagement have been reported (Sijtsema et al., 2019), yet this still focuses on the more unconstructive tendencies. Some suggest that this could be due to research into the dark personality being explored and perceived as pathologies, sometimes at the expense of overlooking more positive aspects, as much of the research holds themes of detection, reduction or avoidance of individuals, instead of trying to understand the traits (Kajonius, Persson, & Jonason, 2015).

However, examination of the list of previous Dark Triad research it would be feasible to assume in the area of moral development to find an overturned form of morality and unavoidably research on the Dark Triad must attend to the likelihood of a form of moral deficit (Furnham, Richards, & Paulhus, 2013). Due to antagonistic features of these traits they are more probable to be differentiated by atypical moral cognition (Sijtsema et al., 2019). These three traits are usually ascribed to a malfunctioned morality (Zuo, Wang, Xu, Wang, & Zhao, 2016). Williams et al. (2006) found Machiavellianism and psychopathy to be related to low moral development, the former being linked to shortcomings in perspective taking. Campbell et al. (2009) offered partial support for the prediction that high scores on the dark triad traits are related to lower levels of moral development; more so for psychopathy and Machiavellianism. Noser et al. (2015) found more antagonistic personality features to be negatively correlated with individualising values and moral concerns surrounding harm and care. The authors conclude that individuals higher in aversive personality traits are much less concerned about signs of suffering and pain. Jonason, Strosser, Kroll, Duineveld and Baruffi (2015) explored how the Dark triad traits related to differed values systems. Results indicated that psychopathy was related to a reduced concern across all moral foundations; Machiavellianism was associated with a moral flexibility; and narcissism was related to socially desirable form of morality. Kajonius et al. (2015) explored the relationship between the dark traits and social values, as social values are a significant factor of moral development within society. The findings showed that achievement, power, stimulation and hedonism were key values held by individuals who were high on the dark traits.

Further investigations in the dark triad and the moral domain, take a more allotted approach, as each trait are related, yet consist of varying dimensions (Kowalski, Vernon, & Schermer, 2017). As found by Jonason et al. (2015) outlined above; each trait holds distinguishing

values in their association with moral foundations. Narcissism appear to be brighter in comparison to the other two traits (Furnham et al., 2013). Rauthmann and Kolar (2012) investigated the perceived darkness of the dark triad traits, it was found that narcissism was evaluated brighter than Machiavellianism and psychopathy in lay people's perceptions. Both psychopathy and Machiavellianism have been reported to be positively correlated to low levels of moral development, whereas narcissism was either found to be unrelated (Williams et al., 2006; Campbell et al., 2009) or positively correlated (Zuo et al., 2016).

Reasons for this may be due to individuals with high levels of narcissism tend to have a more stable ability to behave more morally or that they have a stronger motivation to do so, to seek and uphold their inflated but frail self-concept (Zuo et al., 2016). This self-concept may be dependent on the external validation of others, through opinions and perceptions (Kauten & Barry, 2014). Hence, displaying a high level of individual morality is a way of narcissists to receive social recognition and accomplish a feeling of superiority (Fossati, Borroni, Eisenberg & Maffei, 2010). In addition, this could also be to avoid ego-threat, as the recognition of a failing or deficiency could lead to levels of dissonance (Zuo et al., 2016).

Recently Karamavrou, Mouratidou, Evaggelinou, Koidou and Parisi (2016) employed the Moral Competence Test (MCT, Lind, 2008a) and the Inventory of Child Individual Differences (Besevegis & Pavlopoulos, 1998). Results indicated low positive correlation with conscientiousness and moral competence. Interestingly no other personality factor was correlated to moral competence. As suggested by the researchers (Karamavrou, et al., 2016) this could be due to characteristics such as independence not being fully developed in a sample of high school students. However, relating to the provisions of the Dual Aspect Theory, it could be due to personality traits in general not being related to moral competence. Instead personality traits, such as those presented by the Big Five models or the Dark Triad could be more associated with moral orientations, an innate internal force directing behaviour, as opposed to a learnt level of competence. Research exploring the affiliations between the three Dark Triad traits and moral competence requires further grounding.

Though there has been some interesting speculation surrounding personality and emotions in relation to ethical compositions. As, utilitarian thought processes are considered to be more logical and calculated through the deliberation of various outcomes (Duke & Begue, 2015; McDonald et al., 2017). Research tends to support the notion that utilitarian decisions are the morally appropriate option as they are more reflective and less emotionally arbitrated (Foot,

1967; Quinn, 1989; Green et al., 2001; Valdesolo & Desteno, 2006; Nichols & Mallon, 2006; Tassy et al., 2011). This level of cognitive skill and restraint has been associated with time and working memory capacity. Suter and Hertwig (2011) found that faster response times were associated with more deontological responses, suggesting that under time pressure individuals are less likely to provide utilitarian outputs. Moore, Clark and Kane (2008) reported that individuals with higher working memory capacity were more likely to choose utilitarian outcomes.

Conversely, not all see utilitarian moral decisions as reflective of deliberation, overall portraying the morally correct action. Others have associated utilitarian responses with a diminished perception of responsibility (Franklin, McNally & Rienmann, 2009); higher explicit hope to gain power (Sussenbach & Moore (2015); impaired social cognition (Duke & Begue, 2015); greater levels of anger; and testosterone (Montoya et al., 2013; Ugazio et al., 2012;). A large body of research link utilitarian inferences to a reduced aversion to carrying out harmful acts, a lack of empathetic concern, and subclinical psychopathy and Machiavellianism (Aktas, Yilmaz, & Bahçekapili, 2017; Bartels & Pizarro, 2011; Gleichgerrcht & Young, 2013; Kahane, Everett, Earp, Farias, & Savulescu, 2015; Koenigs, Kruepke, Zeier, & Newman, 2012; Koven, 2011; Patil, 2015; Rozil, Svegar & Kardum, 2018; Takamatsu & Takai, 2019; Wiech et al., 2013).

Karandikar, Kapoor, Fernandes and Jonason (2019) noted that the link between the dark personality traits and utilitarianism stem from a low concern for individualising moral foundations; harm and fairness. Djeriouat and Trémolière (2014) found the dark traits to be significantly positively related to utilitarianism, furthermore that Dark Triad moral utilitarian association was negatively mediated by Harm/Care and honestly/Humility personality factor, for psychopathy and Machiavellianism. The authors go on to report that utilitarianism is driven by a lower concern for the physical integrity of others and prosocial altruistic behaviours, suggesting that the dark traits association with utilitarianism may be as result of a defective emotional function which lead these individuals to reject moral deontological choices as irrelevant. Pletti, Lotto, Buodo and Sarlo (2017) further contend that high psychopathy trait affects choices of action in sacrificial dilemmas due to lack of emotional reactivity to harmful acts. Whereas, Gawronski, Conway, Armstrong, Friesdorf and Hütter (2016) assert that individuals higher in psychopathy are drawn more towards utilitarian prospects due to weaker sensitivity to moral norms. Others, view the association of utilitarianism and psychopathy as a positive, and that individuals higher in this trait may at

least have the capacity to adhere to utilitarian moral codes (Balash & Falkenbach, 2018). Therefore it seems a substantiation to support both the view that increased deliberation, diminished empathy, reduced emotional reactivity and a weaker understanding of moral norms increases utilitarian responses when exploring moral dilemmas.

A further contemporary construct creating a surge in attention and research is emotional intelligence which can be defined as the ability to comprehend emotions and to utilise emotions efficiently to develop thinking, this includes the capabilities to perceive emotions successfully, to retrieve emotions to aid thought process, to display emotional awareness and to contemplate emotions to stimulate emotional and intellectual development (Mayer, Salovey, & Caruso, 2004). Within the workplace, emotional intelligence comprises of a collection of non-cognitive abilities, competence and proficiencies which embody professionalism, honesty and responsiveness to aid individuals handle situational difficulties and pressures (Talarico et al., 2013). Emotional intelligence can provide a useful insight into individual aptitudes in areas of teamwork, attitudes and adaptability (Goleman, 1995).

With regards to the relationship between emotional intelligence and morality there have been some mixed outlooks. Athota, O'Connor and Jackson (2009) discuss the overlap between the two concepts as moral reasoning requires the deliberation of an individual's values and principles to direct decision making, they assert that these values are highly dependent on the regulation and perception of both individual emotion and that of others. The author's go further to highlight a difference based on levels of specificity, emotional intelligence being a generalised distal ability and moral reasoning a specific proximal ability and so the relationship between the two concepts would be distal in nature. In their study they found emotional intelligence to be a significant predictor of Extraversion, Openness, Neuroticism, Agreeableness, which consecutively were significant predictors of moral reasoning. Fernandez-Berrocal and Extremera (2005) discuss the nature of the moral task which is influenced by age and levels of emotional intelligence, concluding that the basis of making morally sound decisions resides in individual emotion and in turn emotional intelligence may govern decision making in varying moral dilemmas.

An abundance of research have delved into exploring the dark sides of emotional intelligence. Commentaries suggest that individuals high in emotional intelligence may be able to create positive impressions of themselves for personal gain and self-interest (Kilduff, Chiaburu, & Menges, 2010). Research exploring this notion have utilised personality clusters such as the

Dark Triad, which consists of narcissism, Machiavellianism, and psychopathy. Though studies are gathering mixed results regarding association between these constructs. Widespread findings highlight negative associations with emotional intelligence, psychopathy and Machiavellianism (Megías, Gómez-leal, Gutiérrez-cobo, Cabello, & Fernández-berrocal, 2018; Miao, Humphrey, Qian, & Pollack, 2019; Nagler, Reiter, Furtner, & Rauthmann, 2014; Petrides, Vernon, Schermer & Veselka, 2011; Zhang, Zou, Wang, & Finy, 2015). Whereas, Jauk, Freudenthaler and Neubauer (2016) found lower emotional intelligence to be associated with psychopathy in females and narcissism in males. Interestingly, as displayed in the research investigating moral dimensions narcissism appears to be the trait in conflict. Studies have demonstrated a positive relationship between emotional intelligence and narcissism (Petrides et al., 2011; Nagler et al., 2014; Zhang et al., 2015). Miao et al. (2019) reported no statically significant relationship between narcissism and emotional intelligence.

2.4.2 Vocational and educational choices

It is evident that an extensive range of personality traits may impact moral decision making processes. This may also influence the decision making processes with regards to vocational choice. Personality has been associated with vocational interests. For instance studies utilising five factor model and Holland's (1997) six domain model of vocational interests (RIASEC) have reported extraversion to be associated with social and enterprising interests; openness related to investigative and artistic interests; and conscientiousness with enterprising and conventional interests (Larson, Rottinghaus & Borgen, 2002; Barrick, Mount & Gupta, 2003) Yet, Larson et al. (2002) noted that whilst some personality traits and interests are related, some may not be related at all. The association between the dark traits and vocational interests is considered to be an undeveloped area (Kowalski et al., 2017). Yet, despite the negative inferences associated with the dark traits, research into the association with vocational interests is fruitful, as some individuals who score high on the dark traits might be more suitable to certain career prospects (Mount, Barrick, Scullen & Rounds, 2005).

It has been suggested that individuals with specific socially undesirable traits attain higher positions more frequently than others (Babiak & Hare, 2006). Within business and management there is a significantly higher level of psychopaths than in other occupational domains (Babiak & Hare; 2006; Boddy, 2011). Machiavellianism has been portrayed in both positive and negative lights, describing individuals high in this trait as social chameleons,

embracing the attitudes and behaviours of colleagues while perceptively manipulating the conditions to their favour (Hurley, 2005). In direct contrast, narcissists have been linked to speedier promotions due to higher levels of self-promotion and impression management (Hogan & Kaiser, 2005). Further suggesting that individuals with such traits will overcome any obstacles to receive their goals (Krick et al., 2016).

Jonason, Wee, Li and Jackson (2014) reported that individuals high on psychopathy display interests in more practical work, with little supervision and less interaction with others; those higher on narcissism to be interested in more caring and cultured work, to help satisfy their need for admiration and approval; and individuals high on Machiavellianism displayed less interest in caring jobs and practical roles. Visser, Pozzebon and Reina-tamayo (2014) explored life aspirations and found the dark traits were negatively correlated with intrinsic aspirations and positively with extrinsic, concluding that individuals high on the dark traits were less motivated by acceptance and contribution and more motivated by popularity, money and attractiveness. Spurk, Keller and Hirschi (2016) found narcissism and Machiavellianism to be positively related to desire for salary status and objective career success; whereas psychopathy was negatively related to these aspects. Schneider, McLaren, and Carswell (2017) found psychopathy to be associated with interests in roles detailing rational judgment, precision and sound reasoning.

An individual's moral competence should be considered when investigating career choice and workplace behaviours. Individuals high on the dark traits contribute to precarious working environment as opposed to a favourable ethical climate (Bogdanovic & Cingula, 2015). Although, usually before an individual is able to pursue a prosperous career, whether it be in health care or other organisational pursuits, they will most likely go through the education system. Vedel and Thomsen (2017) found business and economic students displayed higher levels of the dark traits in comparison to psychology students. When investigating moral competence and the dark traits in business and economics undergraduate students, Krick et al. (2016) drew on two hypothesis. The first being the self-selection hypothesis, which is that business and economics may attract individual with higher levels of psychopathy due to the chances of attaining powerful positions in the future; derived from Wilson and McCarthy (2011) who reported that economics students had higher levels of psychopathy. The second being the indoctrination hypothesis, which suggests that immoral behaviours are more widespread among business students due to the academic training received (Elegido, 2009). Krick et al. (2016) offered support for the self-selection hypothesis.

The investigation of the dark traits within business education is flourishing. Bogdanovic and Cingula (2015) reported dark traits to be high in management students. Turnipseed and Cohen (2015) in a sample of business students found psychopathy and narcissism related to the dimensions of academic entitlement. Vedel and Thomsen (2017) offers support for the self-selection hypothesis in educational choices as they found that business students exhibited the highest dark triad scores whilst psychology students displayed the lowest. These findings offer an insight into the influence of dark personality traits and educational choices.

Alternatively, Bailey (2017) found in a cross sectional study that psychopathy levels of accounting students to be significantly lower to students of other disciplines which persists throughout education and prediction into professional practice; which manages to refute both the self-selection hypothesis and the indoctrination hypothesis. A further feature of the present study is to test the outlined hypothesis within the student sample and explore these features within practice.

Emotional intelligence has obtained significant attention within contemporary research, mainly circulating within healthcare related fields (Brown, Etherington, & Williams, 2017). Professions such as nursing and midwifery regularly comprise of difficult and challenging situations which run high on emotional intensity and often occur within a stressful work setting and can have detrimental effects on practice, wellbeing and personnel (Foster et al., 2017; Wright, Matthai, & Warren, 2017). Research from healthcare and medicine highlight the importance of emotional intelligence in improving overall nurse performance (Al-hamdan, Oweidat, Al-faouri, & Codier, 2017; Beauvais, Brady, Shea, & Griffin, 2011), adequate conflict management styles (Basogul & Ozgur, 2016; Chan, Sit, & Lau, 2014), transformational leadership qualities of nurse managers (Echevarria, Patterson, & Krouse, 2017), career adaptability (Coetzee & Harry, 2014), increased patient satisfaction for medical practitioners (Bharamanaikar & Kadadi, 2006), higher job satisfaction and less burnout (Weng et al., 2011).

Research examining emotional intelligence within healthcare is critical as being able to read and manage emotions is a crucial skill within practical settings (Por, Barriball, Fitzpatrick, & Roberts, 2011). A review by Smith, Profetto-McGrath & Cummings (2009) expressed the requirement and explicit presence of emotional intelligence within nursing education, as it may effect ethical decision making ability, critical assessment, quality of student learning and comprehension and understanding within practice. Emotional intelligence may impact professional relationships and professional productivity (Libbrecht, Lievens, Carette, & Cote,

2014). Studies within healthcare education and residency have shown emotional intelligence to be effective predictors in handling stressful interpersonal interactions (Arora et al., 2010; Mccloughen & Foster, 2018), academic success and performance (Chew, Zain, & Hassan, 2013; Fernandez, Salamonson, & Griffiths, 2012; Por et al., 2011; Sharon & Grinberg, 2018; Talarico et al., 2013; Wijekoon et al., 2017), increased empathy and communication skills (Arora et al., 2010), critical thinking (Fernandez et al., 2012) and resident wellbeing (Lin, Liebert, Tran, Lau, & Salles, 2016; Por et al., 2011). Libbrecht et al. (2014) found that the ability to regulate emotions predicated performance within communication and interpersonal courses within medical schools, more so than cognitive factors and conscientiousness. Foster et al. (2017) reported that nursing students level of emotional intelligence increased across curriculum, with the subscale of managing others emotions being related to academic performance. Snowden et al. (2018) found that nurses who successfully completed their programme scored higher on trait emotional intelligence. Brown et al. (2017) utilised the Genos Emotional Intelligence Inventory and found that the subscales of emotional management of others and emotional reasoning were significant predictors of occupational therapy students teamwork skills. Contrary to popular conjectures, Stenhouse et al. (2016) found no such association between emotional intelligence scores and performance within student nurses.

In relation to other student populations, Stiglic et al. (2018) found that emotional intelligence was higher in nursing student compared to engineering students. Masole and Dyk (2016) reported emotional intelligence to predict work readiness in social science students. Othman and Muda (2018) in a sample of undergraduate students reported that they display high levels of self-awareness and empathy with moderate levels of emotion management, further indicating that those students who were able to manage negative emotions more effectively were more likely to pursue an entrepreneurial career. Fall, Kelly, Macdonald, Primm, and Holmes (2013) found that emotionality, sociability, and self-control manages intercultural communication apprehension in public speaking students. Coco and Guttikonda (2015) reported that business students displayed medium to high emotional intelligence. Singh (2014) reported a mediated effect between academic performance and emotional intelligence in management students. Akers, Giacomino, Li, and Wall (2017) reported high levels of emotional intelligence in a sample of Chinese accounting students.

Within organisational psychology and business communications, Gurieva, Kuznetsova, Yumkina, Manichev and Sidorenko (2017) found within a sample of middle managers that

people-orientated interaction styles correlate highly with interpersonal emotional intelligence. Angelidis and Ibrahim (2011) reported a significant relationship between manager emotional intelligence and ethical ideology. Downey, Papageotgiou and Stough (2006) reported that female managers who displayed transformational leadership qualities were more likely to exhibit higher levels of emotional intelligence and intuition. Gardner and Stough (2002) concluded that emotional management is the strongest predictor of transformational leadership. This was further supported by Alston, Dastoor and Sosa-fey (2010) who found high levels of emotional intelligence aids leadership skills among managers. Alternatively, Baczyńska (2015) reported practical intelligence to be a more adequate predictor of managerial competencies, more so than IQ or emotional intelligence.

2.5 Practical insights: Moral Distress

Moral aspects are an integral part of the health care sector. Within the literature, moral distress has been highly associated with the nursing profession. Nurses have been reported to experience higher levels of moral distress than physicians, which is suggested to increase through the number of years of experience; supporting a crescendo effect (Epstein & Hamric, 2009; Hamric & Blackhall, 2007; Hamric, Borchers & Epstein, 2012). Nursing is essentially a moral vocation, compelled by the desire to help and protect patients from harm and suffering. It is when these ambitions are obstructed healthcare professionals endure moral distress (Corley, 2002).

Moral distress may affect an individual's physical, mental, spiritual qualities and social relations (Pendry, 2007), which may last for many years (Nathaniel, 2002). It may lead to feelings of frustration, anger, guilt, sadness, anxiety, shame, low self-esteem, emotional exhaustion, insecurity, fear and depression in nurses, which ultimately impacts their performance (Austin, Lemermeyer, Goldberg, Bergum & Johnson, 2005; Corley, Minick, Elswick & Jacobs, 2005; Hanebuth, Aydin & Scherf, 2010; Meltzer & Huckabay, 2004; Park et al., 2003). Resulting in decreased job satisfaction (Elpern, Covert & Kleinpell, 2005; O'Connell, 2015; Schluter, Winch, Holzhauser & Henderson 2008), burnout and intent to leave current position or the healthcare profession altogether (Corley, Elswick, Gorman & Clor, 2001; Lazzarin, Biondi & Di Mauro, 2012; O'Connell, 2015; Nathaniel, 2002; Rushton, 2006; Whitehead, Herberston, Hamric, Epstein & Fisher, 2015).

2.5.1 Definitional criteria

Moral distress has become one of the most enduring, yet one of the most debateable topics within the nursing literature (Woods, Rodgers, Towers & La Grow, 2015). A rapidly growing and disputed field, stimulating extensive converse and review (Burston & Tuckett, 2012; Gallagher, 2010; Johnstone, 2013; McCarthy, 2013; McCarthy & Deady, 2008; Woods et al., 2015). Despite this, there still remains a substantial volume of varied opinion about the agreed definition of moral distress.

Consequently equivocal definitions of moral distress have been utilised. Whereby moral distress is functioning as a consequence of the effort to conserve moral integrity when acting against individual moral convictions (Kelly, 1998); an experience when nurses try to act morally in oppressive circumstances (Liaschenko, 1995); a result of being unable to convert moral choices into moral action (Wilkinson, 1988; Rushton, 2006); an occurrence when moral dilemmas which becomes stressful when the correct course of action is in doubt (Elpern et al., 2005); a habitual negative stress response which occurs where the healthcare provider feels they are not able to uphold all interests and values at stake (Kalvemarka, Hoglunda, Hansson, Westerholm & Arnetza, 2004). Generally, moral distress is a term used to describe the psychological, emotional and physiological anguish, which may be felt when we act in ways that are inconsistent with genuinely held ethical values, principles or morals (McCarthy, 2013). Further augmentations focus on the antithesis of the adherent to professional duty and individual perception of being a compassionate, trusting and protective care giver (Austin et al., 2005; Begley, 2008; Varcoe, Pauly, Webster & Storch, 2012).

The initial definition of moral distress was outlined by Jameton (1984), as being a psychological disequilibrium, resulting from knowing the ethical action to take, but not taking it due to inhibiting institutional policies or practices. Subsequently expanded to include two forms of moral distress; initial distress, which are feelings of frustration and anger due to institutional shortcomings; and reactive distress, the tension felt when an individual does not act accordingly to the initial distress (Jameton, 1984). This definition governs the majority of the nursing literature, in one variation or another (Hanna, 2005), placing emphasis on the external origins of moral distress. Whether this arises from the incompatibility of nurses values with the customary views of the external work environment (Epstein & Delgado, 2010); the suppression of moral agency due to institutional constraints (Corely, 2002); and

the known or unconscious influence of organisational or political factors on moral distress (Gallagher, 2010).

Though some have argued that the initial definition is restricted and runs the risk of neglecting other morally significant causes of moral distress (Fourie, 2013; Morley, 2016). The concept of moral distress rests on the assumption that nurses are aware of the right course of action mixed with a form of restraint; which could be either internal or external (Nathaniel, 2002; Webster & Baylis, 2002; McCarthy & Deady, 2008; Epstein & Hamric, 2009; Johnstone & Hutchinson, 2015; Woods et al., 2015). Internal constraints refer to personal characteristics, such as the lack of assertiveness, which may hinder an individual's ability to speak up in challenging situations (Hamric, Davis & Childress, 2006).

This insight presents a less restricted outlook on the concept of moral distress. McCarthy and Deady (2008) refer to moral distress as an umbrella concept that depicts the array of experiences of individuals who are morally constrained, from either internal and or external factors. Though, this perspective is not entirely tangible, it does manage to offer a more patent direction in an attempt to understand the spectrum of experience when exploring moral distress.

2.5.2 Clinical sources

Sources of moral distress can be attributed to many varying factors. One leading source are clinical situations. Research has highlighted moral distress to be most common when a caregiver perceives care to be unnecessary, unjustified or futile (Hamric et al., 2006). Elpern, Covert and Klienpell (2005) found nurses working in intensive care units reported high levels of moral distress in situations involving aggressive and futile care, and care related to patients who would not benefit from these interventions. Woods et al. (2015) in a sample of 412 registered nurses noted moral concerns over initiating extensive lifesaving, which were perceived as prolonging the dying process. Trotochaud, Coleman, Krawiecki and McCracken (2015) found that in a sample of 1113 paediatric healthcare providers, one of the most distressing situations include aggressive treatments which are not in the child's best interest. There are many studies which have documented the link between moral distress, futile care (Akpinar, Senses & Er, 2009; Range & Rotherham, 2010; Shoorideh et al., 2012; Wiegand & Funk, 2012; Zuzelo, 2007); aggressive treatment plans (Burston & Tuckett, 2012; Corley et al., 2005; Zuzelo, 2007; Hamric & Blackhall, 2010; Range & Rotherham, 2010; Wiegand & Funk, 2012; Zuzelo, 2007); and care given to patients even though they would not benefit

from such actions (Atabay, Çangarli, & Penbek, 2015; Hamric & Blackhall, 2010; Silen, Svantesson, Kjellstron, Sidenvall & Christtensson, 2011; Varcoe et al., 2012).

A further clinical circumstance is that of informed consent, or rather insufficient informed consent. This can generate moral distress when a healthcare provider considers that the conditions of informed consent, such as decisional capability, voluntariness, and disclosure of information have been unmerited (Hamric et al., 2006). Atabay et al. (2015) in a sample of 201 registered nurses in Turkey, found that one of the dimensions of moral distress was misinformed patients. Patients being given inadequate or misleading information regarding medication or treatment was also highlighted as a source of moral distress in mental health students (Wojtowicz, Hagen, & Van Daalen-Smith, 2014). Nurses or physicians in training are steered to receive patient consent, but this can be construed to merely getting a patients signature, viewing the procedure more as an *event*, rather than a detailed and informative *process* (Hamric et al. 2006).

Furthermore the depersonalisation of care has been noted create moral distress and has been said to stem from contextual factors. Varcoe et al. (2012) in a sample of 292 registered nurses in Canada noted that the most morally distressing situations, such as negative judgments about patients were highly related to contextual constraints, for instance distancing themselves from patients. Ohnishi, Asai and Akabayashi (2003) reported that in a sample of 80 psychiatric nurses in Japan, moral distress was mainly associated with long term hospitalisation, which resulted in patient isolation. Clinical constraints may place healthcare providers in situations here they may feel they are unable to deliver quality care.

Regardless of the recent prominence on quality assurance, there are nurses and physicians who may not be competent to treat patients (Hamric et al., 2006). When healthcare providers observe below average performance or incompetence in a co-worker, they may become distressed at having to choose between professional integrity, adherence to colleagues and maintaining an unwavering work environment (Hamric et al., 2006). Silen et al. (2011) study on 249 registered nurses in Sweden, reported low levels of moral distress, but one of the most highest scoring items was lack of competency of personnel. Similar findings were noted in a study by Karagozoglu, Yildirim, Ozden and Çınar (2015) in a sample of 200 intensive care nurses in Turkey, moral distress was low, though one of the highest associated items was working with professionals with the fear that they aren't competent enough. This concern over staff competency has also been documented in the USA (Zuzelo, 2007); New Zealand

(Woods et al., 2015); Israel (Eizenberg, Desivilya & Hirschfeld, 2009); and Iran (Shoorideh et al., 2012).

Further conceptions have placed emphasis on the demanding role of healthcare providers. Engelhardt (1985) defined the role of nurses as a *caught between*, meaning that nurses act as the intermediate between patients and physicians; with commitments to both. A nurse's foremost duty lies with the patient, though other professional obligations, such as attending the physician, the employing organisation and to the nursing profession can create a conflicting struggle (Hamric et al., 2006). Nurses may feel ambushed by these contending commitments, with pressure arising over prioritising and balancing duties; a compelling origin of moral distress (Hamric et al., 2006). Research highlights that clinical situations induce moral distress in a variety of job roles, different working environments and a diverse mixture of patient groups.

2.5.3 External and extrinsic sources

Healthcare professionals face many challenges in their job; due to the increased complexity of the healthcare system, clinical errors and nursing shortages (Mrayyan & Hamaideh, 2009). Previous illustrations about moral distress have been essentially putative as being associated to what may be perceived as primarily external factors, such as organisational constraints and medical hegemony (Atabay et al., 2015; Shoorideh et al., 2012; Woods et al., 2015). Reports link moral distress with the idea that nurses are viewed as an *artificial* person, due to their role being rooted within multifaceted institutions and systems of power, whereby nurses act on decisions made by others, highly related to the ethical environment of healthcare organisations (Liaschenko, 1995).

A prevailing determinant of moral distress is interdisciplinary conflicts; particularly between nurses and physicians (Jameton, 1984; Repenshek, 2009; Shoorideh et al., 2012; Zuzelo, 2007). Professional relationships among different specialities can be both advantageous and distressful (Eizenberg et al., 2009). The sundry of professionals operating within a patient care unit include, physicians, nurses, therapists, social workers, chaplains and others who have contact with patients and families; each have been through their own disciplines distinctive educational and socialisation practices (Hamric et al., 2006). In theory, they convey through disassociated routes of communication and comply with different professional codes (Shannon, 1997)

Hierarchical decision making by physicians can hinder the nurse's aptitude to carry out desired moral actions (Austin et al., 2005; Deady & McCarthy, 2010; Elpern et al., 2005; Manojlovich, 2007). A qualitative study by Wojtowicz et al. (2014) interviewed mental health students ($n = 7$) over a 13 week clinical rotation and identified the following themes; the *docs word is the law*, which reflects interdisciplinary conflicts mainly with physicians; *powerlessness*, over physicians and psychiatrists; and *no where to turn*, which denotes feelings of isolation. It was also reported that students observe their instructors powerlessness, unintentionally learning about moral distress, but further witnessing the occupations powerlessness to effect change.

Related extrinsic factors that may contribute to the occurrence of moral distress are, poor workplace communication (Karagozoglu et al., 2015; Shoorideh, et al., 2012; Trotochaud et al., 2015); lack of resources (Atabay et al., 2015; Eizenberg et al., 2009; Forde & Aasland, 2008; Shoorideh et al., 2012; Silen et al., 2011); lack of sufficient time (Atabay et al., 2015; Eizenberg et al., 2009; Jameton, 1984); staff shortages (Corley, 2002; Mrayyan & Hamaideh, 2009; Ohnishi et al., 2010; Pauly, Varcoe, Storch & Newton, 2009; Zuzelo, 2007); lack of provider continuity (Woods et al., 2015; Trotochaud et al., 2015); and delivering less than optimal care due to management pressures to reduce costs (Woods et al., 2015).

The features of working in the care service include having sustained relationships with a variety of people, specialised and intricate skills, teamwork and close contact with others. All these aspects if handled poorly can lead to distress and inadequate coping in the workplace (Clements & Zarkowsk, 1994), through avoidance behaviours (Corley, 2002; Villers & DeVon, 2012) and nurse attrition and retention (Wilkinson, 1988). For an integrative team, communication is vital, but even when communication is adequate, individual perspectives can contend, and dissensions may intensify in a dilemma, leaving individual caregivers morally distressed (Hamric et al., 2006).

Work climate can help identify work setting influences on practice. Ethical climate is the most prevailing form and is linked to employee feelings and responses when faced with ethical issues (Victor & Cullen, 1988). Within healthcare organisations ethical climate is the implicit and explicit principles which initiate and shape health care delivery (Rodney, Doane & Storch, 2006) and health care providers perception of how ethical issues are handled (Olson, 1995), covering issues of power, trust, and human interaction (Olson, 1998).

Ethical climate has been found to be a predictor of moral distress frequency and intensity (Corley et al., 2005; Pauly et al., 2009; Lutzen, Blom, Edwalds-Kvist & Winch, 2010; Silen et al., 2011; Hamric et al., 2012; Oh & Gastmans, 2015). For instance, research has documented that nurses were willing to compromise their values, in support of hospital views (Raines, 1997). Furthermore, a positive perception of ethical climate is a pivotal element in job satisfaction, professional competence, staff turnover rates/ intention to stay and the provision of quality of care (Hart, 2005; Pauly et al., 2009; Lutzen et al., 2010; Numminen, Leino-Kilpi, Isoaho & Meretoja, 2015).

The medial culture itself may create moral conflicts and moral distress. Forde and Aasland (2005) found that Norwegian doctors report low tolerance levels for criticism of unprofessional and misconduct in the workplace. The absence of openness concerning criticism and the unwillingness to converse on difficult issues may diminish support when dealing with dilemmas and thus may increase moral distress (Forde & Aasland, 2008).

2.5.4. Internal and individualistic sources

Internal constraints may also lead to moral distress (Epstein and Hamric, 2009). It is evident that the original definition of moral distress should be widened to include internal constraints. These refer to personal characteristics, such as the lack of assertiveness, which may hinder an individual's ability to speak up in challenging situations (Hamric et al., 2006). They consist of, skills, knowledge, attitude, moral awareness and abilities to make whole judgements and take relevant action.

Nurses' perception of their powerlessness is a prevailing theme concealing their disinclination or helplessness to resolve ethical problems (Hamric et al., 2006). As previously noted the power discrepant between nurses and doctors can be both an impediment to good care and a potent source of moral distress (Austin et al., 2005; Deady & McCarthy, 2010; Elpern et al., 2005; Manojlovich, 2007; Wojtowicz et al., 2014), as many provide care at the cost of compromising their values (Burston & Tuckett, 2012; Corely et al., 2005; Varcoe et al., 2012; Wojtowicz et al., 2014). Moral distress has been associated with lower levels of psychological empowerment, possibly due to nurses lack of involvement in decision making (Corley et al., 2005).

A healthcare provider's lack of knowledge can also be a source of moral distress, with processes and procedures (Hamric et al., 2006); which could be arguably linked back to

contextual constraints. Though, a recent systematic review conducted by Lamiani, Borghi, and Argentero (2017) noted that moral distress is associated with low levels of autonomy both on the knowledge and action subscales; which again could be related to contextual issues or individual courage, through moral integrity. Moral integrity has been defined as adhering to one's personal code so that one can sleep peacefully, live with oneself, having demonstrated courage, patience and insistence in the face of conflict (Laabs, 2011). Attempts to uphold one's moral integrity when faced with conflict has been found to be a key challenge for nurses in various stages of their career (Kelly, 1998). Ham (2004) found that when comparing nursing students and experienced nurses, new graduated nurses primarily acted based on moral codes, over time they conformed to environmental pressures and the expectations of others; there was a significant negative correlation between years of experience and the level of principled thinking. When nurses are confronted with moral conflict they may experience moral distress, as they feel moral integrity is in risk (Hardingham, 2004) or betrayed (Laabs, 2011).

A Further individualistic feature is moral sensitivity. Some argue that augmented moral sensitivity reduces moral distress, since responsive clinicians should be more amicable to patient's needs and more morally competent (Corely, 2002). However, Hamric et al. (2006) noted that increased moral sensitivity can be a source of moral distress; nurses with profound moral sensitivity will experience distress if they witness the moral elements of nursing being dishonoured, neglected, or poorly managed. Meaning in a contradictory sense, that moral sensitivity can increase the risk of experiencing moral distress (Hamric et al., 2006).

Studies within the healthcare literature are often focused on diluted themes of morality such as moral sensitivity, moral character and moral awareness. Whilst, these issues are still vital in the understanding of morality when operating within a highly dynamically ethical and in some cases a legally bound working environment they overlook moral competence. Moral competence embodies moral knowledge, the ability to discuss and deliberate differing and sometimes conflicting moral perspectives and having the core ability to utilise these proficiencies efficiently to handle morally challenging circumstances (Johnstone, 2015). Moral competence is the adeptness to comprehend one's individual intricate, diverging moral feelings, to present them to introspective reasoning and to participate in ethical discussion with friends, experts and authorities (Lind, 1989; Lind, 2000a). The moral competency of healthcare professionals have been largely ignored.

2.5.5. Moral distress and emotional intelligence

A further contemporary construct creating a surge in attention and research is emotional intelligence which can be defined as the ability to comprehend emotions and to utilise emotions efficiently to develop thinking, this includes the capabilities to perceive emotions successfully, to retrieve emotions to aid thought process, to display emotional awareness and to contemplate emotions to stimulate emotional and intellectual development (Mayer et al., 2004). Within the workplace, emotional intelligence comprises of a collection of non-cognitive abilities, competence and proficiencies which embody professionalism, honesty and responsiveness to aid individuals handle situational difficulties and pressures (Talarico et al., 2013).

Emotional intelligence has obtained significant attention within contemporary research, mainly circulating within healthcare related fields (Brown et al., 2017). Professions such as nursing and midwifery regularly comprise of difficult and challenging situations which run high on emotional intensity and often occur within a stressful work setting and can have detrimental effects on practice, wellbeing and personnel (Foster et al., 2017; Wright et al., 2017). Research from healthcare and medicine highlight the importance of emotional intelligence in improving overall nurse performance (Beauvais et al., 2011; Al-Hamdan et al., 2017), adequate conflict management styles; (Chan et al., 2014; Basogul & Ozgur, 2016), transformational leadership qualities of nurse managers (Echevarria et al., 2017), career adaptability (Coetzee & Harry, 2014), increased patient satisfaction for medical practitioners (Bharamanaikar & Kadadi, 2016), higher job satisfaction and less burnout (Weng et al., 2011).

Emotional intelligence within healthcare is critical as being able to read and manage emotions is a crucial skill within practical settings (Por et al., 2011), a skill which could relate to the occurrence of moral distress. Research has documented the link between emotional intelligence and stress. Miklolaiczak, Menil, and Luminet (2007) reported individuals high in trait emotional intelligence experience lower levels of burnout and less somatic ailments. Slaski and Cartwright (2003), found targeted training lead to increased emotional intelligence and better health and wellbeing. Zhang et al. (2016) reported emotional intelligence to be negatively associated with psychological distress among nursing student, suggesting that individual with higher level of emotional intelligence would experience lower levels of psychological distress.

There are an increasing number of studies which suggest that emotional intelligence influences psychological distress with the work place (Dulewicz, Higgs, & Slaski, 2003). Besharat (2007) found alexithymia to be associated with lower emotional intelligence scores and wellbeing and higher scores on psychological distress. Karim (2009) reported that the effect of emotional intelligence was more robust for positive affect than negative affect, highlighting the critical role emotional intelligence provides in creating positive moods within the work place. In a meta-analysis Martins, Ramalho and Morin (2010) highlighted the significant link between emotional intelligence and mental health. Furthermore, Salovey, Bedell, Detweiler and Mayer (1999) theorise that individuals with high levels of emotional intelligence are more proficient in recognising and evaluating their own emotions, noticing how and when to express them emotions, and being able to regulate individual mood competently.

2.6. Summary and research model

The Dual Aspect theory asserts that moral behaviour must be defined in provisions of both affective (ideals and emotions) and cognitive (competencies) features, denoting the dual temperament of moral thinking and behaviour (Lind, 2013). One prevalent measure of moral competence is The Moral Competence Test (MCT, Lind).

The MCT is considered to be an experimental behavioural design, as opposed to a psychometric test (Lind, 2016), constructed entirely on theoretical considerations (Lind, 2013). It has been validated and verified through extensive literature reviews, expert ratings and cross cultural validation studies; all of which are grounded on the research based criteria. The first being the hierarchal preference order of moral orientations, which denotes a level of universal agreement that dilemmas entail consideration and discussion at higher stage moral orientations, irrespective of age, gender, education and social background (Rest, 1973; Kohlberg, 1984). The second criteria is the quasi-simplex structure of inter-correlations of moral orientations, meaning that adjacent moral orientations should correlate more highly than distant moral orientations. This infers a developmental sequence and a simplex structure as outlined by Kohlberg (1958). The third criteria asserts an affective cognitive parallelism, moral orientations and moral competence should correlate systematically and are in parallel, a correlational parallelism (Piaget & Inhelder, 1969). The hierarchal preference order of the six Kohlbergian moral orientations have been upheld and substantiated in numerous studies utilising the MCT, in varying sample types, e.g. prisoners (Wischka, 1982; Lind, 2002,

2016), as well as various cultures (Schillinger, 2006; Lind, 2002, 2016). These theoretical criteria have been used to test the validation of the MCT and have been met with success; moreover a minimum of thirty foreign language versions have been validated and certified, promoting cross cultural validity (Lee, 2005; Lerkiatbundit, Utaipan, Laohawiriyanon & Teo, 2006; Schillinger, 2006; Slovackova & Slovacek, 2007; Feitosa et al., 2013; Biggs & Colesante, 2015; Lind, 2016 Abbasi et al., 2017; Agurto et al., 2017).

Thus, to ensure that the use of the MCT has been utilised correctly and to check for any anomalies, the theoretical validity of the MCT will be screened and checked, this will be conducted in chapter four (study one) and will address the first research question as presented in the research model (Figure 2.1).

The majority of the reviewed research generally supports the notion of moral regression or stagnation in moral competence or moral reasoning throughout medical and healthcare curriculum and possibly entering professional practice. Reasons for which usually circulate around the education system and the range of teaching methods available on these courses. Chapter five (study two) aims to test these common assumption through the employment of The Moral Competence Test (MCT; Lind 2008a) in healthcare vocations; both students and professionals and will address the second research question, as presented in Figure 2.1.

Besides, the customary caveats surrounding small samples sizes, non-longitudinal design and the inconsistency of measures in the field of moral development, if one was to consider the context specific relevance of the mercy killing scenario and further note that both the MJI and both version of the DIT also contain a medical related dilemma. It could be argued that rather than witnessing a regression or stagnation in moral development in healthcare related vocations, it could possibly be a moral segmentation, due to the medical context of the dilemmas presented. This raises questions surrounding the use of hypothetical dilemmas in measuring moral competence and further probes whether a dilemma not contextually attached to healthcare vocation would elicit the same response in a healthcare and medical population.

Chapter six (study three) of this research not only intends to shed light on how moral segmentations arise but rather determine whether contextual elements delineate individual moral segments, as outlined in the third research question in Figure 2.1. As highlighted in the literature, it seems numerous factors may influence how individuals assess moral dilemmas and determine which moral action they take. Possible factors may a divergence between ethical policies and individual attitudes, the indices of harm versus the calculations of

consequence, negative affect versus positive affect, contextual elements of the scenario or motivational influences. Yet, here is a call for research to study moral cognition needs in real life environments where the antes are proximate and direct (Kang et al., 2011), emotionally stimulating (Teper et al., 2011) and real (FeldmanHall et al., 2012) in order to provide conclusive evidence that hypothetical moral enquiries represent a sufficient substitute for moral behaviour. Granting the fact that it is highly improbable that individuals will find themselves in a situation where they have to make life and death choices, many are still intrigued and motivated to understand how humanity chooses to tackle these important moral issues (Waldmann & Dieterich, 2007). Further providing the practical and ethical constraints bounding the cross over into real life applicability, hypothetical moral dilemmas offer a productive and fruitful insight into moral cognition; yet it is crucial that researchers when analysing hypothetical choice data are aware of such complexities.

A dilemma is something which exists only in the eye of the beholder. That is, it is not objective and does not exist outside our minds. Therefore we cannot write or tell a ‘dilemma’. We cannot know whether the participants share our perspective and feel the moral dilemma that we see. We can only hope that our stories trigger the feeling of a dilemma in our audience. (Lind, 2016, p. 21)

Granted the significance of personality and emotional intelligence to behaviour and decision-making, this grouping offers a primary area of study. Since, little research has been conducted on the association of the dark traits with more constructive and positive concepts, such as moral development. This research will attempt to overcome the deliberate negative congregation of variables and endeavours to understand the distinguishing features of the dark traits in relation to moral competence, ethical compositions and vocational selection. The trajectory relationship between morality, personality and emotional intelligence will be the focal point of chapter seven (study four; Figure 2.1.)

Furthermore, there is a pressing need for conceptual work to generate a more robust understanding of moral distress in UK healthcare practice, as highlighted in the literature most studies derive from the USA (Morley, 2016). Chapter eight (study five; Figure 2.1) will examine both the individual and contextual constraints on moral distress, by examining both the frequency and intensity of moral distress, the evaluation of hospital ethical climate and intention to leave for physicians and nurse’s working within private healthcare intuitions in the UK. Further focusing on particular characteristics of moral distress through the

exploration of personality, emotional intelligence, moral competence and ethical composition evaluations in hypothetical moral scenarios. Overall contributing to the current literature on moral distress, this will not only generate a fuller understanding of the issue in a UK context and provide insight on the prevalence rates of moral distress, but could have possible benefits for healthcare providers and patients. Furthermore, it hopes to understand potential links between how individuals perceive and evaluate hypothetical moral dilemmas and how individuals experience moral distress within their working environment.

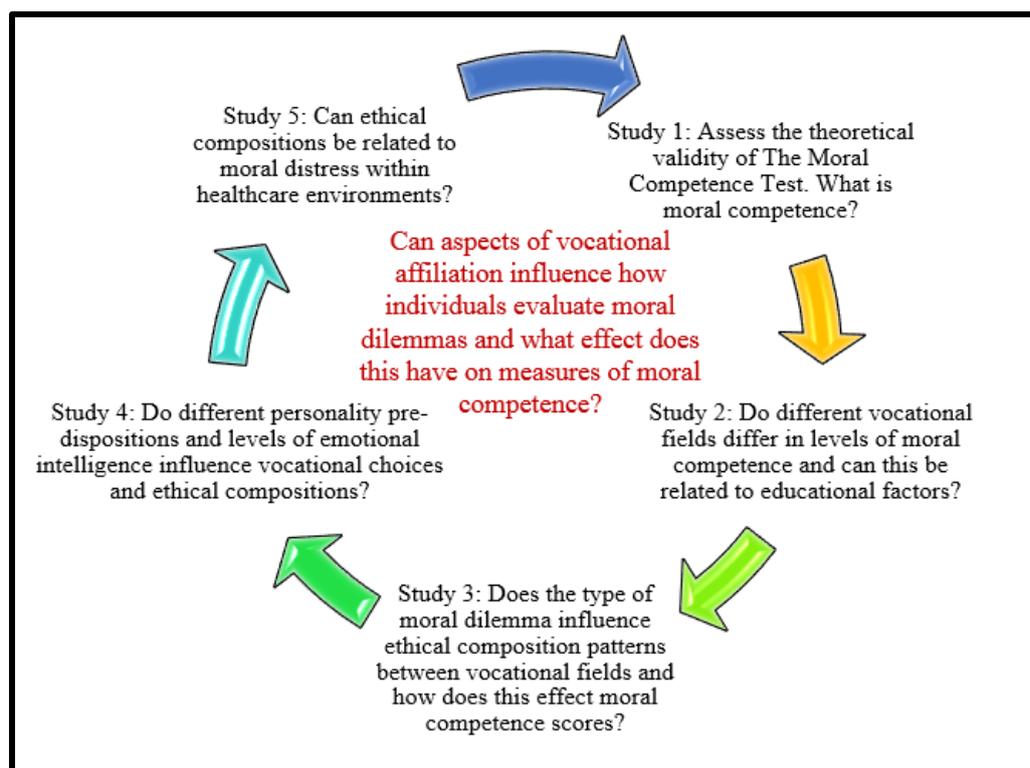


Figure 2.1 Research model displaying main research questions per study

Chapter 3:

Research Methodology

3.1 Research Design Overview

This chapter outlines the research methodology utilised in the thesis and how it has directed data collection and analysis. It begins with a research design model as reproduced from chapter 2.6 (Figure 2.1) which highlights the central primary question of the research circulated by secondary research questions derived from the studies. The following sections will outline each of the studies research design in relation to the corresponding chapters in the report with research aims. Each study section displays a diagram displaying the study conditions and design with further derived sub questions.

The research design utilised in the study was a survey design implemented through the use of questionnaires and was distributed to UK university students, private healthcare professionals and non-healthcare professionals. The surveys consisted of the measures detailed in more detail below in the report. This design seemed the most appropriate method to obtain large amount of data from a large sample design in a shorter timescale. It also permitted the incorporation of the measures into a reliable and easy accessible and manageable platform.

3.1.1 Research Model

The research model outline is displayed in Figure 2.1. The central primary research question is positioned in the centre, which to a) investigate whether aspects of vocational affiliation influences how individuals evaluate moral dilemmas, and b) what effect may this have on measures of moral competence. The first study is aimed at testing the theoretical validity of the Moral Competence Test (MCT; Lind, 2008a) to ensure that it has been operationalised correctly and does not violate any test assumptions, it also adds clarity to understanding the concept of moral competence and how it is measured. This leads on to study two, which is the employment of the tested MCT to different vocational fields within the education system and within a practice professional environment, to ultimately assess whether different vocations vary in their moral competence levels. Moral competence is described as a learnt concept or ability which may be highly dependent on environmental factors, such as reflective practices within education and so study two also explores a popular avenue in the occurrence of low moral competence, which is education and teaching methods used on university courses. A further popular conjecture in the explanation of low moral competence is opinion, whereby individuals rate the arguments presented in the instrument in reference to their own opinion as opposed to the moral quality of the arguments. Study three explores the concept of opinion, by first exploring the neutral variable of opinion commitment strength and then

through the addition a more directional driven approach, through ethical compositions, namely utilitarian and deontological philosophies, which were applied to the MCT. Step a further by analysing the two moral scenario independently to investigate whether different vocational fields differ in their ethical compositions and whether this can be related to aspects and context of the moral scenario. It overall aims to observe how ethical compositions may influence moral competence but rather how the type of moral scenario effects ethical composition patterns and whether this changes dependent on vocational field. Study four is centred around individuals differences and whether certain personality traits and emotional of intelligence can be related to vocational choices and how they may relate to moral competence and ethical composition pattern. Study five moves into the healthcare practice environment and explores how the way individuals perceive and evaluation hypothetical moral scenarios in the MCT through their overall moral competence scores and ethical compositions whether this can be related to moral distress in the healthcare workplace. Following the research model, the report centres questions based on the theoretical and practical implications which can drawn from the results.

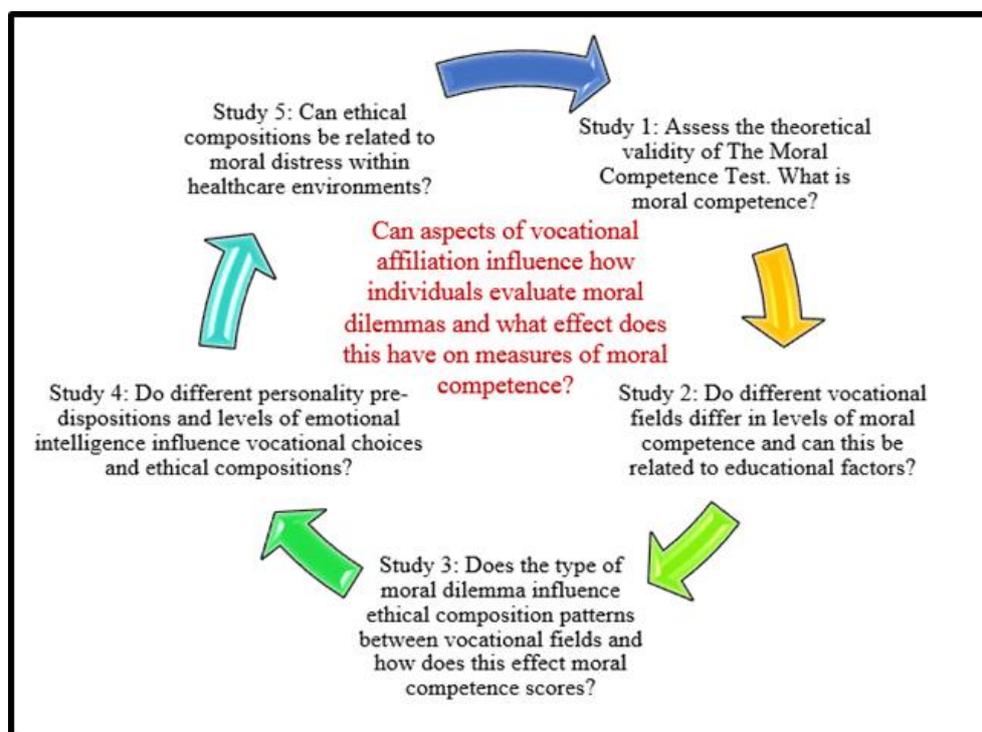


Figure 2.1 Research model displaying main research questions per study

3.1.2 Study Design

Study one (Chapter four): Testing the theoretical validity of The Moral Competence Test within student and practice populations

The design of the Moral Competence Test (MCT) is an experimental questionnaire, as opposed to a psychometric test (Lind, 2016). For this reason a correlational study assessing the theoretical validity of the Moral Competence Test was conducted to validate and understand the assessment features of moral competence. of the MCT was checked against three of the validation criteria (Lind, 2016), i) moral orientations form a hierarchal preference order, ii) moral orientations inter-correlate to form a simplex structure, and iii) affective-cognitive parallelism. The present study aimed to test the three criteria within both student populations and practice populations to examine the level and extent of universal agreement surrounding dilemma analysis.

The aim of the study was to;

- To examine the theoretical validity of The Moral Competence Test against the three validation criteria; hierarchal preference order, a simplex structure, and an affective-cognitive parallelism.

Study two (Chapter five): An exploration into the moral competence levels of different vocational fields and the effects of education

This study aimed to assess the moral competence levels of different vocational fields and the effects of education. It consisted of three analysis stages, please see figure 3.1 which displays the research structure by highlighting the three independent variables and the dependent variable. The first stage consisted of measuring the moral competence levels, which took place in two conditions; education and practice. Within the education condition a between groups survey design was implemented to assess the moral competence level of four different student disciplines; medical and healthcare, business, social sciences and art and design. Within the practice condition, a between groups survey design was also implemented to assess the moral competence levels of individuals working within private healthcare environments and individuals working within non-healthcare related environments.

The second stage of the analysis was concerned with moral competence levels over time, which took place in two conditions education and practice. Within the education condition a cross sectional between groups design was implemented to assess the moral competence

scores of four different student disciplines, by their year of study. Within the practice condition, a cross sectional between groups design was also implemented to assess the moral competence levels of individuals working within private healthcare environments and individuals working within non-healthcare related environments, by their years of practical experience.

The final stage of analysis was concerned with the relationship between moral competence and education, which took place in two conditions; education and practice. Within the education condition a cross sectional between groups design was implemented to assess if the four different student disciplines, differed in level of interactive and non-interactive teaching methods on their courses, followed by a correlational design to assess the strength and direction of the relationship between moral competence and interactive and non-interactive teaching methods. Within the practice condition, a cross sectional between groups design was utilised to assess the weather differences in moral competence levels between healthcare and non-healthcare professionals were due to educational levels.

It will help understand the interaction between education and moral development; further addressing the concerns emanating in the literature on either the facilitating or inhibiting effect of education on moral development. Education being the first area of interest.

Professional practice being the next step after education. It will help understand the potential interaction between moral development and education across the years by utilising years of practical experience and educational level. It will attempt to investigate the dynamics and direction of moral development from education to practice.

The aims of the study were to;

- To explore moral competence levels; between healthcare and non-healthcare vocational fields in education and practice, investigate the dynamics and directions of moral competence across the educational or professional span, and examine the relationship between moral competence and educational factors.
- To assess the moral competence scores independently for the scenario depicting a) and act of vigilantism and b) an act of euthanasia, to explore the occurrence of a moral segmentation between healthcare and non-healthcare vocations.

The main research question was to assess whether different vocational fields differ in levels of moral competence and whether this can be related to educational factors. The following sub research questions were also used to aid the structure and guide the study;

- Do individuals within medical and healthcare vocational fields display lower moral competence levels compared to non-healthcare vocations and do they display a regression in moral competence throughout either a) their educational studies or b) their professional career?
- Does the level of interactive and non-interactive teaching methods differ between student vocational fields within education and what relationship do these methods have with moral competence?
- How the level of educational achievement influence moral competence and what relationship do these two variables have?

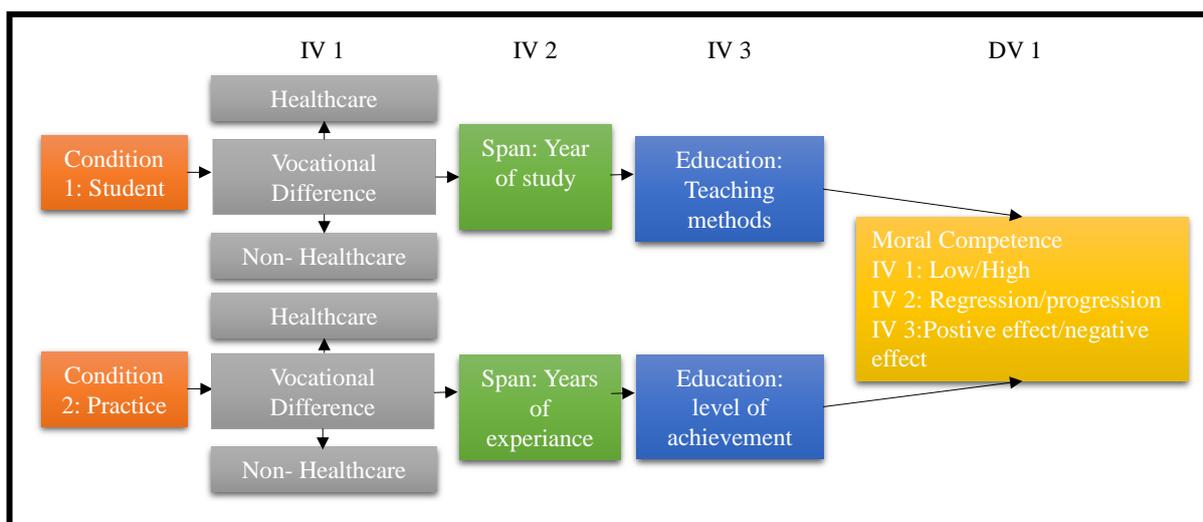


Figure 3.1 outline of the research design for study two exploring moral competence levels between different vocational fields

Study three (Chapter six): The effects of ethical compositions on moral dilemma analysis and how this may influence moral competence levels

This section of the thesis aimed to reanalyse the data of the Moral Competence Test (Lind, 2016) with the application of two ethical compositions; utilitarian and deontological philosophical positions, by analysing the two moral scenarios separately; the vigilantism and the mercy killing scenario between two conditions, education and practice; please see figure

3.2 which displays the research structure by highlighting the independent and the dependent variables.

The first stage of the analysis consisted of a correlational design concerned with assessing the strength and direction of the relationship between opinion commitment strength and moral competence.

The next stages consisted of a between groups survey design, which took place in two conditions; education and practice. The education condition assessed whether differences occurred in the initial decisional choices, ethical compositions and moral orientations types between four different student disciplines; medical and healthcare, business, social sciences and art and design. The practice conditions also assessed whether differences occurred in the initial decisional choices, ethical compositions and moral orientations types between individual working within private healthcare environments and individuals working within non-healthcare related environments. This was conducted independently for the vigilantism scenario and the mercy killing scenario.

This was followed by a correlational design to first assess the inter-correlations between initial decisional choices and ethical compositions and to then assess the strength and direction of the relationship between moral competence, opinion commitment strength and ethical compositions. It will add a contextual and directional element to understanding moral dispositions and may provide an insight into the moral competence scores from the previous analysis. To add and contribute to further the understanding of the use and application of moral dilemmas within moral psychology.

The aim of the study was to;

- To examine the vigilantism and mercy killing moral dilemmas independently through the application of utilitarianism and deontological philosophies to investigate whether different vocational fields differ in their ethical compositions, whether this is dependent on the type of dilemma, and how this effects moral competence scores, as measured by the moral competence test, in the hope to find an explanation for moral segmentations.

The main research question was to assess whether the type of moral dilemma influences ethical composition patterns between different vocational fields and what effect this may

have on measures of moral competence. The following sub research questions were also used to aid the structure and guide the study;

- Does the preference for utilitarian and deontological ethical compositions differ between medical and healthcare vocational fields and non-healthcare vocational fields when analysing the a) vigilantism scenario and/or b) the mercy killing scenario?
- Are the ethical composition patterns similar between medical and healthcare students and professional counterparts?
- How does the level of opinion commitment and ethical composition influence moral competence scores?

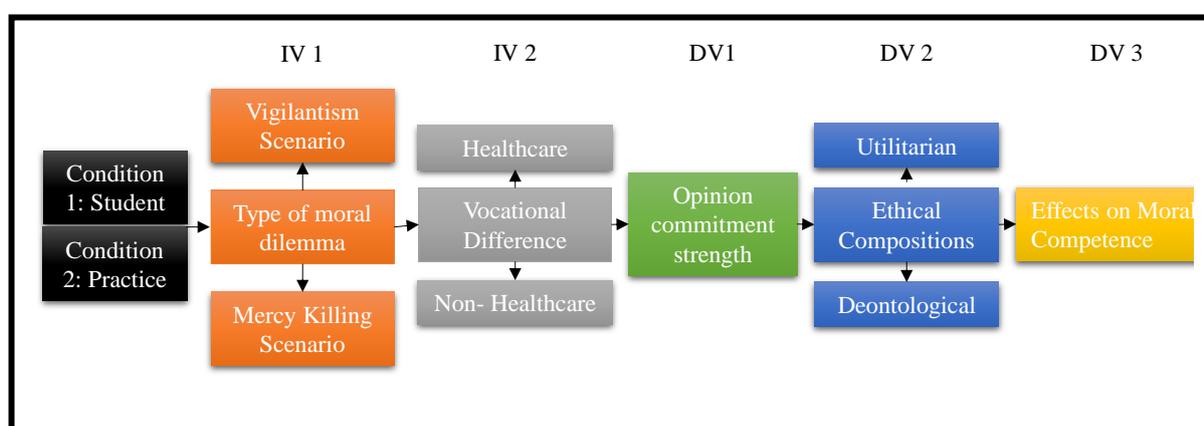


Figure 3.2 outline of the research design for study three exploring ethical compositions and effects of moral competence

Study four (Chapter seven): The role of personality and emotional intelligence in vocational choices, moral competence and ethical compositions

This section of the thesis aimed to explore the role of personality and emotional intelligence in vocational choices, moral competence and ethical compositions; please see figure 3.3 which displays the research structure by highlighting the independent and the dependent variables.

The first stages of the analysis consisted of a cross sectional between groups design to assess if differences occurred in levels of dark traits and emotional intelligence between different vocational fields. This took part in two conditions; education and practice. The next stage of the analysis was concerned with exploring the dark traits over time and whether they increased or decreased throughout education and practice. This employed a cross sectional between group design, in two condition; education and practice. The education condition was

concerned in assessing whether levels of the dark traits increased or decreased throughout education between four student disciplines; medical and healthcare, business, social sciences and art and design. The practice conditions was concerned in assessing whether the dark traits increased or decreased with years of practical experience between healthcare and non-healthcare professionals. Overall, investigating the self-selection and indoctrination hypothesis. The final stage consisted of a correlational design, exploring the strength and direction of the relationship between moral competence, The Dark Triad, emotional intelligence and ethical compositions.

The aim of the study was to;

- To assess individual differences through the exploration of personality and emotional intelligence and the relationship with both vocational choice and vocational span, and to further explore the extent personality pre-dispositions and levels of emotional intelligence influence moral competence and ethical compositional choice in moral dilemma analysis.

The main research question was to assess whether different personality pre-dispositions and levels of emotional intelligence influence vocational choices, ethical compositions and moral competence. The following sub research questions were also used to aid the structure and guide the study;

- Do individuals within different vocational fields differ in levels of personality predispositions and levels of emotional intelligence and does this change throughout educational/practice span?
- Do different levels of personality predispositions and levels of emotional intelligence influence ethical compositions between different vocational fields?
- Do different levels of personality predispositions and levels of emotional intelligence influence moral competence levels?

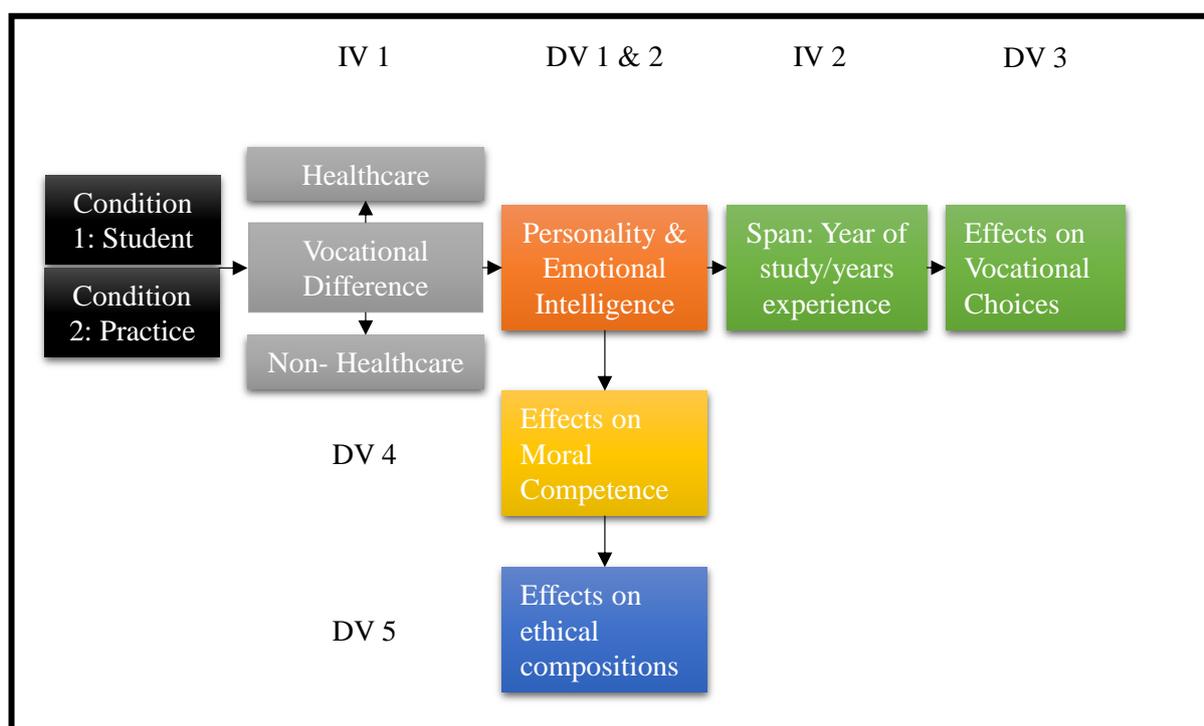


Figure 3.3 outline of research design for study four exploring individual differences in relation to vocational choices and ethical compositions

Study five (Chapter eight): An investigation into factors of moral stress within healthcare environments and whether these can be attributed to moral competence, ethical compositions and individual differences

This study aims to explore the relationship between moral competence and moral distress within healthcare practice, please see figure 3.4 which displays the research structure by highlighting the independent and the dependent variables. The research study will take two forms. The first being a cross-sectional survey design for comparative study, whereby both frequency and intensity of moral distress, the evaluation of hospital ethical climates, intention to leave and level of job satisfaction will be assessed for both physicians and nurses. The second phase will consist of a relationship based correlational design to explore particular characteristics of moral distress, which goes beyond occupational differences and demographics. This will observe the relationship between individual differences, namely personality and emotional intelligence, moral competence, ethical compositions with moral distress. Professional practice being the next step after education. It will help understand the potential interaction between moral development and moral distress, further addressing reports in the literature that moral distress may stem from internal constraints, such as moral

competence. Furthermore, it may help shed light on the potential links between how individuals perceive and evaluate hypothetical moral dilemmas and how individuals experience moral distress within their working environment.

The aim of the study was to;

- To explore the levels of moral distress and its relationship moral competence, ethical compositions, personality, emotional intelligence and ethical climate within healthcare environments.

The main research question was to assess whether ethical compositions and moral competence can be related to moral distress occurring within healthcare environments. The following sub research questions were also used to aid the structure and guide the study;

- Do nurses experience higher levels of moral distress than physicians?
- What are the most and least reported causes of moral distress?
- How do factors such as ethical climate, age, years of practical experience, personality and emotional experience relate to moral distress?
- Can ethical composition in moral dilemma analysis be related to moral distress within nurse and physician samples?

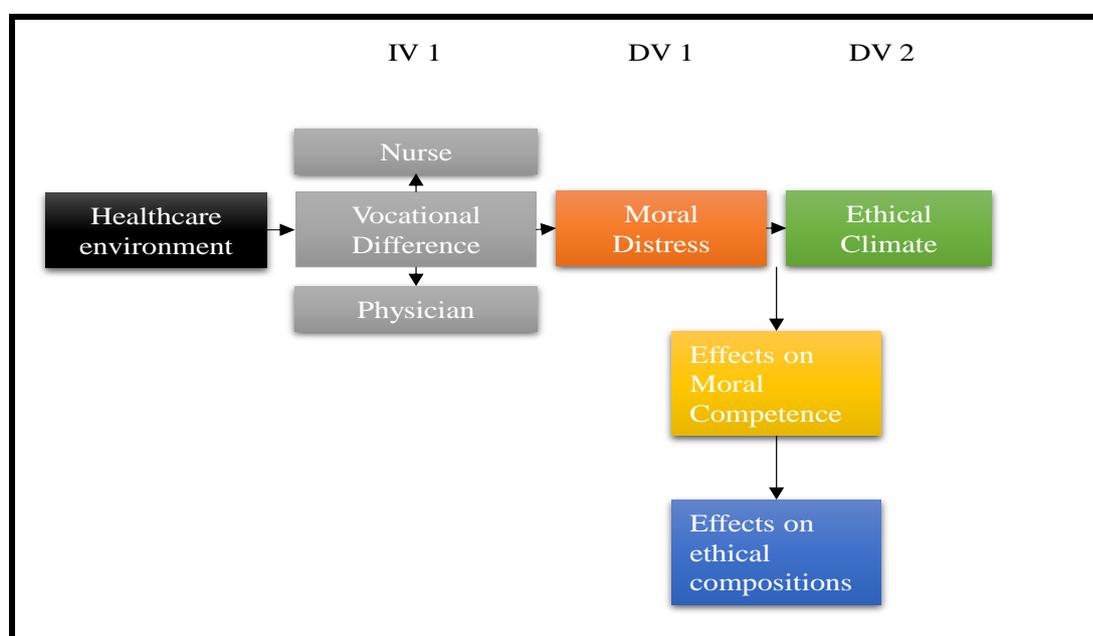


Figure 3.4 outline of research design for study five exploration of the factors of moral distress and relation to moral competence and ethical compositions

3.2 Participants

Overview

The research consisted of data collection from three independent samples. The first sample was university students within the UK the second were individuals working within private healthcare environments and the third were individuals currently working in non-healthcare related environments. Details for each of the sample characteristics and recruitment procedures are presented below.

University Student Sample

A total of 254 university students from UK universities were recruited through convenience sampling. The target sample being university students. Data from English and Humanities students were omitted from the analysis due to a small sample size ($n = 7$), leaving a final sample size of 247 students. A higher portion of the sample were aged between 18 and 24 years (79.76%), with 80 males (32.39%) and 167 females (67.61%). Of the sample 79 (32%) were in their first year of academic study, 55 (22.3%) in their second year, 73 (29.6%) in their third year, and 40 (16.2%) were higher than their third year of study indicative of postgraduate study. A total of 96 (38.87%) students were enrolled on medical and healthcare courses (e.g. medicine, nursing, pharmaceutical sciences), 80 (32.39%) on business related courses (e.g. business studies, accountancy and finance, management), 44 (17.81%) on social science courses (e.g. psychology, sociology), and 27 (10.93%) were enrolled on art and design courses (e.g. graphic design, drama, music).

Healthcare Practice Sample

A total of 118 healthcare professionals working within the UK were recruited through sampling. The target sample being individuals currently working within private healthcare environments. Of the sample, 40.7% were physicians, surgeons and consultants and 59.3% were nurses, healthcare assistants or sisters. There were a total of 46 males (39%) and 72 females (61%), with a mean age of 38.81 ($SD = 10.53$). A higher portion of the sample had completed educational level 6 of a bachelor's degree (39%), held at least one to two years' experience in their job role (34.7%), and worked between 30 and 40 hours per week (61.9%), with weekly overtime ranging from zero (40.7%) to one to five hours per week (27.1%). Table 3.1 displays further details on work characteristics and educational achievements.

Table 3.1

Frequencies of Educational Achievements and Work Characteristics for the Healthcare Sample

Variable	<i>n</i>	%	
Educational Level	Level 1-2	1	0.85
	Level 3	4	3.39
	Level 4	0	0.00
	Level 5	10	8.47
	Level 6	46	38.98
	Level 7	44	37.29
	Level 8	7	5.93
	Vocational Skills	6	5.08
	Less than 1 year	10	8.47
Years of Practical Experience	1-2 years	41	34.75
	3-5 years	31	26.27
	6-10 years	16	13.56
	11-15 years	12	10.17
	16 or more years	8	6.78
	Less than 12 hours	5	4.24
Weekly Hours Worked	12-29 hours	14	11.86
	30-40 hours	73	61.86
	41-50 hours	18	15.25
	51-60 hours	5	4.24
	61 hours or more	3	2.54
Weekly Overtime Hours	No overtime	48	40.68
	1-5 hours	32	27.12
	6-10 hours	19	16.10
	11 - 20 hours	13	11.02
	21 hours or more	6	5.08

Non-healthcare Practice Sample

A total of 150 individuals working within various business environments within the UK were recruited through sampling. The target sample being individuals working outside of the healthcare sectors. The sample consisted of 73 males (48%) and 78 females (51.3%), with a mean age of 40.38 ($SD = 12.87$). In levels of seniority, of the sample 37.5% were from the general level of working population with no managerial attachment, 30.3% were individuals within middle management positions, 26.3% at senior management and 5.3% at C-level management (e.g. chief executive officer). With reference to economic sectors, 19.1% of the sample were employed within secondary production (e.g. manufacturing and assembly,

59.9% from tertiary production (e.g. commercial and public services), 20.4% from quaternary production (e.g. research and development); no data was collected from primary production organisations (e.g. extraction of raw materials). A higher portion of the sample had completed educational level 6 of a bachelor's degree (38.2%), held between three and five years practical experience in their job role (32.9%), worked between 30 and 40 hours per week (56.6%), with no overtime (46.1%). Table 3.2 displays further details on work characteristics and educational achievements.

Table 3.2

Frequencies of Educational Achievements and Work Characteristics for the Non-healthcare Sample

Variable	<i>n</i>	%	
Educational Level	Level 1-2	12	7.89
	Level 3	14	9.21
	Level 4	3	1.97
	Level 5	8	5.26
	Level 6	58	38.16
	Level 7	25	16.45
	Level 8	2	1.32
	Vocational Skills	28	18.42
Years of Practical Experience	Less than 1 year	11	7.24
	1-2 years	40	26.32
	3-5 years	50	32.89
	6-10 years	18	11.84
	11-15 years	17	11.18
	16 or more years	11	7.24
Weekly Hours Worked	Less than 12 hours	2	1.32
	12-29 hours	12	7.89
	30-40 hours	86	56.58
	41-50 hours	36	23.68
	51-60 hours	7	4.61
Weekly Overtime Hours	61 hours or more	4	2.63
	No overtime	70	46.05
	1-5 hours	37	24.34
	6-10 hours	25	16.45
	11 - 20 hours	12	7.89
	21 hours or more	3	1.97

3.3 Procedure

University Student Sample

A portion (38%) of the surveys were paper based, whereby participants were approached on Huddersfield university campus and asked to take part. A research stand was set up in student central surrounded by tables and workstations, allowing participants to return completed surveys in their own time. The remainder of the surveys (62%) were completed through an online platform. This was completed in two ways, the first approach was through email correspondence with the heads of departments from both Huddersfield University and other universities kindly asking for their assistance in circulating the survey to students through online platforms, and the second approach utilised social media paths where the survey was shared on authors' individual pages and student group pages. A raffle incentive was used to help boost participation rates. At the beginning of the survey, following the participant information sheet and consent form participants were asked to enter a unique ID number which was memorable to them, to quote back to researcher in case they wished to withdraw their data. Next, participants were asked a range of closed ended demographic and education based questions, such as their age, gender, course type, course name, current year of study and were asked to indicate how often they engaged with the listed teaching methods. Participants then proceeded into the main body of the survey which consisted of the Moral Competence Test (Lind, 2008a), The Dark Triad (Jones & Paulhus, 2014), and the Genos Emotional Intelligence Inventory (Palmer, Stough, Harmer & Gignac, 2009), the scales were presented in the above specified order. This was then followed by a debrief sheet. Participants did not have a time limit to complete the survey and so were able to take as long as necessary.

Healthcare Practice Sample

All surveys were distributed and completed through an online platform. This was completed in two ways, the first approach was conducted through email correspondence seeking approval from private healthcare organisations kindly asking them for their assistance to circulate and take part in the survey and the second approach utilised social media paths where the survey was shared on authors individual pages and with permission private healthcare group pages. A raffle incentive was used to help boost participation rates. At the beginning of the survey, following the participant information sheet and consent form participants were asked to enter a unique ID number which was memorable to them, to quote back to researcher in case they wished to withdraw their data. Next, participants were asked a

range of closed ended demographic, education and employment based questions, such as their age, gender, highest educational achievement, the course type, course name, current job role, and years of experience in job role. Participants then proceeded into the main body of the survey which consisted of the Moral Competence Test (Lind, 2008a), The Dark Triad (Jones & Paulhus, 2014), the Genos Emotional Intelligence Inventory (Palmer et al., 2009), the Moral Distress Scale –revised (Hamric et al., 2012), and the Hospital Ethical Climate Survey (Olson, 1998) the scales were presented in the above specified order. There are different version of the Moral Distress-Scale-revised (Hamric, et al., 2012), for the purposes of this study the physician version and nurse version was utilised. Individuals who identified as a physician or more closely to that job role was directed to the physician version and as goes for the nurses version. This was then followed by a debrief sheet. Participants did not have a time limit to complete the survey and so were able to take as long as necessary.

Non-healthcare Practice Sample

All surveys were distributed and completed through an online platform. This was completed in two ways, the first approach was conducted through email correspondence seeking approval from companies kindly asking them for their assistance to circulate and take part in the survey and the second approach utilised social media paths where the survey was shared on author's individual pages and with permission business group pages. A raffle incentive was used to help boost participation rates. At the beginning of the survey, following the participant information sheet and consent form participants were asked to enter a unique ID number which was memorable to them, to quote back to researcher in case they wished to withdraw their data. Next, participants were asked a range of closed ended demographic, education and employment based questions, such as their age, gender, highest educational achievement, the course type, course name, current job role, and years of experience in job role. Participants then proceeded into the main body of the survey which consisted of the Moral Competence Test (Lind, 2008a), The Dark Triad (Jones & Paulhus, 2014), and the Genos Emotional Intelligence Inventory (Palmer et al., 2009), the scales were presented in the above specified order. This was then followed by a debrief sheet. Participants did not have a time limit to complete the survey and so were able to take as long as necessary.

3.4 Measures with reliability of scales

Overview

There were a total of seven scales utilised in the present thesis. Some of the scales were only used for certain cohorts, which was dependent on the research design and research aims. This means that each of the measures were not applied to every cohort sample, for example the Moral Distress scale revised (Hamric et al., 2012) was only in the data collection procedure for individuals working within healthcare environments. Which scales were used per sample is also detailed in the procedure section. Please see table 3.3 below which outlines which measures were utilised in which sample.

Table 3.3

Displays of Measures by Cohort

Scale	Cohort Application
Brief Teaching Method Assessment (designed by author)	University Students University Students
Moral Competence Test (MCT, Lind, 2008a)	Healthcare Professionals Non-healthcare professionals University Students
The Dark Triad (SD3; Jones & Paulhus, 2014)	Healthcare Professionals Non-healthcare professionals University Students
The Genos Emotional Intelligence Inventory Concise (Palmer, Stough, Harmer & Gignac, 2009)	Healthcare Professionals Non-healthcare professionals
Moral Distress Scale Revised (Hamric, Bouchers & Epstein, 2012)	Healthcare Professionals
Hospital Ethical Climate Survey (Olson, 1998)	Healthcare Professionals

The Moral Competence Test (MCT; Lind, 2008a)

The MCT applies an experimental and cognitive-structural approach. It presents two moral dilemmas, on a seven point Likert scale (-3 = wrong to +3 = right) participants are asked to evaluate the protagonist's action); showing a commitment to particular opinions about the matters presented. For each dilemma, participants are presented with six arguments in favour and six against the actions in the story. They are then asked to indicate whether they accept or reject these arguments on a nine point Likert scale (+4 = completely agree to -4 = completely disagree). All arguments were selected to represent six moral orientations, as identified by Kohlberg (1984) in a normative hierarchy; one for and one against in the each of the two

dilemma stories. Type 1 (avoid physical damage and injury to oneself) and Type 2 (Acquire benefits and rewards) orientations show the pre-conventional category of moral orientation; Type 3 (achieve recognition and avoid disapproval) and Type 4 (respect laws and order of society) show the conventional orientation; and Type 5 (keep contracts) and Type 6 (hold up universal principles of justice, logic and reason) represent the post-conventional orientation. Based on the total pattern of responses it determines an index of moral competence (C-score). The C-score is the numerical representation of the pattern and portrays the extent an individual is able to make or rate judgments on the basis of moral principles, despite robust counter inclinations (Lind, 2016). The development of moral competence becomes evident when individuals accept some supporting arguments less, or even reject them, because they express an insufficient moral orientation (Lind, 2008b). The C-index score may range from 0-100, from the absence of morals to faultless judgment competence (Lind, 2016). The MCT assesses both the consistency of the argument (C-score) and the stage preference, which discloses the moral attitudes of the individual which are identified according to Kohlberg's six stages of moral judgment.

The MCT is considered to be an experimental behavioural design, as opposed to a psychometric test (Lind, 2016), constructed entirely on theoretical considerations (Lind, 2013). It has been validated and verified through extensive literature reviews, expert ratings and cross cultural validation studies (Lind, 2015b); all of which are grounded on the research based criteria. The first being the hierarchal preference order of moral orientations, which denotes a level of universal agreement that dilemmas entail consideration and discussion at higher stage moral orientations, irrespective of age, gender, education and social background (Rest, 1973; Kohlberg, 1984). The second criteria is the quasi-simplex structure of inter-correlations of moral orientations, meaning that adjacent moral orientations should correlate more highly than distant moral orientations. This infers a developmental sequence and a simplex structure as outlined by Kohlberg (1958). The third criteria asserts an affective cognitive parallelism, moral orientations and moral competence should correlate systematically and are in parallel, a correlational parallelism (Piaget & Inhelder, 1969). The hierarchal preference order of the six Kohlbergian moral orientations have been upheld and substantiated in numerous studies utilising the MCT, in varying sample types, e.g. prisoners (Wischka, 1982; Lind, 2002, 2016), as well as various cultures (Schillinger, 2006; Lind, 2002, 2016). These theoretical criteria have been used to test the validation of the MCT and have been met with success; moreover a minimum of thirty foreign language versions have

been validated and certified, promoting cross cultural validity (Lee, 2005; Lerkiatbundit, Utaipan, Laohawiriyanon & Teo, 2006; Schillinger, 2006; Slovackova & Slovacek, 2007; Feitosa et al., 2013; Biggs & Colesante, 2015; Lind, 2016 Abbasi et al., 2017; Agurto et al., 2017).

In light of this, the theoretical validity of the Moral Competence Test was checked against three criteria (Lind, 2016), i) moral orientations form a hierarchal preference order, ii) moral orientations inter-correlate to form a simplex structure, and iii) affective-cognitive parallelism. Please see chapter 4.

The Shapiro Wilk test of normality was conducted to examine the extent moral competence was approximately normally distributed for each of the independent variables. None of the independent groups were found to be normally distributed: student sample ($W = .91, p < .001$), healthcare sample ($W = .89, p < .001$), non-healthcare sample ($W = .90, p < .001$). Meaning that the assumption of normality has been violated.

The Short Dark Triad (SD3; Jones & Paulhus, 2014)

A 27-item questionnaire which assesses the Dark Triad traits; Machiavellianism, narcissism and psychopathy. On a five point Likert scale participants indicated how much they agreed (1 = strongly disagree to 5 = strongly agree) with items such as *'It's not wise to tell your secrets'* (Machiavellianism), *'I like to get acquainted with important people'* (narcissism), and *'I like to get revenge on authorities'* (psychopathy). According to Jones and Paulhus (2014) the Short Dark Triad (SD3) has a good internal consistency with 0.76. In the current study the mean Cronbach Alpha Coefficient was 0.73, which is considered acceptable. The evaluation of subscales was also conducted; Machiavellianism ($\alpha = 0.73$), narcissism ($\alpha = 0.70$), and psychopathy ($\alpha = 0.75$); table 3.4 displays the full reliability coefficients for each of the samples.

Table 3.4

Reliability Coefficients for The Dark Triad (SD3)

Sample	<i>n</i>	Machiavellianism (α)	Narcissism (α)	Psychopathy (α)	Mean (α)
Student	247	0.73	0.71	0.77	0.74
Healthcare	118	0.75	0.71	0.72	0.73
Non-healthcare	150	0.72	0.68	0.76	0.72
Mean		0.73	0.70	0.75	0.73
Jones & Paulhus (2014)	230	0.76	0.78	0.73	0.76

The Shapiro Wilk test of normality was conducted to examine the extent the dependent variables, Machiavellianism, narcissism and psychopathy were approximately normally distributed for each of the independent variables. All of the independent groups were found to be normally distributed for total levels of Machiavellianism: student sample ($W = .99, p = .09$), healthcare sample ($W = .91, p = .65$), non-healthcare sample ($W = .99, p = .19$). All of the independent groups were found to be normally distributed for total levels of narcissism: student sample ($W = .99, p = .24$), healthcare sample ($W = .98, p = .18$), non-healthcare sample ($W = .99, p = .68$). However, none of the independent groups were found to be normally distributed for total levels of psychopathy: student sample ($W = .96, p < .001$), healthcare sample ($W = .93, p < .001$), non-healthcare sample ($W = .93, p < .001$). Meaning that the assumption of normality was violated for psychopathy.

The Genos Emotional Intelligence Inventory Concise (Palmer et al., 2009)

A 31-item questionnaire which assess how often individuals exhibit emotionally intelligent workplace behaviours. It is grounded on factor analytic research to present a taxonomic model of emotional intelligence. It renders a general factor (total emotional intelligence) alongside seven implicit elements: 1) Emotional Self-Awareness (ESA), the ability of recognising and understanding individual emotions; 2) Emotional Expression (EE), the ability to sufficiently express individual emotion; 3) Emotional Awareness of Others (EAO), the ability to recognise and understand other people emotions; 4) Emotional Reasoning (ER), being able to use emotional information in decision making tasks; 5) Emotional Self-Management (ESM), the ability to control individual emotion; 6) Emotional Management of Others (EMO), the ability to constructively influence the emotions of others; and 7) Emotional Self-Control (ESC), the skill to control strong emotions efficiently. On a five point Likert scale participants are asked to indicate how often the behaviour is demonstrated (1 = almost never to 5 = almost always with items such as ‘*When I am under stress I become impulsive*’ (Emotional Self Control, reversed item), ‘*I express how I feel at the appropriate time*’ (Emotional Expression), and ‘*I respond to events that frustrate me appropriately*’ (Emotional Self-Management). Items selected in the Genos Emotional Intelligence Inventory manage to capture and display a wide range of positive emotions, such as motivation, optimism and engagement, as well as and negative emotions such as, frustration, upset and stress.

As reported by Palmer et al. (2009) the Genos Emotional Intelligence Inventory has a good internal consistency with 0.93 for Total EI. In the current study the mean Cronbach Alpha

Coefficient was 0.89, which is also considered acceptable. The evaluation of subscales was also conducted, table 3.5 displays the full reliability coefficients for each of the samples. The majority of the Cronbach Alpha values for the subscales were below the recommended 0.7 range, Cronbach alpha values have been noted to be sensitive to the number of items in a scale. Given that the number of items in subscales ranged between four and five, the mean inter item correlations were also reported. The recommend optimal range for the inter item correlation should fall between 0.2 and 0.4 (Briggs & Cheek, 1986). ESM within the student sample mean inter item correlation was 0.17 below the optimal range, though examination of alphas if items were deleted revealed no increases within the coefficients.

Table 3.5

Reliability Coefficients and Mean Inter Item Correlations for the Genos Emotional Intelligence Inventory

Variable	Student (<i>n</i> = 108)		Healthcare (<i>n</i> = 107)		Non- healthcare (<i>n</i> = 137)		Mean α	Palmer et al. (2009) (<i>n</i> = 206)
	α	<i>M</i>	α	<i>M</i>	α	<i>M</i>	<i>M</i>	α
ESA	0.61	0.28	0.64	0.31	0.56	0.25	0.60	0.75
EE	0.60	0.23	0.68	0.30	0.64	0.27	0.64	0.72
EAO	0.61	0.28	0.66	0.34	0.70	0.39	0.66	0.74
ER	0.69	0.31	0.71	0.31	0.73	0.33	0.71	0.72
ESM	0.51	0.17	0.64	0.27	0.70	0.31	0.62	0.74
EMO	0.60	0.28	0.72	0.39	0.67	0.34	0.66	0.74
ESC	0.70	0.36	0.62	0.30	0.56	0.25	0.63	0.71
TOTAL EI	0.87	0.18	0.91	0.25	0.90	0.24	0.89	0.93

The Shapiro Wilk test of normality was conducted to examine the extent total emotional intelligence was approximately normally distributed for each of the independent variables. None of the independent groups were found to be normally distributed for total levels of emotional intelligence: student sample ($W = .99, p = .35$), healthcare sample ($W = .99, p = .72$), non-healthcare sample ($W = .98, p = .12$). Indicating a violation of the assumption of normality.

Moral Distress Scale Revised (MDS-R, Hamric et al. 2012)

A 21 item questionnaire designed to assess moral distress levels in healthcare providers. The MDS-R has been developed and adapted to suit a wide range of healthcare environments. The present study utilised the nurse's version and the physician's version. Differences between

these two versions are certain question modifications to fit the targeted population. For example, nurse and other healthcare professional question '*Follow the physician's request not to discuss the patient's prognosis with the patient or family*' has been altered for physicians to '*Request nurses or others not to discuss the patient's prognosis with the patient or family*'. On a five point Likert scale participants are asked to rate the items on two dimensions; how often the situation occurs (frequency; 0 never to 4 very frequently) and how disturbing the situation is when it arises (intensity; 0 none to 4 great extent). The frequency and intensity scores can be calculated separately, as well as a composite score. The composite score is calculated by multiplying the frequency score and intensity score for each of the 21 items (fxi) the composite score is then the result of adding each of the items fxi score (Hamric et al., 2012). The ending score can range from 0 to 336, 0 indicating no perceived moral distress and 336 revealing the hugest level of moral distress. This scoring system allows items which are never experienced or are minimally distressing to be removed from the composite score, providing a more precise reading of moral distress. Following the main body of the questionnaire two questions assess intention to leave a current position or a previous position due to moral distress. Reliabilities in the psychometric testing as reported by Hamric et al. (2012) were Cronbach α reliabilities 0.67 for physicians and 0.89 for nurses; 0.88 combined. In the current study the mean Cronbach α Coefficient was 0.94 for physicians and 0.95 for nurses, with a combined α of 0.95.

The Shapiro Wilk test of normality was conducted to examine the moral distress was approximately normally distributed for each of the independent variables. The independent group were found to be not normally distributed for total levels of moral distress: ($W = .89$, $p < .001$). Indicating a violation of normality.

Hospital Ethical Climate Survey (Olson, 1998)

A 26-item questionnaire designed to examine healthcare workers perceptions of the ethical climate of their workplace. Within healthcare organisations ethical climate is the implicit and explicit principles which initiate and shape health care delivery (Rodney et al, 2006) and health care providers perception of how ethical issues are handled (Olson, 1995), covering issues of power, trust, and human interaction (Olson, 1998). The Hospital Ethical Climate survey offers a general factor (perceived ethical climate), with higher scores denoting a positive perception, alongside five subscales: 1) peers, 2) patients, 3) Managers, 4) Hospital and 5) Physicians. On a five point Likert scale participants are asked to indicate how true the

range of statements apply to work place practice (1 = almost never true to 5= almost always true) with items such as ‘*Nurses and physicians trust each other*’ (physicians), ‘*My peers listen to my concerns about patient care*’ (peers), and ‘*My manager is someone I can trust*’ (Managers).

Olson (1998) reported that the Hospital Ethical Climate Survey has a good internal consistency with 0.91. In the current study the mean Cronbach Alpha Coefficient was 0.96. The evaluation of subscales was also conducted and displayed in Table 3.6, all of which fell within the optimum range.

The Shapiro Wilk test of normality was conducted to examine the extent ethical climate was approximately normally distributed for each of the independent variables. The independent group were found to be normally distributed for reported levels of ethical climate ($W = .97, p = .29$). Indicating that the data did not violate normality.

Table 3.6

Reliability Coefficients for the Hospital Ethical Climate Survey

Variable	Healthcare Sample ($n = 50$)	Olson (1998) ($n = 360$)
Peers	0.80	0.73
Patients	0.80	0.68
Managers	0.94	0.92
Hospital	0.85	0.77
Physicians	0.86	0.81
Total	0.96	0.91

3.5 Analysis

Before analysis, the gathered data was coded and prepared. The data was then analysed using the statistical software SPSS. Line graphs were created using Microsoft excel. Due to the multitude of results, separate analysis sections are included throughout the report within each of the results sections for further clarity. Generally, the following non-parametric tests were used to compare groups, Kruskal-Wallis Tests, Mann-Whitney U Tests, independent samples t-test; dependent on the number of categories in the independent variable. The Shapiro Wilk test of normality was conducted to examine the extent the dependent variable (ethical climate) is approximately normally distributed for each of the independent variables. This test was chosen over the Kolmogorov-Smirnov because it provides a better power in the detection

for non-normal distribution and is a highly recommended test (Ghasemi & Zahediasl, 2012; Steinskog, 2007). The majority of the dependent variables, as detailed above in the measures section, violated the assumption of normality. However, it has been noted that the majority of parametric tests are robust enough to tolerate violations of this assumption, especially with large samples of over thirty participants (Pallant, 2007). Therefore, within samples with less than thirty participants non-parametric tests were utilised. The statistical technique used to explore the strength and direction of relationships between variables was the non-parametric alternative Spearman's Rank Order Correlation (ρ), to account for the non-linear relationship between variables, where Pearson Product-moment Correlation Coefficient may underestimate the strength of a relationship (Pallant, 2007). Holms-Bonferroni method (Holm, 1979) was used to adjust p-values to correct for multiple comparisons and for when the dependent variable has been tested multiple times with different independent variables, to control the familywise Type 1 error. Built on the foundations of the Bonferroni adjustment method, which attempts to manage the familywise Type 1 error through a more stringent criteria by calculating the adjusted alpha values by dividing it by the number of tests performed and simultaneously tested hypotheses (Bland & Altman, 1995). Holms-Bonferroni Method (Holm, 1979) gradually adjusts the threshold values attaining a higher statistical power over the standard Bonferroni adjustment (Haynes, 2013) by operating in a less conservative manner to help control Type 2 error rate. In a stepwise procedure, Holms-Bonferroni method (Holm, 1979) calculates significance levels subject to the P value established rank of hypotheses.

Chapter 4

Testing the theoretical validity of The Moral Competence Test within student and practice populations

4.1 Introduction

Moral competence is the ability to make moral judgments (based on inner principles) and act in accordance to these judgments (Kohlberg, 1964), through deliberation and discussion, instead of violence and deceit (Lind, 2016); which embodies both the internal (orientations) and external (ability) aspects. The Dual Aspect theory asserts that moral behaviour must be defined in provisions of both affective (ideals and emotions) and cognitive (competencies) features, denoting the dual temperament of moral thinking and behaviour (Lind, 2013). One prevalent measure of moral competence is The Moral Competence Test (MCT, Lind).

The MCT is considered to be an experimental behavioural design, as opposed to a psychometric test (Lind, 2016), constructed entirely on theoretical considerations (Lind, 2013). It has been validated and verified through extensive literature reviews, expert ratings and cross cultural validation studies; all of which are grounded on the research based criteria. The first being the hierarchal preference order of moral orientations, which denotes a level of universal agreement that dilemmas entail consideration and discussion at higher stage moral orientations, irrespective of age, gender, education and social background (Rest, 1973; Kohlberg, 1984). The second criteria is the quasi-simplex structure of inter-correlations of moral orientations, meaning that adjacent moral orientations should correlate more highly than distant moral orientations. This infers a developmental sequence and a simplex structure as outlined by Kohlberg (1958). The third criteria asserts an affective cognitive parallelism, moral orientations and moral competence should correlate systematically and are in parallel, a correlational parallelism (Piaget & Inhelder, 1969). The hierarchal preference order of the six Kohlbergian moral orientations have been upheld and substantiated in numerous studies utilising the MCT, in varying sample types, e.g. prisoners (Wischka, 1982; Lind, 2002, 2016), as well as various cultures (Schillinger, 2006; Lind, 2002, 2016). These theoretical criteria have been used to test the validation of the MCT and have been met with success; moreover a minimum of thirty foreign language versions have been validated and certified, promoting cross cultural validity (Lee, 2005; Lerkiatbundit, Utaipan, Laohawiriyanon & Teo, 2006; Schillinger, 2006; Slovackova & Slovacek, 2007; Feitosa et al., 2013; Biggs & Colesante, 2015; Lind, 2016 Abbasi et al., 2017; Agurto et al., 2017).

Thus, to ensure that the use of the MCT has been utilised correctly and to check for any anomalies, the theoretical validity of the MCT will be screened and checked against three of the validation criteria (Lind, 2016):

- ***Moral orientations form a hierarchal preference order*** - a level of universal agreement that particular dilemmas entail consideration and discussion at a higher stage of moral principles when it comes to reasoning of moral problems
- ***Moral orientations inter-correlate to form a simplex structure*** - adjacent moral orientations will correlate more highly than distant moral orientations
- ***Affective-cognitive parallelism*** - moral orientations and moral competence (C-score) correlate systematically and are in parallel

The present study aims to test the three criteria within both student populations and practice populations to examine the level and extent of universal agreement surrounding dilemma analysis.

4.2 Aims of the study

The aims of the study were to;

- To assess the extent that moral orientations form a hierarchal preference order within both student and practice populations
- To examine moral orientation preference to check they inter-correlate to form a simplex structure
- To examine that moral orientations and moral competence form an affective-cognitive parallelism

4.3 Method

Participants

Data was collected from a total of 517 participants, consisting of 270 individuals working within both healthcare settings and non-healthcare settings (practice sample) and from a total of 254 students (student sample). Data from English and Humanities students were omitted from the analysis due to a small sample size ($n = 7$), leaving a final sample size of 247 students. Of the student sample, a higher portion of the sample were aged between 18 and 24 years (79.76%), with 80 males (32.39%) and 167 females (67.61%). From the practice sample there were a total of 46 males (39%) and 72 females (61%), with a mean age of 38.81 ($SD = 10.53$).

Procedure

From the data collected from the student sample 38% of the surveys were paper based, whereby participants were approached on Huddersfield university campus and asked to take part. A research stand was set up in student central surrounded by tables and workstations, allowing participants to return completed surveys in their own time. The remainder of the surveys (62%) were completed through an online platform. For the practice samples (both healthcare and non-healthcare professionals all surveys were distributed and completed through an online platform.

Measures

The Moral Competence Test (MCT; Lind, 2008a)

The MCT applies an experimental and cognitive-structural approach. It presents two moral dilemmas, on a seven point Likert scale (-3 = wrong to +3 = right) participants are asked to evaluate the protagonist's action; showing a commitment to particular opinions about the matters presented. For each dilemma, participants are presented with six arguments in favour and six against the actions in the story. They are then asked to indicate whether they accept or reject these arguments on a nine point Likert scale (+4 = completely agree to -4 = completely disagree). All arguments were selected to represent six moral orientations, as identified by Kohlberg (1984) in a normative hierarchy; one for and one against in the each of the two dilemma stories. Based on the total pattern of responses it determines an index of moral competence (C-score). The C-score is the numerical representation of the pattern and portrays the extent an individual is able to make or rate judgments on the basis of moral principles,

despite robust counter inclinations (Lind, 2016). The development of moral competence becomes evident when individuals accept some supporting arguments less, or even reject them, because they express an insufficient moral orientation (Lind, 2008b). The C-index score may range from 0-100, from the absence of morals to faultless judgment competence (Lind, 2016). The MCT assesses both the consistency of the argument (C-score) and the stage preference, which discloses the moral attitudes of the individual which are identified according to Kohlberg's six stages of moral judgment.

Analysis

To explore the first research aim to assess the extent that moral orientations form a hierarchal preference order within both student and practice populations, line graphs were used to examine the mean scores of moral orientation preference across student practice populations. The mean scores of each of the moral orientation preferences (e.g. Type 1 in favour, Type 3 against) were calculated for each moral dilemma (vigilantism and mercy killing), the means of the same moral orientations were then summed up (e.g. Type 1 *for* was added to Type 1 *against* in both the vigilantism and mercy killing scenario), the outcome was then divided by four to provide an average mean score for each moral orientation preference. This procedure was conducted separately for student and practice samples. To examine the second research aim, that moral orientation preference inter-correlate to form a simplex structure a Spearman's Rank Order (Rho) correlation coefficients was conducted; within both student and practice populations. This was to examine both the strength and direction between moral orientation types. To investigate the final research aim into the affective-cognitive parallelism a Spearman's Rank Order (Rho) correlation coefficients was conducted to examine the strength and direction of the relationship between C-score and moral orientation types, as well as a line graph to assess the mean scores of moral orientation preference across C-score categorisations. The categorisations were as follows, C-scores 0-9, C-scores 10-19, C-scores 20-29, C-scores 30-39, C-scores 40-49, and C-scores 50 or above. The same procedure detailed above to obtain the mean moral orientation type preferences was conducted, but separately for each for the C-score categorisations, not separately for student and practice populations.

4.4 Results

4.4.1 Moral orientations form a hierarchal preference order analysis

Figure 4.1 displays the range of argument acceptance for the each of the moral orientation types between student and practice populations. The y axis presents the participants mean level of agreement (acceptance or rejection) of a particular type of moral orientation. The x axis displays the six types of moral orientations. Each lines represent one of the two study groups. There is a high level of similarity between the two groups, as both groups appear to accept the same moral orientations and similarly reject other orientations. Participants within both the student and practice sample accepted moral orientation Type 1, Type 2 and Type 3 less and showed an increase towards higher moral orientations. This steady increase across moral orientations provides adequate support for the hierarchal preference order of moral orientations.

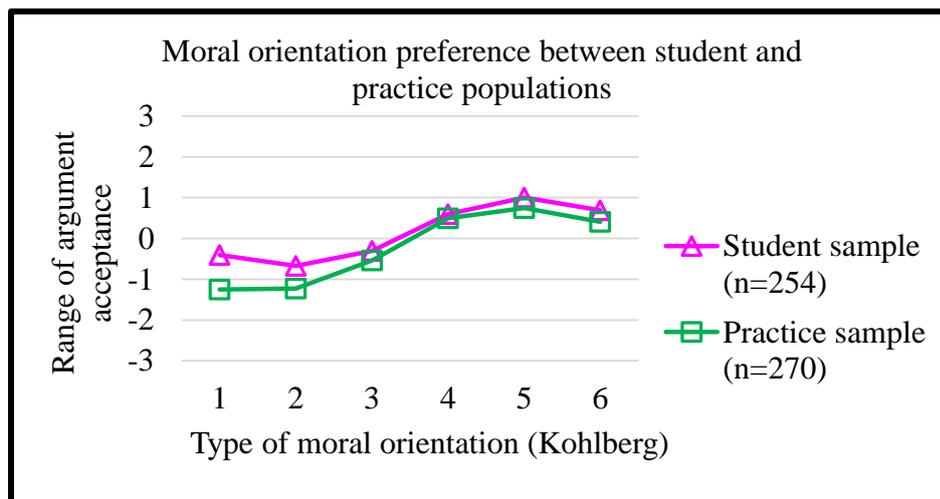


Figure 4.1 displays moral orientation preference between students and professionals

4.4.2 Inter-correlation of moral orientations and whether they form a simplex structure analysis

The inter-relationships between moral orientations and moral categorisations was investigated using Spearman's Rank Order (Rho) correlation coefficients; please see table 4.1 For each of the moral orientation types and moral categorisations positive correlations were found, each differing in relationship strength. In summary, Type 1; small correlations with Type 5 and Type 6; medium relations with Type 4; and large correlations with Type 2, and

Type 3. For Type 2: small correlations with Type 5 and Type 6; medium associations with Type 3 and Type 4. For Type 3: small correlations held with Type 5; medium relations with Type 4 and Type 6. Type 4: medium correlations with Type 5 and Type 6. Type 5: held medium correlations with Type 6. It seems that preferences for neighbouring types of moral orientations correlate more highly than preferences for more distant moral orientation types.

Table 4.1

Spearman's Rank Order (rho) Correlations between Moral Orientations Types

Moral Orientation	1	2	3	4	5	6
1. Type 1	-					
2. Type 2	.55**	-				
3. Type 3	.48**	.48**	-			
4. Type 4	.30**	.33**	.35**	-		
5. Type 5	.17**	.16**	.20**	.39**	-	
6. Type 6	.22**	.22**	.27**	.42**	.43**	-

*Note ** $p < .01$ (2-tailed) ($n = 517$)*

4.4.3 Affective-cognitive parallelism analysis

The relationships between moral competence (C-score) and moral orientations and categorisations was investigated using Spearman's Rank Order (Rho) correlation coefficients; please see table 4.2. Medium negative correlations were noted between C-score and all lower end moral orientations (Types 1, 2 and 3). The opposite was found between C-scores and higher end moral orientations, with medium positive relations with Type 5 and small positive correlations with Type 4 and Type 6. The acceptance of lower moral orientation types and the rejection of higher moral orientation types are associated with lower moral competence (C-score), whereas the acceptance of higher moral orientation types and the rejection of lower moral orientation types denotes higher moral competence. Further support for this was found when moral orientation types were grouped into categories, as medium negative correlations were found between C-score and pre-conventional modes (Type 1 and Type 2) and positive relations were found between C-score and post-conventional modes (Type 5 and Type 6). The conventional category (Type 3 and Type 4) held negative correlations with C-scores though this was small. Figure 4.2 displays the preference for moral orientation types by C-score categorisation, it can be seen that individuals with a C-score between zero and nine showed a higher preference for lower end moral orientations (Type 1, Type 2 and Type 3)

with a lower preference for higher end moral orientations (Type 4, Type 5 and Type 6). Conversely, individuals with a C-score of fifty or above reject more clearly lower end moral orientations more whilst accepting higher end moral orientations.

Table 4.2

Spearman's Rank Order (rho) Correlations between Moral Competence (C-score) and Moral Orientations

Variable	1
1. C-score	-
2. Type 1	-.38**
3. Type 2	-.42**
4. Type 3	-.31**
5. Type 4	.12**
6. Type 5	.34**
7. Type 6	.24**
8. Pre-conventional	-.45**
9. Conventional	-.12**
10. Post-conventional	.34**

Note ** $p < .01$ (2-tailed) ($n = 517$)

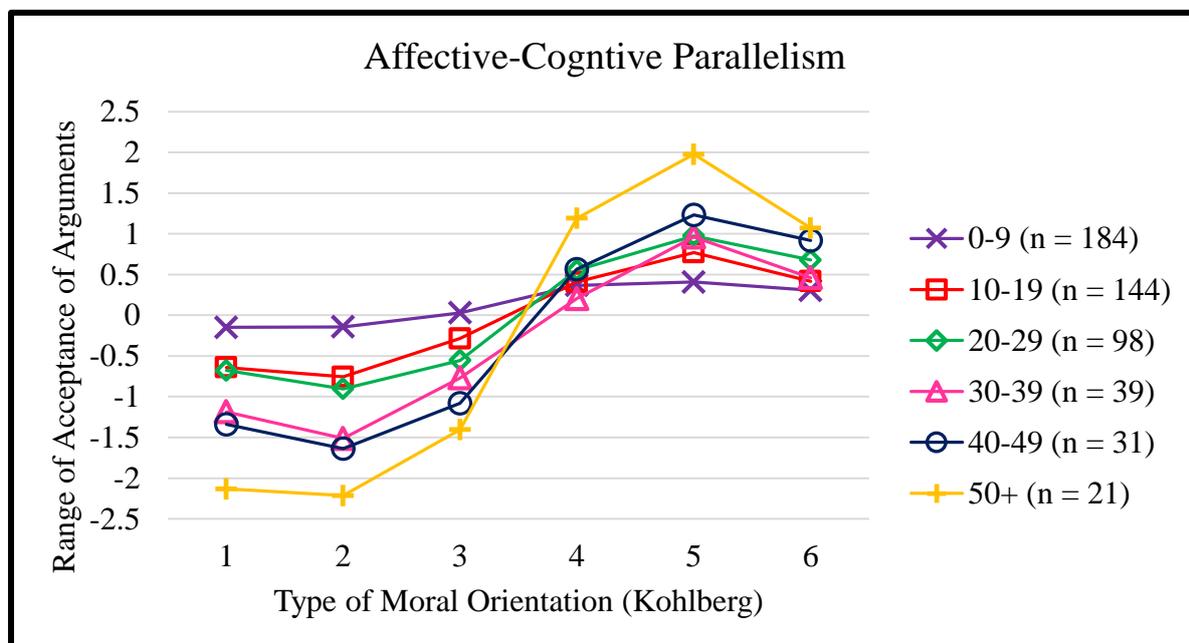


Figure 4.2 displays moral orientation preference in relation to C-score categorisation

4.5 Key findings and partial discussion

The aims of the study were to;

- To assess the extent that moral orientations form a hierarchal preference order within both student and practice populations
- To examine moral orientation preference to check they inter-correlate to form a simplex structure
- To examine that moral orientations and moral competence form an affective-cognitive parallelism

4.5.1 Key findings

- Moral orientations form a hierarchal preference order: individuals are more likely to accept higher end moral orientations and reject low end moral orientations when deliberating a difficult moral issue
- Moral orientations inter-correlate to form a simplex structure: adjacent moral orientations correlated more highly than distant moral orientations
- Support for affective-cognitive parallelism: the more clearly an individual accepts high end moral orientations and rejects low end moral orientations the higher their moral competence

4.5.2 Partial discussion

The present study aimed to examine that the use of the MCT has been utilised correctly and to check for any anomalies. The theoretical validity of the MCT was checked against three of the validation criteria (Lind, 2016), i) moral orientations form a hierarchal preference order, ii) moral orientations inter-correlate to form a simplex structure, and iii) affective-cognitive parallelism. The present study investigated the three criteria within both student populations and practice populations to examine the level and extent of universal agreement surrounding dilemma analysis.

Support was found for the core assumption that moral orientations form a hierarchal preference order, both sample groups displayed a higher preference for higher type moral orientations and a lower preference for low end moral orientations, as depicted in. It seems that particular dilemmas require deliberation and thought at higher type of moral orientations, as higher types of moral orientations seem to be more morally acceptable than lower types

when attempting to solve difficult moral issues. Highlighting the hierarchal preference order as presented by normative theory across various cultures, age groups and social classes (Feitosa et al., 2013; Kohlberg, 1964; Lind, 1985, 2016; Slovackova & Slovacek, 2007). Lind (2016) reported a notable similarity in the moral orientation ratings between university students and prisoners, denoting a level of universal agreement that particular dilemmas entail consideration and discussion at a higher stage of moral principles when it comes to reasoning of moral problems. Though, the present study didn't utilise prison samples as a comparison, it is fair to assume that students and professionals utilised differ in many ways and are at different stages in their lives.

Evidence was also found to support the second assumption that moral orientations inter-correlate to form a simplex structure. The present study found adjacent moral orientations correlated more highly than distant moral orientations (Lind, 2016). This highlights and provides evidence for the hierarchal type structure held within the arguments presented in the Moral Competence Test.

The correlation between moral orientations and moral competence (c-score) displays the systematic and parallelism between affective and cognitive aspects. Differences depicted in Figure 4.2, were noted between individuals with a C-score between zero and nine and individuals with a C-score of fifty or above. The more clearly an individual accepts higher types of moral orientations and rejects lower ones, the higher the moral competence level (Lind, 2016).

The theoretical validity of the Moral Competence Test within the present study has been successfully substantiated on the following three assumptions; i) moral orientations form a hierarchal preference order, ii) moral orientations inter-correlate to form a simplex structure, and iii) affective-cognitive parallelism.

Chapter 5

An exploration into the moral competence levels of different vocational fields and the effects of education

5.1 Introduction

There is a plenteous amount of evidence to suggest that facets, such as moral reasoning skills, increase throughout the higher education years, as highlighted in chapter 2.2.1 (Cummings et al., 2001; Doyle & O’Flaherty, 2013; Foster & LaForce, 1999; Gfellner, 1986; Gielen & Markoulis, 2001; Kitchener et al., 1984; McNeel, 1994; Myyry et al., 2013; Paradice & Dejoie, 1991; Rest & Thoma, 1985; Rose, 2012; Shaver, 1985, 1987; Swaner, 2004).

Yet conversely, not all agree that educational endeavours currently aid moral development, with specific concerns circulating to medical and healthcare vocations and preceding educational experiences. As outlined in chapter 2.2.2 research tends to support the notion of a moral regression or moral stagnation occurring within medical education, commonly attributed to educational teaching and opportunities. This phenomenon has been documented in research utilising various measures the Moral Judgment Interview (Helkama et al., 2003; Patenaude et al., 2003; Self et al., 1993); the defining issues test (Fleisher et al., 2003; Hren et al., 2011; Kim et al., 2004; Morton et al., 1996; Murrell, 2014; Prescott et al., 2014; Self & Olivarez, 1996; Self et al., 1998; Swisher, 2010); the Moral Competence test (Agurto et al., 2017; Feitosa et al., 2013; Lind, 2000a; Slovackova & Slovacek, 2007); and other means (Chalmers et al., 2011; Freitas et al., 2006; Hebert et al., 1992; Self et al., 1996)

Reasons for the occurrence of moral regression or stagnation usually distribute around the education system and the range of teaching methods available on these courses. Namely, how these courses focus more on practical and technical aspects, overuse of governing teaching methods which supresses discussion, role taking and reflection and students who experiences less peer contact, and higher levels of competition and pressure (Bok, 2001; Coles, 1998; Kohlberg, 1984; Lind, 2000a, 2000b, 2008b, 2016; Sprinthall et al., 1994; Wolf et al., 1989).

However, further speculations into reports of moral segmentations (Hegazi & Wilson, 2013; Schillinger-Agati & Lind, 2003) draws some interesting questions in relation to the hypothetical dilemma based measures being used to examine moral development within medical and healthcare vocations and highlights the significance of context when interpreting data. This insight contends the notion of a homogeneity postulate within dilemma analysis (Colby & Kohlberg, 1987; Lind 2016) and provides support for a heterogeneous claim (Beck et al., 1998; Krebs et al., 1991; Rest, 1979; Senger, 1985; Zeidler & Schafer, 1984).

The present study aims to test these assumptions through the employment of The Moral Competence Test (MCT; Lind, 2008a) within healthcare vocations; both students and professionals and compare results with other vocational areas. Furthermore, the present study aims to explore the notion of a moral segmentation, as if one was to consider the context specific relevance of the mercy killing scenario and further note that both the MJI and both version of the DIT also contain a medical related dilemma. It could be argued that rather than witnessing a regression or stagnation in moral development in healthcare related vocations, it could possibly be a moral segmentation, due to the medical context of the dilemmas presented. Which raises further questions surrounding the use of hypothetical dilemmas in measuring moral competence and further probes whether a dilemma not contextually attached to healthcare vocation would elicit the same response in a healthcare and medical population. Nevertheless, it is of huge significance to not only understand and explore the moral development of potential future leaders (students), but the current professionals in both healthcare and non-healthcare business related fields, combined with the capability to not put financial or human welfare of others at risk or perform hazardous practices.

Based on the literature it is hypothesised that medical and healthcare vocational fields, both students (H_{1a}) and practice professionals (H_{1b}), will display significantly lower levels of moral competence compared to non-healthcare vocational fields. As the majority of the reviewed research generally supports the notion of moral regression or stagnation in moral competence throughout medical and healthcare curriculum and possibly entering professional practice (Agurto et al., 2017; Feitosa et al., 2013; Lind, 2000a; Slovackova & Slovacek, 2007), it predicts that the moral competence scores of medical and healthcare students and professionals, will decrease across either the educational span (H_{2a}) or professional span (H_{2b}), indicative of a moral regression. Reasons for the occurrence of moral regressions usually circulate around the education system and the overuse of governing teaching methods which suppresses discussion, role taking and reflection (Bok, 2001; Coles, 1998; Kohlberg, 1984; Lind, 2000a, 2000b, 2008b, 2016; Sprinthall et al., 1994; Wolf et al., 1989), it is hypothesised that medical and healthcare student will report higher levels of non-interactive methods (H_{3a}) the levels non-interactive teaching methods will negatively affect the moral competence scores of students (H_{3b}). Research examining the effects of higher education on the development of moral concepts remains divided on its benefits (Bok, 2001; Cummings et al., 2001; Doyle & O'Flaherty, 2013; Ferrell et al., 2008; Foster & LaForce, 1999; Gfellner, 1986; Gielen & Markoulis, 2001; Hummel et al., 2018; Kitchener et al., 1984; King &

Mayhew, 2002; McNeel, 1994; Myyry et al., 2013; Paradice & Dejoie, 1991; Traiser & Eighmy, 2011; Rest & Thoma, 1985; Rose, 2012; Shaver, 1985, 1987; Swaner, 2004). Consequently, the present research adopts a non-directive stance and predicts that the educational background of practice professions will affect the moral competence scores (H_4). Alternatively, the significance of context in hypothetical dilemmas and the documented cases of moral segmentation occurrence (Hegazi & Wilson, 2013; Schillinger-Agati & Lind, 2003), it is hypothesised that medical and healthcare students (H_{5a}) and professionals (H_{5b}) are more likely to undergo a moral segmentation effect when analysing mercy killing scenario presented in the MCT, compared to non-healthcare vocational fields.

5.2 Aims of the study

The aims of the study were to;

- To explore moral competence levels; between healthcare and non-healthcare vocational fields in education and practice, investigate the dynamics and directions of moral competence across the educational or professional span, and examine the relationship between moral competence and educational factors.
- To assess the moral competence scores independently for the scenario depicting a) an act of vigilantism and b) an act of euthanasia, to explore the occurrence of a moral segmentation between healthcare and non-healthcare vocations.

5.3 Method

Participants

Data was collected from a total of 254 university students and 270 individuals working within healthcare or non-healthcare settings. Data from English and Humanities students have been omitted from the analysis due to a small sample size ($n = 7$), leaving a final sample size of 247 students. Of the student sample, a higher portion of the sample were aged between 18 and 24 years (79.76%), with 80 males (32.39%) and 167 females (67.61%). Of the sample 79 (32%) were in their first year of academic study, 55 (22.3%) in their second year, 73 (29.6%) in their third year, and 40 (16.2%) were higher than their third year of study indicative of postgraduate study. A total of 96 (38.87%) students were enrolled on medical and healthcare courses (e.g. medicine, nursing, pharmaceutical sciences), 80 (32.39%) on business related courses (e.g. business studies, accountancy and finance, management), 44 (17.81%) on social

science courses (e.g. psychology, sociology), and 27 (10.93%) were enrolled on art and design courses (e.g. graphic design, drama, music).

Of the practice sample 118 were healthcare professionals working within private healthcare settings, with a total of 46 males (39%) and 72 females (61%), with a mean age of 38.81 ($SD = 10.53$), 40.7% were physicians, surgeons and consultants and 59.3% were nurses, healthcare assistants or sisters. The remainder of the sample consisted of 152 individuals working within various business environments within the UK, with a total of 73 males (48%), 78 females (51.3%) and one not disclosed, with a mean age of 40.38 ($SD = 12.87$). With reference to economic sectors, 19.1% of the sample were employed within secondary production (e.g. manufacturing and assembly), 59.9% from tertiary production (e.g. commercial and public services), 20.4% from quaternary production (e.g. research and development); no data was collected from primary production organisations (e.g. extraction of raw materials).

Procedure

From the data collected from the student sample 38% of the surveys were paper based, whereby participants were approached on Huddersfield university campus and asked to take part. A research stand was set up in student central surrounded by tables and workstations, allowing participants to return completed surveys in their own time. The remainder of the surveys (62%) were completed through an online platform.

Within the practice samples, all surveys were distributed and completed through an online platform. For the healthcare sample this was completed in two ways, the first approach was conducted through email correspondence seeking approval from private healthcare organisations kindly asking them for their assistance to circulate and take part in the survey and the second approach utilised social media paths where the survey was shared on authors individual pages and with permission private healthcare group pages. The recruitment of non-healthcare professionals was conducted through email correspondence seeking approval from companies kindly asking them for their assistance to circulate and take part in the survey and the second approach utilised social media paths where the survey was shared on author's individual pages and with permission business group pages.

Measures

The Moral Competence Test (MCT; Lind, 2008a)

The MCT applies an experimental and cognitive-structural approach. It presents two moral dilemmas, on a seven point Likert scale (-3 = wrong to +3 = right) participants are asked to evaluate the protagonist's action); showing a commitment to particular opinions about the matters presented. For each dilemma, participants are presented with six arguments in favour and six against the actions in the story. They are then asked to indicate whether they accept or reject these arguments on a nine point Likert scale (+4 = completely agree to -4 = completely disagree). All arguments were selected to represent six moral orientations, as identified by Kohlberg (1984) in a normative hierarchy; one for and one against in the each of the two dilemma stories. Type 1 (avoid physical damage and injury to oneself) and Type 2 (Acquire benefits and rewards) orientations show the pre-conventional category of moral orientation; Type 3 (achieve recognition and avoid disapproval) and Type 4 (respect laws and order of society) show the conventional orientation; and Type 5 (keep contracts) and Type 6 (hold up universal principles of justice, logic and reason) represent the post-conventional orientation.

Based on the total pattern of responses it determines an index of moral competence (C-score). The C-score is the numerical representation of the pattern and portrays the extent an individual is able to make or rate judgments on the basis of moral principles, despite robust counter inclinations (Lind, 2016). The development of moral competence becomes evident when individuals accept some supporting arguments less, or even reject them, because they express an insufficient moral orientation (Lind, 2008b). The C-index score may range from 0-100, from the absence of morals to faultless judgment competence (Lind, 2016). The MCT assesses both the consistency of the argument (C-score) and the stage preference, which discloses the moral attitudes of the individual which are identified according to Kohlberg's six stages of moral judgment.

To assess the preference for moral orientation types, the original markers (+4 = completely agree to -4 = completely disagree) were recoded from negative to positive numerals (1 completely disagree to 9 completely agree). There were two arguments presented for each moral orientation type (one for and one against the protagonist actions) per moral dilemma leaving scores for moral orientation preference ranging from 2 to 16 for the vigilantism scenario and 2 to 16 for the mercy killing scenario.

Course and Teaching Methods Questionnaire

This was applied to the student sample only. A brief survey was conducted to assess student's field of study and prevalence of teaching methods and assessments utilised within the disciplines. Participants were asked to rate on a 5-point Likert scale how often they engaged in particular teaching methods (1 never to 5 always). The assessments were categorised into interactive and non-interactive methods based on the level of involvement of the student and form of communication, whether one way communication or two way communication teaching. The interactive methods consisted of: discussion and debate; problem solving; group work; role play; workshops. Non-interactive methods consisted of: lectures; essays; dissertations; exams; presentations. The scores for each singular method was added up leaving scores ranging from 1 to 25 for both interactive methods and non-interactive methods.

Brief demographic and background questionnaire

This was applied to the practice sample only. A brief survey was conducted to assess individual demographic information, job role, professionals field, years of practical experience and highest educational qualification. With regards to education the following five criteria were used to distinguish categories: high school education; further education; higher education; postgraduate education; vocational skills.

Analysis

A Kruskal-Wallis Test was conducted to assess whether medical and healthcare students display lower levels of moral competence compared to business, social sciences and art and design students, to compare the variance in C-scores by student discipline (H_{1a}). To assess whether medical and healthcare professionals display lower moral competence compared to non-healthcare professionals an independent samples t-test was conducted to compare the mean C-scores between the two groups (H_{1b}). In order to examine whether medical and healthcare students display signs of a regression throughout the educational span a series of Kruskal Wallis Tests were conducted (H_{2a}). To examine this phenomenon within the practice samples the non-parametric alternative the Kruskal-Wallis Tests were used due to the further division of the samples groups into years of practical experience (H_{2b}). A Kruskal-Wallis and Mann Whitney U Tests were used to investigate if different medical and healthcare students report higher levels of non-interactive methods (H_{3a}) compared to other student disciplines methods; which was followed by Spearman's Rank Order (Rho) correlation coefficients to determine the relationship between teaching methods and C-scores (H_{3b}). A Kruskal-Wallis

and Mann Whitney U Tests were used to explore the impact of profession and educational level on C-scores between healthcare and non-healthcare professions to assess whether educational levels facilitate or inhibit moral competence within practice (H_4). To explore the occurrence of a moral segmentation the C-score was calculated separately for the vigilantism and mercy killing scenario, to assess if there were any significant differences between groups a Kruskal-Wallis Test was conducted in student samples (H_{5a}) and an independent t-test in practice samples (H_{5b}). The Holm-Bonferroni Method (Holm, 1979) was used where necessary to adjust the p -value to correct for multiple comparisons.

5.4 Results

5.4.1 Moral competence (C-score) analysis

To investigate whether medical and healthcare students display lower moral competence than student of other disciplines (H_{1a}), a Kruskal-Wallis Test was conducted to explore levels of moral competence (C-score) as measured by the Moral Competence Test (MCT) between students of different disciplines. No significant differences were found across the four different student groups (Gp1, $n = 96$: medical and healthcare, Gp2, $n = 80$: business, Gp3, $n = 44$: social sciences, Gp4, $n = 27$: art and design), $H(3, n = 247) = 1.35, p = 0.72$.

Descriptive statistics are presented in table 5.1.

Table 5.1

Descriptive Statistics of C-scores by field of study

Field of Study	n	M	SD	Md	Minimum Value	Maximum Value
Medical	96	17.86	13.40	16.09	0.00	62.87
Business	80	19.72	15.93	15.60	0.56	68.24
Social Science	44	19.26	14.34	15.02	1.10	46.89
Art and Design	27	21.90	14.75	16.03	3.43	71.04

As depicted in figure 5.1, through the mean categorisation of the C-scores, it appears that medical and healthcare, social sciences and business students displayed low moral competence, whereas art and design students displayed a sufficient level of moral competence. Though, generally all student groups displayed low levels of moral competence.

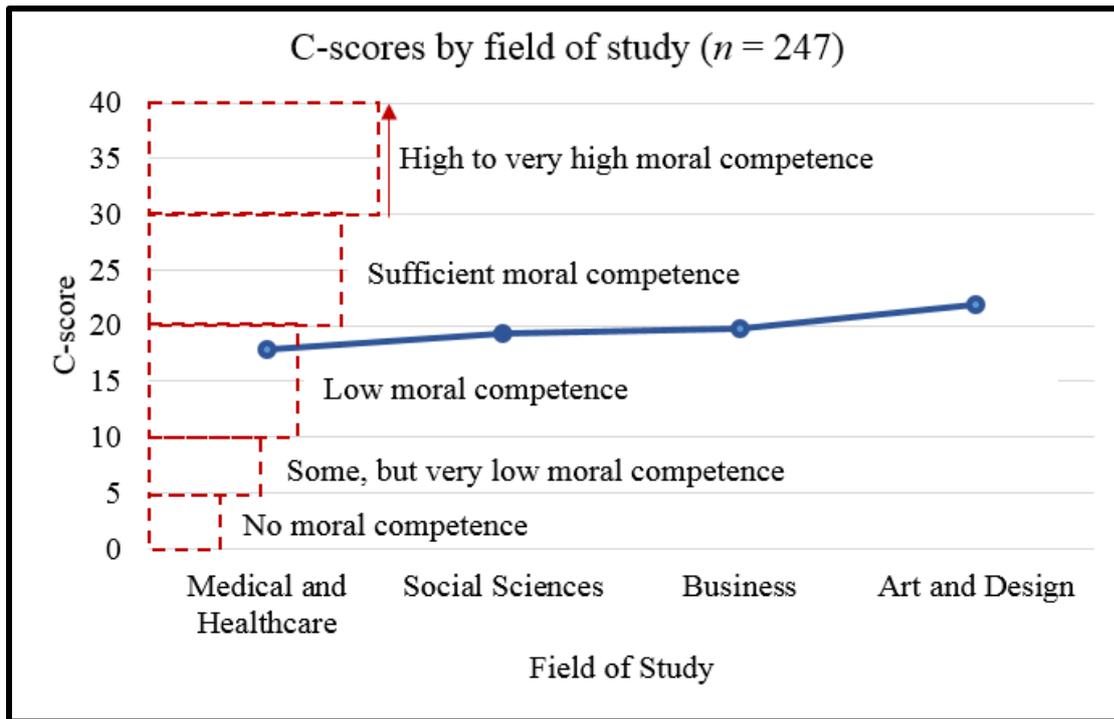


Figure 5.1. Moral competence (C-score) categorisation by student discipline

To explore whether individuals working within healthcare displayed lower moral competence scores non-healthcare business related fields (H_{1b}), an independent samples t-test was conducted. This was to compare levels of moral competence (C-score) as measured by the Moral Competence Test (MCT) between healthcare professionals and non-healthcare professionals. There was a significant difference in C-scores for healthcare professionals ($M = 14.55$, $SD = 11.92$) and non-healthcare professionals ($M = 17.81$, $SD = 15.50$); $t(268) = -1.95$, $p = .05$ (two-tailed). The magnitude of differences in the means (mean difference = -3.26, 95% CI: -6.55 to 0.02) was small (eta squared = .01).

As depicted in figure 5.2, categorisation of the C-scores shows that both healthcare professionals and non-healthcare professionals displayed low moral competence, though healthcare professionals are positioned in the lower sector of the classification.

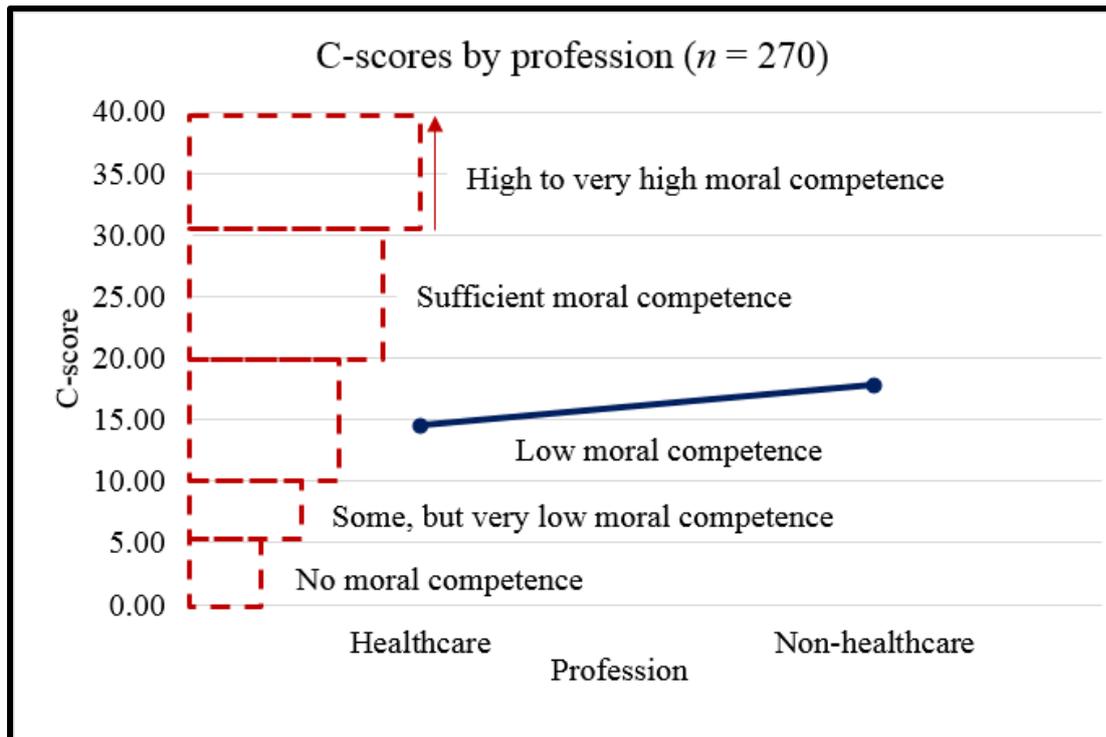


Figure 5.2. Moral competence (C-score) categorisation by professional field

5.4.2 Moral competence regression analysis

To explore whether medical and healthcare students display a regression in moral competence throughout education (H_{2a}), a series of Kruskal- Wallis Tests were completed. Holm-Bonferroni method was used to correct for multiple comparisons. No significant differences was found in levels of moral competence across the four year groups in all student samples; medical and healthcare (Gp1, $n = 29$: 1st year, Gp2, $n = 23$: 2nd year, Gp3, $n = 26$: 3rd year, Gp4, $n = 18$: above 3rd year) $H(3, n = 96) = 5.77, p = 0.12$; business (Gp1, $n = 24$: 1st year, Gp2, $n = 17$: 2nd year, Gp3, $n = 27$: 3rd year, Gp4, $n = 18$: above 3rd year) $H(3, n = 80) = 1.82, p = 0.61$; social science (Gp1, $n = 21$: 1st year, Gp2, $n = 9$: 2nd year, Gp3, $n = 12$: 3rd year, Gp4, $n = 2$: above 3rd year) $H(3, n = 44) = 0.83, p = 0.84$; and art and design (Gp1, $n = 5$: 1st year, Gp2, $n = 6$: 2nd year, Gp3, $n = 8$: 3rd year, Gp4, $n = 8$: above 3rd year) $H(3, n = 27) = 2.29, p = 0.52$. Though not significant, observation of the descriptive statistics as presented in Table 5.2 shows that within the medical and healthcare sample a steady increase in C-scores is evident, however a slight regression is noted within postgraduate years.

Table 5.2.*Descriptive Statistics of C-score by Year of Study*

Y	Medical <i>n</i> = 96			Business <i>n</i> = 80			Social Science <i>n</i> = 44			Art and Design <i>n</i> = 27		
	<i>Md</i>	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
1st	11.76	16.24	14.95	11.76	18.37	18.3	14.59	20.26	16.35	31.95	26.34	12.47
2nd	16.82	16.85	12.97	12.50	19.03	16.26	15.38	19.92	11.52	15.85	15.11	3.77
3rd	20.17	22.43	13.31	19.40	19.86	13.34	14.23	16.61	14.19	13.70	26.81	28.14
3rd+	12.67	15.14	10.57	16.69	23.09	17.25	21.83	21.83	10.14	20.35	19.29	7.29

Note. Y = Year of Study

To explore if medical and healthcare professionals experience a regression in moral competence scores over practical years of experience (H_{2a}), a series of Kruskal-Wallis Tests were conducted, with the Holm-Bonferroni method utilised where necessary to adjust the p -value to correct for multiple comparisons. This was to explore the impact of years of practical experience on moral competence (C-score) as measured by the Moral Competence Test (MCT).

No significant differences were found in C-scores in the healthcare sample between years of practical experience (Gp1, $n = 10$: less than 1 year, Gp2, $n = 41$: 1-2 years, Gp3, $n = 31$: 3-5 years, Gp4, $n = 16$: 6-10 years, Gp5, $n = 12$: 11-15 years, Gp6, $n = 8$: 16 years or more) $H(5, n = 118) = 3.38, p = 0.64$. No significant differences were also found in C-scores in the non-healthcare sample between years of practical experience (Gp1, $n = 11$: less than 1 year, Gp2, $n = 40$: 1-2 years, Gp3, $n = 50$: 3-5 years, Gp4, $n = 18$: 6-10 years, Gp5, $n = 117$: 11-15 years, Gp6, $n = 11$: 16 years or more) $H(5, n = 147) = 1.97, p = 0.85$.

Observation of the median scores as presented in Table 5.3 shows that within the healthcare sample C-scores appear rather stable throughout years of experience, with a slight increase after sixteen or more years. With the non-healthcare sample, though not significant it appears that C-scores decrease with eleven to fifteen years of experience, though this increases again after sixteen years of more practical experience.

Table 5.3*Descriptive Statistics of C-scores by Years of Practical Experience*

Profession	Years of experience	<i>N</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Healthcare	Less than 1 year	10.00	10.48	15.60	14.09
	1-2 years	41.00	10.89	14.69	13.24
	3-5 years	31.00	9.47	13.53	11.79
	6-10 years	16.00	13.21	14.00	12.02
	11-15 years	12.00	12.51	14.59	10.58
	16 years or more	8.00	16.84	17.54	4.55
Non-healthcare	Less than 1 year	11.00	16.69	21.00	19.44
	1-2 years	40.00	16.31	18.64	15.30
	3-5 years	50.00	14.06	18.60	17.04
	6-10 years	18.00	15.98	18.92	13.54
	11-15 years	17.00	9.21	13.83	13.97
	16 years or more	11.00	17.10	16.93	13.22
	Missing	5.00	-	-	-

5.4.3 Moral competence and education analysis

To explore if any differences occur between field of study in the variety and frequencies of teaching methods, a Kruskal-Wallis Tests was conducted to explore levels interactive and non-interactive teaching methods (H_{3a}) between students.

A statistical significant difference was found across the four student groups in the level of interactive methods (Gp1, $n = 96$: medical and healthcare, Gp2, $n = 80$: business, Gp3, $n = 44$: social science, Gp4, $n = 27$: art and design) $H(3, n = 247) = 15.75, p = 0.001$. The medical and healthcare student group recorded a higher median score ($Md = 17$), compared to business ($Md = 15$, social science ($Md = 15.5$) and art and design ($Md = 15.00$). A follow-up analysis of Mann-Whitney U tests between pairs of groups was conducted. Holm-Bonferroni method was used to adjust the p -value to correct for multiple comparisons. Medical and healthcare students significantly engaged in more interactive methods that business students ($U = 2833, z = -3.00, p = 0.003, r = 0.22$), social science students ($U = 1539, z = -2.58, p = 0.01, r = 0.22$), and art and design students ($U = 800, z = -3.04, p = 0.002, r = 0.27$), using Cohen (1988) criteria the effect sizes for these comparisons were small. No significant differences were found between business students and both social science students ($U = 1756, z = -0.021, p = 0.98$) and art and design students ($U = 916, z = -1.18, p = 0.29$). Nor were any significant differences found between social science and art design students in levels of interactive methods ($U = 508, z = -1.03, p = 0.30$).

A statistically significant difference was found across the four student groups in the level of non-interactive methods (Gp1, $n = 96$: medical and healthcare, Gp2, $n = 80$: business, Gp3, $n = 44$: social science, Gp4, $n = 27$: art and design) $H(3, n = 247) = 22.13, p < .001$. Medical and healthcare and business student groups recorded a higher median score ($Md = 18$), compared to social science ($Md = 17.50$) and art and design ($Md = 15$). A follow-up analysis of Mann-Whitney U tests between pairs of groups was conducted. Holm-Bonferroni method was used to adjust the p -value to correct for multiple comparisons. Art and design students significantly engaged less in non-interactive methods at the adjusted alpha levels of .0083, .01, and .0125 respectively, that medical and healthcare students ($U = 583, z = -4.38, p < .001, r = 0.39$), business students ($U = 474, z = -4.37, p < .001, r = 0.42$), and social science students ($U = 277, z = -3.78, p < .001, r = 0.45$), using Cohen (1988) criteria the effect sizes for these comparisons were medium. No significant differences were found between medical and healthcare students and both business students ($U = 3815, z = -0.07, p = 0.94$) and social science students ($U = 2034, z = -0.35, p = 0.73$). Nor were any significant differences found between business and social science students in levels of non-interactive methods ($U = 1701, z = -0.310, p = 0.76$).

The relationship between moral competence (C-score, as measured by the MCT) and teaching methods (interactive/ non-interactive) was investigated using Spearman's Rank Order (Rho) correlation coefficients (H_{3b}). There were weak insignificant correlations between C-score and both interactive methods, ($r = -.05, n = 247, p = .40$) and non-interactive methods, ($r = -.07, n = 247, p = .29$).

To explore this further an exploration of the individual items for both interactive and non-interactive methods was conducted, using Spearman's Rank Order (Rho) correlation coefficients, please see table 5.4 for means and standard deviations by field of study. Holm-Bonferroni method was used to adjust the p -value to correct for multiple comparisons, with the adjusted alpha level of 0.005. No significant relationships were found between C-score and interactive methods individual items; discussion and debate ($r = -.08, n = 247, p = .53$), problem solving ($r = .01, n = 247, p = .94$), group work ($r = -.05, n = 247, p = .40$), workshops ($r = .03, n = 247, p = .64$), and role play ($r = -.08, n = 247, p = .23$). No significant relationships were also found between C-score and non-interactive methods individual items lectures ($r = -.06, n = 247, p = .40$), dissertations ($r = -.002, n = 247, p = .98$), exams ($r = -.05, n = 247, p = .41$), and presentations ($r = -.04, n = 247, p = .53$). A small negative

relationship was found between C-score and essay writing ($r = -.16, n = 247, p = .01$), though this was not significant at the adjusted alpha level of 0.005.

Table 5.4

Means and Standard Deviations of Teaching Methods by Field of Study

Teaching Method	Healthcare ($n = 96$)		Business ($n = 80$)		Social ($n = 44$)		Art and design ($n = 27$)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<i>Non-interactive</i>								
Lectures	4.25	0.93	4.21	1.27	4.66	0.75	3.85	1.43
Essays	3.53	1.13	3.61	1.27	3.89	0.81	2.67	1.07
Dissertations	2.83	1.37	2.6	1.3	3.09	1.55	2.59	1.19
Exams	4	1.03	4.13	0.95	3.18	1.21	2.44	1.5
Presentations	3.47	0.97	3.39	1.02	3.11	0.95	3.33	1.04
<i>Interactive</i>								
Discussion and Debate	3.24	1.24	2.96	1.21	3.34	1.24	2.48	1.19
Problem Solving	3.65	1.21	3.63	1.19	3.18	1.15	3.04	1.53
Group Work	3.74	0.98	3.59	0.98	3.8	0.82	3.48	1.01
Workshops	3.02	1.16	3.01	1.37	2.68	1.27	3.37	1.47
Role play	2.93	1.24	1.65	0.93	1.86	1.07	1.33	0.83

To explore whether educational level facilitates or inhibits moral competence within practice samples (H_4), a Kruskal-Wallis Test was conducted. This was to explore the impact of educational level on moral competence (C-score) as measured by the Moral Competence Test (MCT). No significant differences were found in C-scores between the five educational levels in the healthcare sample (Gp1, $n = 1$: high school, Gp2, $n = 4$: further education, Gp3, $n = 56$: higher education, Gp4, $n = 51$: postgraduate education, Gp5, $n = 6$: vocational skills) $H(4, n = 118) = 0.15, p = 0.99$. A significant difference was found in the C-scores between the five educational levels in the non-healthcare sample (Gp1, $n = 12$: high school, Gp2, $n = 14$:

further education, Gp3, $n = 69$: higher education, Gp4, $n = 27$: postgraduate education, Gp5, $n = 28$: vocational skills) $H(4, n = 150) = 10.97, p = 0.03$.

A follow-up analysis of Mann-Whitney U tests between pairs of groups was conducted. Holm-Bonferroni method was used to adjust the p -value to correct for multiple comparisons, with the adjusted alpha level of 0.005. A significant difference was found between Gp1 (high school) and Gp3 (higher education ($U = 203, z = -2.81, p = 0.005, r = 0.31$), using Cohen's (1988) criteria the effect sizes for these comparisons were medium. Observation of the median scores presented in table 5.5 shows that within the non-healthcare sample, high school education displayed lower C-scores compared to individuals with higher education levels.

No significant differences were found between Gp1 and the following educational levels Gp2 ($U = 41, z = -2.21, p = 0.03$), Gp4 ($U = 77.50, z = -2.57, p = 0.10$), Gp5 ($U = 131, z = -1.10, p = 0.28$). Furthermore, no significant differences were found between Gp2 and the following educational levels Gp3 ($U = 456, z = -0.33, p = 0.74$), Gp4 ($U = 173, z = -0.44, p = 0.66$), Gp5 ($U = 161, z = -0.93, p = 0.35$). Gp3 did not differ significantly from both Gp4 ($U = 905, z = -0.22, p = 0.83$), and Gp5 ($U = 723, z = -1.94, p = 0.05$). Nor did Gp4 differ significantly from Gp5 ($U = 283, z = -1.6, p = 0.11$).

Table 5.5

Descriptive Statistics of C-scores by Educational Level

Education Level	Healthcare				Non-healthcare			
	<i>n</i>	<i>Md</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
High School Education	1	11.44	11.44	-	12	7.03	7.28	5.60
Further Education	4	9.34	14.53	16.40	14	12.55	20.36	16.40
Higher Education	56	11.67	14.29	11.50	69	17.02	19.87	15.83
Postgraduate Education	51	10.89	14.84	12.54	27	16.99	20.38	15.76
Vocational Skills	6	11.78	15.09	11.63	28	8.55	13.36	12.06

5.4.4 Moral segmentation analysis

To explore the occurrence of a moral segmentation the C-score was calculated separately for the vigilantism and mercy killing scenario, this was done through the same method for calculating the total combined C-score, but with the variables applicable to each dilemma.

To investigate the prediction that medical and healthcare students are more likely to undergo a moral segmentation effect when analysing the mercy killing scenario presented in the MCT, compared to non-healthcare vocational fields (H_{5a}). A Kruskal-Wallis Test was conducted. No significant differences were found in C-scores across the four student groups (Gp1, $n = 96$: medical and healthcare, Gp2, $n = 80$: business, Gp3, $n = 44$: social science, Gp 5, $n = 27$: art and design), for the vigilantism scenario $H(3, n = 247) = 0.52, p = 0.92$ and the mercy killing scenario $H(3, n = 247) = 5.01, p = 0.17$. Table 5.6 displays the descriptive statistics, despite the analysis not yielding a significant results, it is evident that the C-score on the vigilantism scenario is noticeably higher in both medical and social sciences students compared to the C-score obtained in the mercy killing scenario. Whilst, all other student groups display only subtle variations between the two scenarios.

Table 5.6

Descriptive Statistics of C-score per Dilemma type

Student Group	<i>n</i>	Vigilantism			Mercy Killing		
		<i>Md</i>	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Medical & Healthcare	96	35.22	38.62	24.59	25.73	29.20	21.31
Business	80	38.64	29.42	23.19	35.56	36.45	24.42
Social Sciences	44	35.50	36.22	20.32	26.51	29.30	20.88
Art & Design	27	35.00	38.25	19.11	36.55	36.56	21.85

To explore this phenomenon within practice settings (H_{5b}) an independent samples t-test was conducted to compare C-score for each dilemma between individuals working within healthcare and non-healthcare business related fields. There was not a significant difference in C-scores in the vigilantism scenario between healthcare professionals ($M = 37.20, SD = 21.87$) and non-healthcare professionals ($M = 31.91, SD = 24.21$); $t(266) = 1.85, p = .06$ (two-tailed). The magnitude of differences in the means (mean difference = 5.29, 95% CI: -0.34 to 10.92) was small (eta squared = .01).

However, a significant difference in C-scores in the mercy killing scenario was found between healthcare professionals ($M = 22.16, SD = 17.55$) and non-healthcare professionals ($M = 32.72, SD = 23.34$); $t(262) = -4.19, p < .001$ (two-tailed). The magnitude of differences

in the means (mean difference = -10.55, 95% CI: -15.51 to -5.60) was moderate (eta squared = .06). Observation of the means shows that the C-scores of healthcare professionals was considerably lower in the mercy killing scenario compared to the vigilantism scenario and that there was a significant differences in the C-scores of healthcare professionals in the mercy killing scenario and non-healthcare professionals. Whilst, non-healthcare professionals displayed subtle variations in C-scores between the two scenarios. The findings from both the student and practice populations offers support for a moral segmentation occurring with medical and healthcare vocations when analysing a moral scenario depicting euthanasia.

5.5 Key findings and partial discussion

The aims of the study were to;

- To explore moral competence levels; between healthcare and non-healthcare vocational fields in education and practice, investigate the dynamics and directions of moral competence across the educational or professional span, and examine the relationship between moral competence and educational factors.
- To assess the moral competence scores independently for the scenario depicting a) an act of vigilantism and b) an act of euthanasia, to explore the occurrence of a moral segmentation between healthcare and non-healthcare vocations.

5.5.1 Key findings

- Medical and healthcare professionals significantly displayed lower moral competence (C-scores) when compared to non-healthcare related professionals, years of practical experience did not influence moral competence levels.
- Non-healthcare professionals with a high school education level significantly recorded lower moral competence scores compared to individuals with a higher education level.
- Medical and healthcare students on average display low moral competence (C-scores) but did not differ significantly to other student disciplines, with no support for a regression in moral competence throughout the educational span in either of the student groups, but rather could be indicative of a moral stagnation.
- Interactive and non-interactive teaching methods were found to have a minimal relationship with moral competence; though essay writing utilised on the courses was

associated with lower moral competence, it was not significant at the adjusted alpha level.

- Isolation of the C-scores per moral scenario revealed that healthcare related vocations obtained lower C-scores in the mercy killing scenario, indicative of a moral segmentation, offering support for a heterogeneous postulate within dilemma analysis
- Highlighted general concern for low moral competence levels across all student disciplines and within practice groups; further analysis related to opinion, moral dilemma structure and ethical compositions will be explored further in the report.

5.5.2 Partial discussion

The present research aimed to assess the moral competence levels within UK university students and professional practice between medical and healthcare vocational fields and non-healthcare vocational fields. This was to help further understand the dynamics and directions of moral development within these fields with further explorations into educational teaching methods, previous educational endeavours, years of practical experience and the possible occurrence of a moral segmentation.

It was predicted that medical and healthcare students would significantly display lower moral competence levels compared to students of other disciplines (H_{1a}). No evidence was found in the present study to support this claim, medical and healthcare students did not significantly display lower moral competence levels compared to students of other disciplines. The contended differences between student disciplines in moral competence could not be detected in the present study as it seems students as a whole operate on a similar discourse. All student groups reported low moral levels of moral competence. However, support was found for the prediction that medical and healthcare professionals would report significantly lower moral competence scores than non-healthcare professionals (H_{1b}). Though, despite this significance, in relation to figure 5.2, non-healthcare professionals, despite reporting higher moral competence scores the groups also exhibited low moral competence according to the classification.

Further analysis into the dynamics and directions of moral competence throughout the educational span and practical experience offered no support for a regression in moral competence throughout education (H_{2a}) and practice (H_{2b}) (Feitosa et al., 2013; Hegazi & Wilson, 2013; Lind, 2000a; Slovackova & Slovacek, 2007). The vacant relationship might be due to the cross sectional design of the study, which may not have been robust enough to

explore moral competence scores throughout both the educational span and professional practice.

On the other hand, perhaps the differences in moral competence over any time span, whether educational or professional, may not have been evident due to minor variations. It may be possible that instead of discovering a more recognisable decent in moral competence, the study may be witness to a moral stagnation, suggesting that moral competence throughout education and practice remains in a stationary position (Self & Baldwin, 1998; Slovackova & Slovacek, 2007), possibly due to little directive action to help increase moral competence.

In relation to previous educational level in the practice samples (H_4), no significant differences were found within the healthcare sample. However, within the non-healthcare sample, significantly lower C-scores were evident in high school educational, compared to higher education. This highlights that higher educational experiences may facilitate moral growth in professional practice; and supports the claim that facets such as moral reasoning skills, increase throughout the higher education years, (Cummings et al., 2001; Doyle & O'Flaherty, 2013; Foster & LaForce, 1999; Gfellner, 1986; Gielen & Markoulis, 2001; Kitchener et al., 1984; McNeel, 1994; Myyry et al., 2013; Paradice & Dejoie, 1991; Rest & Thoma, 1985; Rose, 2012; Shaver, 1985, 1987; Swaner, 2004); though this may not be the case within medical and healthcare professions. Therefore, this research offers partial support for the claim that the educational background of practice professionals affects the moral competence scores (H_4), and could be dependent on vocational area.

This lack of progression in moral competence, predominantly within healthcare vocations could be related to educational methods and assessments. A brief questionnaire assessing the frequency of certain teaching methods was conducted within the student sample in the present study, to investigate the prediction that medical and healthcare students would report higher levels of non-interactive methods (H_{3a}) and that non-interactive teaching methods will negatively affect the moral competence scores of students (H_{3b}). Interactive methods were classified as discussion and debate; problem solving; group work; role play; workshops; and non-interactive methods consisted of: lectures; essays; dissertations; exams; presentations. These were categorised based on the level of communication involved (Kohlberg, 1984; Lind, 2000b; Lind, 2008b; Lind, 2016; Self et al., 1989; Sprinthall et al., 1994).

No support was found for the claim that medical and healthcare students would report higher levels of non-interactive methods. Conversely, results revealed that medical and healthcare

students significantly engaged more in interactive methods than business students and art and design students; which contends previous suggestions that medical students spend less time participating in group work (Bok, 2001; Coles, 1998; Wolf et al., 1989). However, the relationship between the use of interactive and moral competence was faint and inconclusive. Overall, suggesting that such methods alone are not robust enough to boost moral competence, and that it requires a more directive and more complex support systems, as highlighted in the literature (Lind, 2000b). The present study also failed to support the claim that non-interactive teaching methods will negatively affect the moral competence scores of students (H_{3b}). Of the non-interactive methods, essay writing was negatively associated with moral competence (C-score), which supports the idea that teaching restricted to declarative text book knowledge may suppress any significant progression (Lind, 2008b), though this was not significant at the adjusted alpha level.

A further feature of the present study investigated the moral competence (C-scores) of each moral dilemma separately to explore the possibility of a moral segmentation. It was hypothesised that medical and healthcare students (H_{5a}) and professionals (H_{5b}) are more likely to undergo a moral segmentation effect when analysing the mercy killing scenario presented in the MCT, compared to non-healthcare vocational fields. The findings from both the student and practice populations offers support for a moral segmentation occurring within medical and healthcare vocations when analysing a moral scenario depicting euthanasia (mercy killing). Although the analysis failed to reach statistical significance in the students samples, the C-scores for both medical students and professionals were lower for the mercy killing scenario when compared to the vigilantism scenario. Whereas, only subtle variations between the C-scores were noted in other vocations.

This research supports the heterogeneous claim to moral competence in dilemma analysis, (Beck et al., 1999; Senger, 1985; Zeidler & Schafer, 1984), but only within healthcare related samples. Reasons for which may lie in the context bound competencies of the mercy killing scenario displaying too much similarity to healthcare vocational experiences (Rest, 1979), may ultimately influence how these individuals perceive and analyse the presented scenario. Namely, how healthcare students and professionals alike may view the scenario through a professional lens, focusing mainly on the legalistic undertones of the depicted scenario (Hegazi & Wilson, 2013; Murrell, 2014). It could be suggested that a professional identity reinforced through company ethics and even law, as the act of euthanasia is illegal in the UK, may influence opinion, moving away from an individual persona to a more collective

professional stance and outlook on the mercy killing scenario. A process which begins within medical and healthcare education, and becomes more prominent within practice. Rather than witnessing a regression or stagnation in moral development in healthcare related vocations, it could possibly be a moral segmentation, due to the medical context of the dilemmas presented, as no such effect occurred in the analysis of the vigilantism scenario, nor did aspects of moral segmentations occur within other vocations.

This raises questions surrounding the use of hypothetical dilemmas in measuring moral competence. The Moral Competence Test captures a pure form of morality, based on the moral quality of the arguments presented. Thus, reasons as to why moral competence is low within UK education and practice and why a moral segmentation occurs within healthcare vocations, will be investigated further in the report in relation to opinion, moral dilemma structures and the application of a directional analysis with through the exploration of ethical compositions such as utilitarian and deontological philosophies.

Chapter 6:

The effects of ethical compositions on moral dilemma analysis and how this may influence moral competence levels

6.1 Introduction

Within scientific research it is sometimes difficult to investigate moral reasoning conjointly with real life moral dilemmas, due to their variegated and subjective nature.

A dilemma is something which exists only in the eye of the beholder. That is, it is not objective and does not exist outside our minds. Therefore we cannot write or tell a 'dilemma'. We cannot know whether the participants share our perspective and feel the moral dilemma that we see. We can only hope that our stories trigger the feeling of a dilemma in our audience. (Lind, 2016, p. 21)

Nevertheless, hypothetical moral dilemmas have been a popular choice for scholars exploring moral dispositions. A moral dilemma consists of a short vignette which describes a story containing a level of moral discord, whereby an individual is drawn between opposing moral courses. It manages to bring to light the mismatch between the two options and following consequences. The conflict arises usually due to the fact that both routes have significant moral explanations to aid decisions (Christensen & Gomila, 2012).

The dual process paradigm (Greene et al., 2001; Greene, 2007) suggests that moral judgment is propelled by two structures conversely, one being more rational construction deriving on cost-benefit calculations, the other considered more quick paced and emotionally driven. The ethical compositions of utilitarian and deontological concepts have been integrated and involve an effective system comprising of both cognitive and affective assessments. Affective activations to notion of harm being compatible with deontology and cognitive calculations of consequence being coherent with utilitarian conventions.

Utilitarianism is a combination of hedonism and consequentialism. Hedonistic utilitarianism determines the correctness of an action based solely on the amount of pleasure it produces and the amount of pain it reduces, this pleasure can take many forms such as happiness or benefit (Bentham, 1971). This is also referred to as the greatest happiness principle which defines moral acts as ones which endorse utility, which is happiness minus pain (Mill, 1879). It asserts the correct action is one which takes into consideration the interests of all involved and produces the most inclusive and advantageous result for the greater amount of people, to maximise benefits and reduce costs through an objective lens (Bentham, 1781; Mill, 1879). Conversely, deontological domains asserts there are a series of moral guidelines, obligations and responsibilities which individuals must uphold in spite of the consequences or

circumstantial coincidence (Kant, 2002; Waldmann & Dieterich, 2007). Thus, individuals evaluate whether the aspects of their actions fulfil particular moral duties regardless of whether or not those actions lead to a greater outcome (Broeders et al., 2011). Utilitarian routes are considered to be more structured, contemplative and coherent as opposed to deontological means which are viewed as being more innate, instinctive and emotionally charged (McDonald et al., 2017; Li et al., 2018). Moral dilemmas develop when individuals anticipate the opposing forces of utilitarian and deontological compositions, each of which are thought to be produced by specific cognitive channels within the mind (Green et al., 2001; Greene, 2007, Greene, 2013; McDonald et al., 2017).

Despite the stature and prominence of hypothetical choice data within the realms of moral psychology, deliberations question the validity and reliability of this speculative sense of morality, as outlined in chapter 2.3.2. Concerns are expressed over the extent hypothetical dilemmas can forecast actual behaviour and decision making in real life situations (Bauman et al., 2014; Bostyn et al., 2018; Crone & Laham, 2017; Everett et al., 2016; Francis et al., 2017; Haghani & Sarvi, 2018; Kang et al., 2011; Knutson et al., 2010; Patil et al., 2014; Tassy et al., 2013; Teper et al., 2011). The occurrence of social biases (Everett et al., 2016; Lee, Sul, & Kim, 2018a; Reynolds et al., 2019; Rom & Conway, 2018; Rom, Weiss, & Conway, 2017b; Sacco et al., 2017; Uhlmann et al., 2013); perception biases (Cikara et al., 2010; Christenson & Gomila, 2012; Fiske et al., 2007); contextual biases (Elm & Weber, 1994; Magowan & Lee, 1970); the overall contextual staging of moral dilemmas (Cao et al., 2017; Cecchetto et al., 2019; Y. Chan et al., 2016; Migliore et al., 2019; Spears et al., 2018); framing effects through word choice (Petrinovich & O'Neil, 1996); the legal status of the judged action (Barbosa & Jimenez, 2017; Pletti et al., 2015); subjective beliefs in outcome possibilities (Kortenkamp & Moore, 2014; Shou & Song, 2017); transient changes in mood from environmental influences (Valdesolo & Desteno, 2006); environmental changes to temperature (Nakamura et al., 2014); and fatigue (Wippert et al., 2018). All of which are significant factors for consideration.

It seems numerous factors may influence how individuals assess moral dilemmas and determine which moral action they take. Possible factors may be a divergence between ethical policies and individual attitudes, the indices of harm versus the calculations of consequence, negative affect versus positive affect, contextual elements of the scenario or motivational influences. Therefore it is crucial that researchers when analysing hypothetical choice data are aware of such complexities.

The present study aims to reanalyse the data of the Moral Competence Test (Lind, 2016) with the introduction of opinion commitment strength and with the application of ethical compositions in the form of utilitarian and deontological philosophical positions.

One of the most quoted reasons associated with low moral competence (c-score) is that of opinion (Lind, 2016). The MCT presents participants with both supportive and counter arguments on a difficult moral task which poses a challenge for participants to rate those arguments based on their moral quality and not in relation to their opinion commitment. Keasey (1973) noted that preadolescents utilise opinion agreement more than the stage of supportive reasoning when assessing moral stances, possibly due to higher cognitive structures being more resistant to change. It was further reported that older individuals may apply higher levels of reasoning when assessing moral arguments possibly due to more developed verbal and cognitive capacities (Keasey, 1973). More recently, Stanley, Dougherty, Yang, Henne & Brigard (2017) reported a level of resistance to change decisions when participants were faced with alternatives, concluding that the contemplation of reasons does not induce individuals to change their primary decision in moral dilemmas. As a result, it seems essential to assess the factor of opinion agreement when examining and understanding moral competence. Though the calculation of the C-score in the MCT does not take into account this initial decisional choice. It is possible that this is a vital insight into how individuals analyse a moral dilemma, possibly displaying as a decision or alignment with a particular way of thinking. These opinions could denote ethical compositions such as deontological and utilitarian decisions.

The Moral Competence Test (MCT) does not account for nor measure utilitarian and deontological moral judgements, as this is not the measure's intended purpose. Instead the MCT measures an almost pure form of morality. As higher levels of moral competence are associated with the ability to rate arguments presented based on their individual moral quality, as opposed to other factors such as opinion.

The MCT in its measurements and purpose is correct, individuals with low moral competence may display higher levels of opinion commitment, which in turn effects individual judgement throughout the test. Though one must be aware of any potential biases, as cohorts being deemed as being low in moral competence could lead to negative conjectures based on that initial assessment. For instance, research has shown medical students to display low moral competence and may undergo regressions throughout education (Feitosa et al., 2013; Hegazi & Wilson, 2013; Lind, 2000a; Slovackova & Slovacek, 2007) and medical professionals have been shown to have the least amount of moral competence needed to liaise in a social environment (Agurto et al., 2017; Lind, 2016). Results from the previous chapter, indicated low moral competence in students from four disciplines, with on average medical and healthcare students displaying the lowest. This low moral competence became more evident, when healthcare professional were found to have significantly lower moral competence compared to non-healthcare professionals. Furthermore, the previous chapter reported the occurrence of a moral segmentation within healthcare vocation in the analysis of the mercy killing scenario.

Is it possible that these low scores of moral competence and moral segmentation go beyond that of opinion, but towards issues of professional ethics and professional identity. When faced with a moral dilemmas with medical undertones as displayed in the mercy killing scenario, one must question the extent in which professional ethics shadow individual moral judgement, with potential intergroup biases (Cikara et al., 2010; Christenson & Gomila, 2002) and story pull influences (Elm & Weber, 1994; Magowan & Lee, 1970). For instance, healthcare professionals may analyse the vigilantism scenario with more individually perceptive eyes compared to the medically and professionally bound scenario which denotes a mercy killing. If this is the case, then the C-score may be affected. This is not suggesting that the C-score is inaccurate as it is measuring exactly what it is intended to, nor does it dispute any previous research which shows that medical and healthcare students and professionals alike display lower levels of moral competence. The present study aims to simply shed light on potential reasons why.

The present study applies ethical compositions to the dilemmas presented in the MCT, to truly assess the extent of opinion. It attempts to do this by firstly analysing opinion commitment strength in a mutual non-directive context and its relationship with moral competence. Research has highlighted that individuals find it difficult when confronted with opposing views (Keasey, 1973; Lind, 2016; Stanley et al., 2017) and so based on this it is hypothesised that there will be a negative correlation between opinion commitment and moral competence scores, whereby the more strongly a participant has agreed or disagreed with the protagonist's action the lower their overall moral competence score (H_1).

Furthermore, by analysing the role of opinion further through the introduction of utilitarian and deontological ethical compositions and assess the differences between the two dilemma stories, one being the vigilantism scenario, the other being the mercy killing scenario, in an attempt to understand how each student cohort and each professional group chooses to analyse the scenario, and whether differences emerge based on the stories contextual impact. Results from the previous chapter, found the moral competence scores of healthcare professionals to be significantly lower compared to non-healthcare professionals. The occurrence of a moral segmentation within healthcare vocations in the analysis of the mercy killing scenario was also found, adding further support to findings by (Hegazi & Wilson, 2013), that the leading reduction in scores was related to the mercy killing scenario, as opposed to the vigilantism scenario.

Based on this premise it is hypothesised that there will be no significant differences between medical and healthcare vocational fields and non-healthcare vocational fields in ethical composition patterns (utilitarian and deontological stances), which includes initial decisional choice, total ethical compositions, and ethical compositions adhering to moral orientations, for the vigilantism scenario, portrayed in the MCT (H_2). Alternatively, it is predicted that there will be a significant difference between medical and healthcare vocational fields and non-healthcare vocational fields in ethical composition patterns (utilitarian and deontological stances), which includes initial decisional choice, total ethical compositions, and ethical compositions adhering to moral orientations, for the mercy killing scenario, portrayed in the MCT (H_3).

The final hypothesis examines the relationship between moral competence scores and utilitarian and deontological stances. As previously indicated the Moral Competence Test (MCT) does not account for nor measure utilitarian and deontological moral judgements, as

this not the measures intended purpose. Thus, this will be one of the first studies to take this approach and explore participant's line of reasoning when evaluating and completing the MCT. For this reason, the present research adopts a non-directive stance and predicts that there will be a significant correlation between moral competence and overall ethical composition patterns of utilitarian and deontological stances (H_4).

It may be possible that the evaluation of the mercy killing scenario draws different ethical compositional aspects in the healthcare student and professionals and thus it is vital that the relationship with moral competence be explored. It will add a contextual and directional element to understanding moral dispositions and may provide an insight into the moral competence scores explored in the previous chapter. To add and contribute to further the understanding of the use and application of moral dilemmas within moral psychology

6.2 Aims of the study

The aim of the study was to;

- To examine the vigilantism and mercy killing moral dilemmas independently through the application of utilitarianism and deontological philosophies to investigate whether different vocational fields differ in their ethical compositions, whether this is dependent on the type of dilemma, and how this effects moral competence scores, as measured by the moral competence test, in the hope to find an explanation for moral segmentations.

6.3 Method

Participants

Data was collected from a total of 254 students and 270 individuals working within either healthcare related practice or non-healthcare related practice. Data from English and Humanities students have been omitted from the analysis due to a small sample size ($n = 7$), leaving a final sample size of 247 students. Of the student sample, a higher portion of the sample were aged between 18 and 24 years (79.76%), with 80 males (32.39%) and 167 females (67.61%). Of the sample 79 (32%) were in their first year of academic study, 55 (22.3%) in their second year, 73 (29.6%) in their third year, and 40 (16.2%) were higher than their third year of study indicative of postgraduate study. A total of 96 (38.87%) students were enrolled on medical and healthcare courses (e.g. medicine, nursing, pharmaceutical sciences), 80 (32.39%) on business related courses (e.g. business studies, accountancy and

finance, management), 44 (17.81%) on social science courses (e.g. psychology, sociology), and 27 (10.93%) were enrolled on art and design courses (e.g. graphic design, drama, music).

Of the practice sample 118 were healthcare professionals working within private healthcare settings, with a total of 46 males (39%) and 72 females (61%), with a mean age of 38.81 ($SD = 10.53$), 40.7% were physicians, surgeons and consultants and 59.3% were nurses, healthcare assistants or sisters. The remainder of the sample consisted of 152 individuals working within various business environments within the UK, with a total of 73 males (48%), 78 females (51.3%) and one not disclosed, with a mean age of 40.38 ($SD = 12.87$). With reference to economic sectors, 19.1% of the sample were employed within secondary production (e.g. manufacturing and assembly), 59.9% from tertiary production (e.g. commercial and public services), 20.4% from quaternary production (e.g. research and development); no data was collected from primary production organisations (e.g. extraction of raw materials).

Procedure

From the data collected from the student sample 38% of the surveys were paper based, whereby participants were approached on Huddersfield university campus and asked to take part. A research stand was set up in student central surrounded by tables and workstations, allowing participants to return completed surveys in their own time. The remainder of the surveys (62%) were completed through an online platform. For the practice samples (both healthcare and non-healthcare professionals all surveys were distributed and completed through an online platform.

Measures

The Moral Competence Test (MCT; Lind, 2008a)

The MCT applies an experimental and cognitive-structural approach. It presents two moral dilemmas, on a seven point Likert scale (-3 = wrong to +3 = right) participants are asked to evaluate the protagonist's action); showing a commitment to particular opinions about the matters presented. This part of the MCT is not utilised in the calculation of the C-score. In the present study this was defined as decisional choice, the higher a participants decisional choice displays a level of agreement with the protagonists' actions denoting utilitarianism and a disagreement of action denoting deontological concepts.

For each dilemma, participants are presented with six arguments in favour (utilitarian) and six against the actions (deontological) in the story. They are then asked to indicate whether they accept or reject these arguments on a nine point Likert scale (+4 = completely agree to -4 = completely disagree). This was defined as argument preference; the more participants supported arguments in favour of the protagonist actions is more indicative of utilitarian outlooks and the more participants supported arguments against the protagonists actions was indicative of deontological outlooks. All arguments were selected to represent six moral orientations, as identified by Kohlberg (1984) in a normative hierarchy; one for and one against in each of the two dilemma stories. Type 1 (avoid physical damage and injury to oneself) and Type 2 (Acquire benefits and rewards) orientations show the pre-conventional category of moral orientation; Type 3 (achieve recognition and avoid disapproval) and Type 4 (respect laws and order of society) show the conventional orientation; and Type 5 (keep contracts) and Type 6 (hold up universal principles of justice, logic and reason) represent the post-conventional orientation.

A further addition was opinion. As the task of the participant is to rate both supportive and counter arguments in regard to their moral quality irrespective of their opinion agreement, a further area of enquiry added by the researcher which was named opinion commitment strength. On a five point Likert scale (-3 = wrong to +3 = right) participants are asked to evaluate the protagonist's action; showing a commitment to particular opinions about the matters presented. This commitment is not included in the calculation of the C-score, but has been used to determine the strength of opinion. The direction of right and wrong in this case is irrelevant, as it is a moral dilemma and there is no definite correct course of action. Thus in order to calculate the opinion commitment strength all minus ratings were transformed to positive numerals, for example -3 = wrong was altered to a +3. That way the strength of opinion commitment can be measured without the directional meanings of right and wrong.

To explore the concept of opinion further the application of ethical compositions were added to the dilemmas presented in the MCT, these were utilitarian and deontological philosophies, to truly assess the extent of opinion, with a directional meaning. The arguments and inferences displaying utilitarian and deontological support for both the vigilantism scenario and the mercy killing scenario are presented in table 6.1. Moral dilemmas usually capture the conflict between two contrasting philosophical stances, utilitarianism (consequentialist) and deontological normative ethics (duty based ethics). This was assessed in two stages. The first was initial decisional choice, whereby participants are asked if they agree or disagree with the

protagonists actions, an agreement being indicative of utilitarian outlooks and a disagreement with deontological. The second stage was total support; whereby participants are asked the extent they accept or reject arguments in favour of the protagonist's actions (utilitarian support) and arguments against the protagonist's actions (deontological support).

Hedonistic utilitarianism determines the correctness of an action based solely on the amount of pleasure it produces and the amount of pain it reduces, this pleasure can take many forms such as happiness or benefit (Bentham, 1971).

The creed which accepts as the foundation of morals, Utility, or the Greatest-Happiness Principle, holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness. By happiness is intended pleasure, and the absence of pain; by unhappiness, pain, and the privation of pleasure (Mill, 1863, p. 9 – 10)

This is also referred to as the greatest happiness principle which defines moral acts as ones which endorse utility, which is happiness minus pain (Mill, 1879). Arguably, the utilitarian approach could suggest that active voluntary euthanasia is morally permissible as it decreases the level of sadness and despair for all involved parties, such as the patient, family members and friends. In relation to the mercy killing scenario, utilitarianism may determine that the patient who is terminally ill is being kept alive to die slowly which intensifies the level of suffering for all involved parties. Utilitarianism may condone the act if it is at the patient's request and the act relieves unnecessary pain and suffering for the patient. Family and friends of the patient may experience grief and sadness, though this is inevitable as the patient is terminal and incurable and will follow despite the circumstance of death.

Whereas, deontological domains asserts there is a series of moral guidelines, obligations and responsibilities which individuals must uphold in spite of the consequences or circumstantial coincidence (Kant, 2002; Waldmann & Dieterich, 2007). Thus, individuals evaluate whether the aspects of their actions fulfil particular moral duties regardless of whether or not those actions lead to a greater outcome (Broeders et al., 2011).

Table 6.1*Ethical Composition Argument Assumptions*

Scenario	Variable	A Utilitarian argument	A Deontological argument
Vigilantism	Premise	Actions are judged by their results	One must uphold and follow moral laws and principles
	Assumption 1	Act of stealing is morally wrong but may be context dependent	'Don't steal' is a universal moral law
	Assumption 2	Stealing for the greater good to prevent significant or immediate harm may be permissible	One must uphold and follow moral laws and principles despite consequences of action
	Assumption 3	Company listening in on private conversations is illegal and individuals are being fired	Breaking in and taking the tapes without permission is stealing
	Inference	Act of vigilantism is acceptable	Act of vigilantism in scenario is not acceptable
Mercy Killing	Premise	Minimising pain and maximising pleasure	Constraint against causing harm
	Assumption 1	Pain and suffering minimises pleasure	Causing or committing harm is wrong
	Assumption 2	Cancer (disease) causes pain and suffering	Any form of killing is morally wrong
	Assumption 3	Pain and suffering will not decrease and please will not increase overtime (untreatable). Active voluntary euthanasia will end pain and suffering	Active voluntary euthanasia is ending the life of another
	Inference	Active voluntary euthanasia is acceptable	Inference: Active voluntary euthanasia is not acceptable

Analysis

To investigate the first research hypothesis a Spearman's Rank Order (Rho) correlation coefficients was conducted to investigate the prediction that there will be a negative correlation between opinion commitment and moral competence scores, whereby the more strongly a participants has agreed or disagreed with the protagonist's action the lower their overall moral competence score (H_1).

To explore investigate whether how vocational fields differ in their ethical compositions, when analysing both the vigilantism (H_2) and mercy killing (H_3) scenario, a Kruskal-Wallis Test, with a follow up Mann-Whitney U test was conducted within the student samples and an independent samples t-test was conducted in practice samples. To assess whether different vocation fields differ in their mean level of agreement on utilitarian and deontological arguments and individual moral orientation types. Holm-Bonferroni method (Holm, 1979) was used to adjust P values to correct for multiple comparisons where necessary. Line graphs were also used to examine the mean scores of moral orientation types for utilitarian and deontological arguments. The mean scores of each of the moral orientation preferences were calculated for both utilitarian and deontological arguments for each moral dilemma (vigilantism and mercy killing). This procedure was conducted separately for student and practice samples. The above analysis was conducted for both the vigilantism and mercy killing scenario.

To investigate how ethical compositions and moral dilemma type effect moral competence scores, a Spearman's Rank Order (Rho) correlation coefficients was conducted within both student and practice samples. To examine both the strength and direction of the relationship between ethical compositions and moral competence (H_4).

6.4 Results

6.4.1 Opinion commitment strength analysis

Support was found for the claim that there will be a negative correlation between opinion commitment and moral competence scores (H_1). Means and standard deviations are presented in table 6.2. A Spearman's Rank Order (Rho) correlation coefficient revealed small negative correlations between opinion commitment strength for both the vigilantism ($r = -.18, p < .001$) and the mercy killing scenario ($r = -.21, p < .001$) with C-score. The more strongly participants agreed or disagreed with the protagonists actions, the lower their C-scores.

Furthermore, positive correlations were found between total opinion commitments in the vigilantism scenario and the mercy killing scenario ($r = .13, p = .002$). Indicating a duality, the more strongly committed an individual is to their opinion on one scenario the more strongly committed they are on another scenario.

Table 6.2

Means and Standard Deviations of Opinion Commitment Strength by Sample

Sample	Variable	<i>n</i>	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
Student Sample	Vigilantism Opinion Commitment Strength		0	3	1.50	0.98
	Mercy Killing Opinion Commitment Strength	247	0	3	1.89	1.05
	Total Opinion Commitment Strength		0	6	3.38	1.47
Healthcare Sample	Vigilantism Opinion Commitment Strength		0	3	1.72	0.97
	Mercy Killing Opinion Commitment Strength	118	0	3	2.13	1.07
	Total Opinion Commitment Strength		0	6	3.85	1.58
Non-Healthcare Sample	Vigilantism Opinion Commitment Strength		0	3	1.74	0.99
	Mercy Killing Opinion Commitment Strength	152	0	3	1.97	0.98
	Total Opinion Commitment Strength		1	6	3.70	1.50

6.4.2 Moral dilemma 1: Vigilantism Scenario

The following section analyses the vigilantism scenario in relation to initial decisional choices, total ethical composition analysis and ethical compositions adhering to moral orientations. Support was found for the claim that there will be no significant differences between medical and healthcare vocational fields and non-healthcare vocational fields in ethical composition patterns (utilitarian and deontological stances), which includes initial decisional choice, total ethical compositions, and ethical compositions adhering to moral orientations, for the vigilantism scenario, portrayed in the MCT (H_2).

Initial decisional choice analysis between student vocational fields and between healthcare and non-healthcare professionals

Participants completing the MCT are first asked if they agree or disagree with the protagonists actions; an agreement being indicative of utilitarian outlooks and a disagreement with deontological. This was termed initial decisional choice.

To examine if differences occurred between different student vocational fields initial decisional choice when analysing the vigilantism scenario, a Kruskal-Wallis Test was conducted, between the four different student groups (Gp1, $n = 96$: medical and healthcare, Gp2, $n = 80$: business, Gp3, $n = 44$: social science, Gp4, $n = 27$: art and design). No

significant differences in decisional choices between the student groups for the vigilantism scenario, $H(3, n = 247) = 7.45, p = .06$.

To examine whether any differences occurred in initial decisional choices in the vigilantism scenario between healthcare professionals and non-healthcare professionals an independent-samples t-test was conducted. There were no significant differences in decisional choices for the vigilantism scenario for healthcare and non-healthcare professions; $t(268) = -1.08, p = 0.28$ (two-tailed), meaning both groups displayed similar levels of discourse when asked the extent in which they agreed or disagreed with the protagonists actions. Descriptive statistics for the initial decisional choice in the vigilantism scenario between vocational fields are presented in table 6.3.

Table 6.3

Descriptive Statistics for Initial Decisional Choice between Student and Practice Vocational Fields (Vigilantism)

Sample	<i>n</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Medical and Healthcare students	96	-1.00	-0.50	1.75
Business students	80	1.00	0.09	1.76
Social Sciences students	44	-1.00	-0.09	1.78
Arts and Design students	27	-1.00	-0.70	1.71
Healthcare professionals	118	-1.00	-0.74	1.84
Non-Healthcare professionals	152	-1.00	-0.49	1.95

The percentage frequencies of initial decisional choices within the vigilantism scenario, for each student discipline and for healthcare and non-healthcare professionals are displayed in table 6.4. Despite the differences between students vocational fields not being significant, medical and healthcare students along with art and design students appear to show a higher disagreement of the protagonist's actions indicating higher deontological preferences, compared to other student groups. Business and social science students appear more supportive of utilitarian concepts. Whereas within the practice samples, there are noteworthy similarities between the two groups for the vigilantism moral scenario, with close to parallel ranges, both being more supportive of deontological domains.

Table 6.4

Percentages of Initial Decisional Choices between Vocational Fields for the Vigilantism Scenario

Sample	<i>n</i>	Utilitarian (Scores of 1 to 3)	Neutral (Scores of 0)	Deontological (Scores of -3 to -1)
Medical and healthcare students	96	31.30%	17.70%	51.00%
Business students	80	52.60%	11.30%	36.30%
Social science students	44	43.20%	15.90%	40.90%
Art and design students	27	22.20%	25.90%	51.80%
Healthcare professionals	118	33.00%	9.30%	57.70%
Non-Healthcare professionals	152	35.35%	9.20%	55.30%

Ethical composition analysis between student vocational fields and between healthcare and non-healthcare professionals

In the next stage of the MCT participants are asked the extent they accept or reject arguments in favour of the protagonist's actions (utilitarian support) and arguments against the protagonist's actions (deontological support). To examine the extent participants from the student sample accepted or rejected these arguments, a series of Kruskal-Wallis Tests were conducted between the four different student groups (Gp1, $n = 96$: medical and healthcare, Gp2, $n = 80$: business, Gp3, $n = 44$: social science, Gp4, $n = 27$: art and design). No significant differences were found between the student groups for either utilitarian $H(3, n = 247) = 2.65, p = .45$, or deontological arguments $H(3, n = 247) = .89, p = .83$ in the vigilantism (workers) scenario. Descriptive statistics are presented in table 6.5.

Table 6.5

Descriptive Statistics of Argument Acceptance by Student Vocational Field for the Vigilantism Scenario

Sample	<i>n</i>	Utilitarian Support			Deontological Support		
		<i>Md</i>	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Medical and Healthcare	96	0.50	-2.26	12.37	7.00	6.86	7.77
Business	80	1.00	0.86	10.03	6.50	5.63	9.75
Social Sciences	44	0.00	-0.70	10.62	7.50	7.43	8.82
Arts and Design	27	1.00	1.74	9.31	6.00	6.04	9.57

To examine the extent participants accepted or rejected these arguments in the practice sample an independent samples t-test was conducted. No significant differences were found in the vigilantism scenario between healthcare professionals ($M = -3.42$, $SD = 11.61$) and non-healthcare professionals ($M = -3.76$, $SD = 12.76$) for utilitarian arguments, $t(268) = 0.23$, $p = >.05$ (two tailed); or deontological arguments between healthcare ($M = 7.70$, $SD = 8.42$) and non-healthcare professionals ($M = 6.34$, $SD = 10.47$); $t(267) = 1.19$, $p = > 0.5$ (two tailed).

Ethical composition analysis in relation to moral orientation types between student vocational fields and between healthcare and non-healthcare professionals

To further test the intricacies of ethical compositions in more detail within the vigilantism scenario a further analysis occurred to compare the level of acceptance of arguments supporting the protagonists' actions (Utilitarian) and arguments opposing the action (deontological). There were six arguments in favour and six arguments against, per each moral scenario. Each of the arguments represent six moral orientations as identified by Kohlberg (1984).

Within the student sample a series of Kruskal-Wallis Tests were conducted within the four different student groups (Gp1, $n = 96$: medical and healthcare, Gp2, $n = 80$: business, Gp3, $n = 44$: social science, Gp4, $n = 27$: art and design). There was no statistically significant difference at the $p < .05$ level in the following utilitarian moral orientations; Type 1: $H(3, n = 247) = 2.69$, $p = .44$, Type 3: $H(3, n = 247) = .11$, $p = .99$, Type 4: $H(3, n = 247) = 7.19$, $p = .06$, Type 5: $H(3, n = 247) = 4.54$, $p = .21$, and Type 6: $H(3, n = 247) = 1.14$, $p = .77$. There was a statistically significant difference between the student groups at the $p < .05$ level in Type 2 moral orientation for the vigilantism scenario: $H(3, n = 247) = 8.03$, $p = .05$.

A follow analysis of Mann-Whitney U Tests between pairs of groups were conducted. Holm-Bonferroni method was used to adjust the p-value to correct for multiple comparisons.

Business students did not differ in their preference for type 2 moral orientations compared to both social science students ($U = 1667$, $z = -.49$, $p = .62$) and art and design students ($U = 893$, $z = -1.36$, $p = .18$). No significant differences were also found between social science students with both medical students ($U = 1881$, $z = -1.05$, $p = .30$) and art and design students ($U = 467$, $z = -1.53$, $p = .13$). A significant difference was found at .05 alpha level between medical and healthcare students and both art and design ($U = 903$, $z = -2.43$, $p = .02$) and business students ($U = 3168$, $z = -2.01$, $p = .04$), however these did not reach significance at

the adjusted alpha levels of .083 and .01 respectively. Descriptive statistics are presented in table 6.6. Previously noting that no significant differences in total ethical compositions occurred between student vocational fields in utilitarian preferences in the vigilantism scenario, when observing the moral orientation types, subtle differences emerge. Medical and healthcare students appear to reject Type 2 utilitarian (supportive) arguments more compared to business and art and design students. No significant differences were found in any of the deontological (against) moral orientations in the vigilantism scenario between the student groups. Type 1: $H(3, n = 247) = 4.92, p = .18$; Type 2: $H(3, n = 247) = .45, p = 0.93$; Type 3: $H(3, n = 247) = .98, p = .81$; Type 4: $H(3, n = 247) = 2.93, p = .40$; Type 5: $H(3, n = 247) = .42, p = .94$ and Type 6: $H(3, n = 247) = 4.8, p = .19$. Descriptive statistics are presented in table 6.6.

Table 6.6

Descriptive Statistics for Moral Orientations (MO) Types in the Vigilantism Scenario

Discipline	MO	Utilitarian (for)			Deontological (against)			
		<i>n</i>	<i>Md</i>	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Medical and Healthcare	Type 1	96	-1.00	-1.11	2.34	-1.00	-0.24	2.29
Business		80	-1.00	-0.69	2.14	0.00	-0.20	2.61
Social Sciences		44	-2.00	-1.23	2.12	1.00	0.70	2.41
Arts and Design		27	-1.00	-0.96	1.91	0.00	0.19	2.90
Medical and Healthcare	Type 2	96	-1.00	-0.91	2.56	-1.00	-0.25	2.07
Business		80	0.00	-0.16	2.26	0.00	-0.13	2.48
Social Sciences		44	0.00	-0.43	2.37	0.00	-0.25	2.25
Arts and Design		27	1.00	0.52	2.58	0.00	0.00	2.11
Medical and Healthcare	Type 3	96	-1.00	-0.68	2.33	2.00	1.44	2.24
Business		80	0.00	-0.71	2.11	1.00	1.10	2.45
Social Sciences		44	-1.00	-0.64	2.25	2.00	1.48	1.93
Arts and Design		27	-1.00	-0.44	2.49	2.00	0.96	2.75
Medical and Healthcare	Type 4	96	0.00	-0.22	2.70	2.00	1.76	1.83
Business		80	1.00	0.84	2.47	2.00	1.51	2.04
Social Sciences		44	1.00	0.41	2.43	2.00	1.77	1.72
Arts and Design		27	1.00	0.63	2.42	1.00	0.96	2.19
Medical and Healthcare	Type 5	96	1.00	0.30	2.70	3.00	2.47	1.79
Business		80	2.00	1.14	2.29	3.00	2.31	1.99
Social Sciences		44	1.00	0.52	2.45	3.00	2.34	1.68
Arts and Design		27	1.00	1.04	2.08	3.00	2.19	2.13
Medical and Healthcare	Type 6	96	1.00	0.35	2.41	2.00	1.69	1.88
Business		80	1.00	0.45	2.24	1.00	1.03	2.13
Social Sciences		44	1.00	0.66	2.23	1.50	1.39	1.93
Arts and Design		27	1.00	0.96	1.93	2.00	1.74	2.18

Figure 6.1 displays the range of ethical compositions in the vigilantism for the each of the moral orientation types between student vocational fields. The y axis presents the participants mean level of agreement (acceptance or rejection) of a particular type of moral orientation. The x axis displays the six types of moral orientations. The top half of figure 6.1 displays the utilitarian preferences and the bottom half the deontological preferences. Each line represents one of the four study groups. It can be seen in the utilitarian analysis that each of the student groups display a similar discourses, however the significant differences in the mean scores for Type 2 and Type 4 are highlighted, with medical and healthcare students displaying a stronger rejection of these arguments. For deontological preferences, each of the student groups display a similarity in discourse, with art and design students showing a higher rejection of Type 4 arguments, though this was not significant.

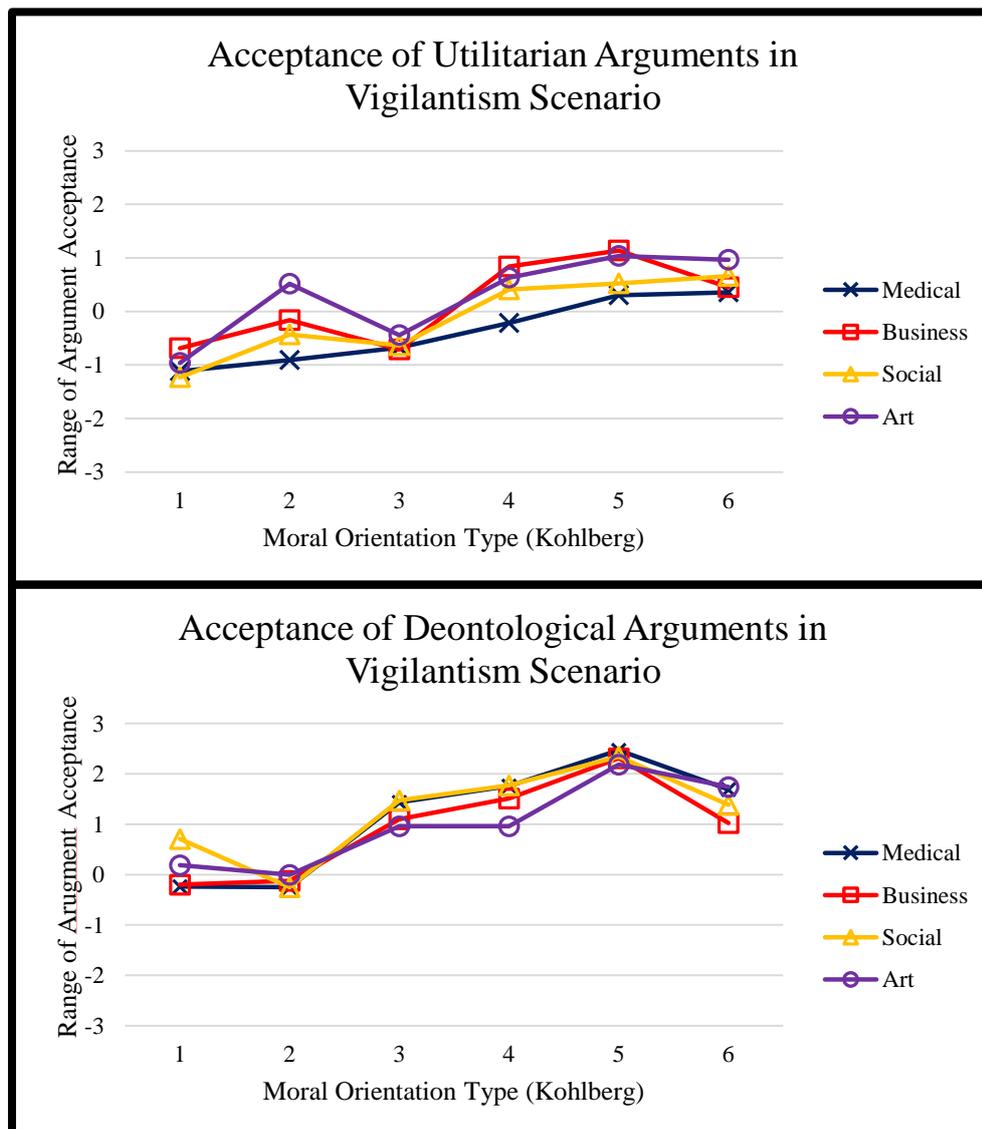


Figure 6.1 Ethical compositions in vigilantism scenario for utilitarian and deontological

To further test the intricacies of ethical compositions in more detail within the practice samples for the vigilantism scenario. A series of independent-samples t-tests were conducted between individuals working within healthcare settings and individual working outside of healthcare settings to compare the level of acceptance of arguments supporting the protagonists' actions (Utilitarian) and arguments opposing the action (deontological) in the vigilantism scenario.

There were no significant differences between the groups for any of the utilitarian arguments for the vigilantism scenario. Type 1: $t(268) = 1.03, p = >.05$ (two tailed); Type 2: $t(264) = 0.78, p = >.05$ (two tailed); Type 3: $t(268) = 1.39, p = >.05$ (two tailed); Type 4: $t(268) = 0.26, p = >.05$ (two tailed); Type 5: $t(268) = -0.88, p = >.05$ (two tailed); and Type 6: $t(268) = 0.35, p = >.05$ (two tailed). Observation of the means as presented in table 6.7 shows that healthcare professionals were more likely to accept utilitarian arguments for Type 1, 3, 4 and 6 and were less favourable towards Type 2 and 5 arguments when compared to non-healthcare professionals, though the differences in mean scores were not great.

With regards to deontological moral orientations. No significant differences were found between healthcare and non-healthcare professionals for the following moral orientation types; Type 1: $t(268) = -1.04, p <.05$ (two tailed); Type 2: $t(268) = 0.53, p <.05$ (two tailed); Type 3: $t(268) = 0.15, p <.05$ (two tailed); and Type 6: $t(268) = 1.81, p <.05$ (two tailed). Though, significant differences were found between healthcare professionals and non-healthcare professionals for deontological (against) Type 4 arguments, $t(267) = 2.05, p = 0.04$ (two-tailed); and deontological (against) Type 5 arguments, $t(266) = 2.34, p = 0.02$ (two-tailed). The magnitude of the differences in means was very small for both, Type 4 (mean difference = 0.51, 95% CI: 0.02 to 1.00, eta squared = 0.02); and Type 5 (mean difference = 0.51, 95% CI: 0.08 to 0.93, eta squared = 0.02). Healthcare professionals showed a higher preference for deontological Type 4 arguments (respect laws and order of society) and Type 5 (keep contracts) in the vigilantism scenario. Observation of the means as presented in table 6.7, show that although not significant healthcare professionals seemed to accept deontological arguments Type 2, 3 and 6 more than non-healthcare professionals, except for deontological Type 1 arguments (avoid physical damage and injury to oneself).

Table 6.7

Means and Standard Deviations of Moral Orientation Types for Healthcare and Non-healthcare Professionals (Vigilantism)

Variable	Healthcare			Non-Healthcare		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Utilitarian (For) Type 1	118	-1.40	2.14	152	-1.69	2.46
Utilitarian (For) Type 2	118	-1.04	2.42	152	-0.80	2.77
Utilitarian (For) Type 3	118	-0.87	2.23	152	-1.25	2.37
Utilitarian (For) Type 4	118	-0.26	2.54	152	-0.35	2.84
Utilitarian (For) Type 5	118	-0.21	2.50	152	0.07	2.74
Utilitarian (For) Type 6	118	0.36	2.36	152	0.25	2.60
Deontological (against) Type 1	118	-0.42	2.38	152	-0.09	2.65
Deontological (against) Type 2	118	0.33	2.37	152	0.17	2.52
Deontological (against) Type 3	118	1.71	2.15	152	1.67	2.38
Deontological (against) Type 4	118	1.93	1.84	152	1.42	2.27
Deontological (against) Type 5	118	2.85	1.48	152	2.34	2.07
Deontological (against) Type 6	118	1.30	2.01	152	0.82	2.23

Figure 6.2 displays the range of ethical compositions in the vigilantism for the each of the moral orientation types between professional vocational fields. The y axis presents the participants mean level of agreement (acceptance or rejection) of a particular type of moral orientation. The x axis displays the six types of moral orientations. Each line represents one of the two study groups, for either deontological or utilitarian preference. It can be seen in the utilitarian and deontological analysis that each of the vocational groups display a similar discourses. However the significant differences in the mean scores for Type 4 and Type 5 deontological arguments are highlighted, with medical and healthcare professionals displaying a slightly higher acceptance of these arguments.

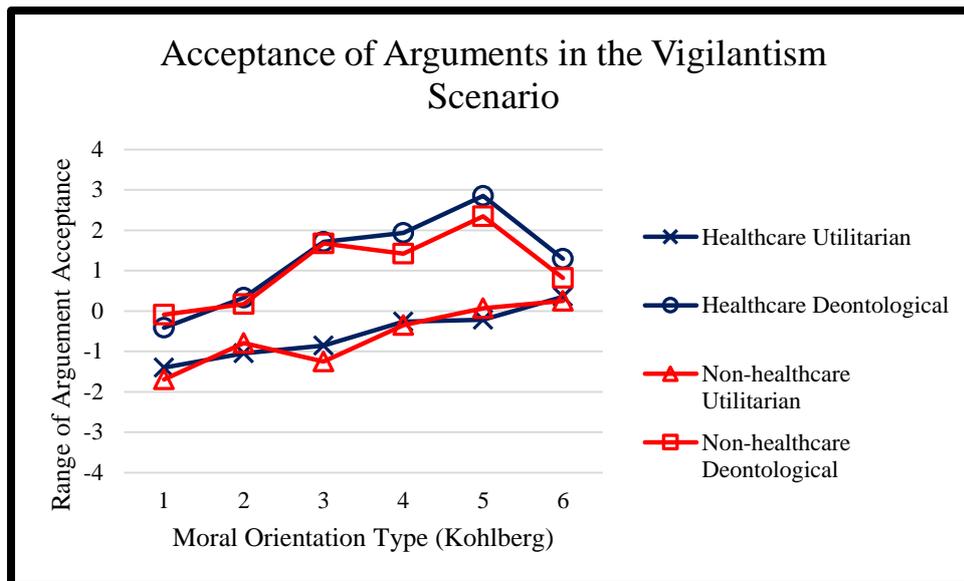


Figure 6.2. Acceptance of utilitarian and deontological arguments in the vigilantism scenario for healthcare and non-healthcare professionals.

6.4.3 Moral dilemma 2: Mercy Killing Scenario

The following section analyses the mercy killing scenario in relation to initial decisional choices, total ethical composition analysis and ethical compositions adhering to moral orientations. Partial support was found for the claim that there will be a significant difference between medical and healthcare vocational fields and non-healthcare vocational fields in ethical composition patterns (utilitarian and deontological stances), which includes initial decisional choice, total ethical compositions, and ethical compositions adhering to moral orientations, for the mercy killing scenario, portrayed in the MCT (H_3).

Initial decisional choice analysis between student vocational fields and between healthcare and non-healthcare professionals

To examine if differences occurred between different student vocational fields initial decisional choice when analysing the mercy killing scenario, A Kruskal-Wallis Test was conducted. A significant difference was across the four different student groups (Gp1, $n = 96$: medical and healthcare, Gp2, $n = 80$: business, Gp3, $n = 44$: social science, Gp4, $n = 27$: art and design), $H(3, n = 247) = 24.44, p < .001$.

A follow analysis of Mann-Whitney U Tests between pairs of groups were conducted. Holm-Bonferroni method was used to adjust the p-value to correct for multiple comparisons. Medical and healthcare students significantly differed in initial decisional choices at the

adjusted alpha level of .0167 compared to business students ($U = 3043, z = -2.41, p = .016, r = .18$); social science students at the adjusted alpha level of .0083 ($U = 1157, z = -4.35, p < .001, r = .37$) and art and design students at the adjusted alpha level of .01 ($U = 779, z = -3.22, p = .001, r = .29$). A significant difference was also found between business and social science students at the adjusted alpha level of .0125 ($U = 1281, z = -2.54, p = .011, r = .23$). No significant differences were found between art and design students and both business students ($U = 850, z = -1.67, p = .09$) and social science students ($U = 561, z = -.40, p = .69$). Observation of the medians as presented in table 6.8 show that for the mercy killing scenario medical and healthcare students disagree with the protagonist's actions more displaying a higher preference for deontological moral views, compared to students of business, social sciences and art and design who displayed a tendency to more utilitarian outlooks.

To examine whether any differences occurred in initial decisional choices in the mercy killing scenario between healthcare professionals and non-healthcare professionals an independent-samples t-test was conducted. There were significant differences in decisional choices for the mercy killing scenario between healthcare ($M = -1.08, SD = 2.13$) and non-healthcare professions ($M = 0.70, SD = 2.09$); $t(268) = -6.89, p < .001$ (two-tailed). The magnitude of the differences in means (mean difference = -1.78, 95% CI: -2.29 to -1.27) was very large (eta squared = 0.15). Observation of the means presented in table 6.8 show that for the mercy killing scenario individuals working within healthcare settings disagree with the protagonists actions displaying a higher preference for deontological moral views, compared to individuals working in non-healthcare settings who displayed a tendency to more utilitarian outlooks.

Table 6.8

Descriptive Statistics of Decisional Choice by Vocational Field (Mercy Killing)

Sample	<i>n</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Medical and healthcare students	96	-1.00	-0.74	2.21
Business students	80	0.00	0.04	2.10
Social science students	44	1.00	1.05	1.72
Arts and design students	27	1.00	0.81	1.92
Healthcare Professionals	118	-2.00	-1.08	2.13
Non-healthcare professionals	152	1.00	0.70	2.09

The percentage frequencies of decisional choices for each vocational field are displayed in table 6.9. In contrast to the vigilantism scenario, preferences for deontological and utilitarian

choices appear to be inversed, with medical and healthcare students and professionals showing a strong preference for deontological moral decisions. To highlight this result it must be noted that from the 57.20% of the medical and healthcare student sample 59.30% of the healthcare sample which selected deontological ranges, 35.40% of the students and 44.10% of the healthcare professionals choose to strongly disagree (-3) with the protagonists actions, with only 8.3% of the healthcare students and 2.5% of the healthcare professionals denoting a weaker choice (-1).

Table 6.9

Percentages of Initial Decisional Choices between Vocational Fields for the Mercy Killing Scenario

Sample	<i>n</i>	Utilitarian (Scores of 1 to 3)	Neutral (Scores of 0)	Deontological (Scores of -3 to -1)
Medical and healthcare students	96	34.40%	8.30%	57.20%
Business students	80	46.30%	16.30%	37.50%
Social science students	44	66.00%	18.20%	15.80%
Art and design students	27	62.90%	11.10%	25.90%
Healthcare professionals	118	33.90%	12.70%	59.30%
Non-healthcare professionals	152	64.60%	6.60%	29.00%

Ethical composition analysis between student vocational fields and between healthcare and non-healthcare professionals

In the next stage of the MCT participants are asked the extent they accept or reject arguments in favour of the protagonist's actions (utilitarian support) and arguments against the protagonist's actions (deontological support). To examine the extent participants from the student sample accepted or rejected these arguments, a Kruskal-Wallis Test was conducted across the four different student groups (Gp1, $n = 96$: medical and healthcare, Gp2, $n = 80$: business, Gp3, $n = 44$: social science, Gp4, $n = 27$: art and design).

Significant differences were found between the groups for the mercy killing scenario (physician) for utilitarian arguments $H(3, n = 247) = 29.78, p < .001$, but not for deontological, $H(3, n = 247) = 4.17, p = .24$. A follow analysis of Mann-Whitney U Tests between pairs of groups were conducted for utilitarian outlooks. Holm-Bonferroni method was used to adjust the p-value to correct for multiple comparisons. Medical and healthcare students significantly from all student groups: at the adjusted alpha level of .01 to business

students ($U = 2800, z = -3.09, p = .002, r = .35$), at the adjusted alpha level of .0083 to social science students ($U = 1011, z = -4.95, p < .001, r = .51$), and at the adjusted alpha level of .0167 to art and design students ($U = 869, z = -2.61, p = .008, r = .24$). A significant difference was also found at the adjusted alpha level of .0125 between business and social science students ($U = 1188, z = -2.99, p = .003, r = .27$). No further significant differences were found at the adjusted alpha levels of .025 and .05 respectively, between social science and art and design students ($U = 419, z = -2.08, p = .04$) and business and art and design students ($U = 1049, z = -.23, p = .82$).

Observation of the medians presented in table 6.10 show that for the mercy killing scenario medical and healthcare student's significantly rejected utilitarian arguments more than students of other disciplines. Art and design and business students, though not as strongly also rejected utilitarian arguments. Whereas, social sciences appear to be the only group to accept utilitarian prospects.

Table 6.10.

Descriptive Statistics of Argument Acceptance by Student Vocational Field for the Mercy Killing Scenario.

Sample	n	Utilitarian			Deontological		
		Md	M	SD	Md	M	SD
Medical and Healthcare	96	-10.00	-9.67	11.50	5.00	4.21	9.73
Business	80	-3.00	-4.68	10.62	1.50	2.23	9.96
Social Sciences	44	2.50	1.39	10.30	4.00	3.70	9.22
Arts and Design	27	-4.00	-3.07	10.56	0.00	0.33	10.42

To examine the extent participants accepted or rejected these arguments in the practice sample an independent samples t-test was conducted. Significant differences were found between healthcare ($M = -12.64, SD = 10.47$) and non-healthcare professionals ($M = -4.10, SD = 12.67$) in utilitarian arguments, $t(268) = -5.92, p < .05$ (two tailed). The degree of differences in the means was large for utilitarian arguments (mean difference = -8.55, 95% CI: -11.36 to -5.70, eta squared 0.12). Significant differences were also found between healthcare ($M = 4.19, SD = 11.41$) and non-healthcare professionals ($M = -1.13, SD = 11.70$) in deontological arguments, $t(268) = 3.75, p < .05$ (two tailed). The magnitude of the differences in means was small for deontological arguments (mean difference = 5.33, 95% CI: 2.53 to 8.12, eta squared 0.05). Healthcare professionals were more likely to

reject/oppose utilitarian arguments and accept deontological cases more than non-healthcare professional groups.

Ethical composition analysis in relation to moral orientation types between student vocational fields and between healthcare and non-healthcare professionals

To further test the intricacies of ethical compositions in more detail within the mercy killing scenario a further analysis occurred to compare the level of acceptance of arguments supporting the protagonists' actions (Utilitarian) and arguments opposing the action (deontological). There were six arguments in favour and six arguments against, per each moral scenario. Each of the arguments represent six moral orientations as identified by Kohlberg (1984).

Within the student sample a Kruskal-Wallis Test was conducted between the four different student groups (Gp1, $n = 96$: medical and healthcare, Gp2, $n = 80$: business, Gp3, $n = 44$: social science, Gp4, $n = 27$: art and design).

There was a statistically significant difference at the $p < .05$ level in all of the utilitarian moral orientation preferences between the groups for the mercy killing scenario; Type 1: $H(3, n = 247) = 31.27, p < .001$; Type 2: $H(3, n = 247) = 16.00, p = .001$; Type 3: $H(3, n = 247) = 15.01, p = .002$; Type 4: $H(3, n = 247) = 24.33, p < .001$; Type 5: $H(3, n = 247) = 21.63, p < .001$; and Type 6: $H(3, n = 247) = 18.73, p < .001$. A follow analysis of Mann-Whitney U Tests between pairs of groups were conducted for each of the utilitarian moral orientations. Holm-Bonferroni method was used to adjust the p-value to correct for multiple comparisons. Descriptive statistics are presented in Table 6.11.

For Type 1, medical students significantly rejected Type 1 moral orientations more than all student groups: at the adjusted alpha level of .0125 to business students ($U = 2927, z = -2.81, p = .005, r = .21$), at the adjusted alpha level of .0083 to social science students ($U = 942, z = -5.41, p < .001, r = .46$) and at the adjusted alpha level of .0167 to art and design students ($U = 876, z = -2.68, p = .007, r = .24$). Furthermore, business students significantly differed from social science students at the adjusted alpha level of .01 ($U = 1174, z = -3.10, p = .002, r = .28$). No significant differences were found between art and design with both business students at the adjusted alpha level of .025 ($U = 962, z = -.87, p = .39$) and social science students ($U = 468, z = -1.15, p = .13$).

For Type 2, medical students significantly rejected Type 2 moral orientations more than social science students at the adjusted alpha level of .0083 ($U = 1303, z = -3.74, p < .001, r = .32$). Significant differences at the alpha level .05 were found between medical and healthcare students and both business ($U = 3085, z = -2.31, p = .02$) and art and design students ($U = 951, z = -2.19, p = .03$), however these did not reach significance at the adjusted alpha level of .01. No significant differences were found between business students and both social science students ($U = 1418, z = -1.81, p = .07$) and art and design students ($U = 1008, z = -.53, p = .60$); and between social science and art and design students ($U = 512, z = -.99, p = .32$).

For Type 3, social science students significantly rejected Type 3 moral orientations less compared to medical and healthcare students at the adjusted alpha level of .0083 ($U = 1321, z = -3.63, p = .0003, r = .31$), business students at the adjusted alpha level of .01 ($U = 1161, z = -3.19, p = .001, r = .29$) and art and design students ($U = 401, z = -2.32, p = .02$), though the latter did not reach significance at adjusted alpha level of .0125. No significant differences were found between medical and healthcare students with both business ($U = 3566, z = -.84, p = .40$) and art and design students ($U = 1164, z = -.83, p = .41$), or between business and art and design students ($U = 1059, z = -.16, p = .88$).

For Type 4, medical students significantly rejected Type 4 moral orientations more than all student groups: at the adjusted alpha level of .01 for business students ($U = 2580, z = -3.80, p < .001, r = .29$), at the adjusted alpha level of .0083 for social science students ($U = 1217, z = -4.10, p < .001, r = .35$) and the adjusted alpha level of .0125 for art and design students ($U = 860, z = -2.73, p = .006, r = .25$). No further significant differences were found between student groups; art and design students did not differ from both business ($U = 1048, z = -.24, p = .81$) and social science students ($U = 496, z = -1.17, p = .24$); nor did business students significantly differ from social science students ($U = 1529, z = -1.22, p = .22$).

For Type 5, medical students significantly rejected Type 5 moral orientations more than all student groups: at the adjusted alpha level of .01 for business students ($U = 2899, z = -2.82, p = .005, r = .21$), at the adjusted alpha level of .0083 for social science students ($U = 1183, z = -4.21, p < .001, r = .36$) and at the adjusted alpha level of .0125 for art and design students ($U = 878, z = -2.56, p = .01, r = .23$). No further significant differences were found between student groups; art and design students did not differ from both business ($U = 1017, z = -.46, p = .65$) and social science students ($U = 483, z = -1.34, p = .18$); nor did business students

significantly differ from social science students at the adjusted alpha level of .0167 ($U = 4620, z = -2.01, p = .05$).

For Type 6, medical students rejected Type 6 moral orientations more than all student groups: at the adjusted alpha level of .0083 for social science students ($U = 1216, z = -4.07, p < .001, r = .34$), for business students ($U = 3217, z = -1.87, p = .06$), and for art and design students ($U = 922, z = -2.31, p = .02$), though the latter two did not reach statistical significance at the adjusted alpha level of .125. Social science students significantly accepted Type 6 moral orientations more than business students at the adjusted alpha level of .01 ($U = 1263, z = -2.62, p = .009, r = .24$). No further significant differences were found between student groups; art and design students did not differ from both business ($U = 962, z = -.85, p = .39$) and social science students ($U = 486, z = -1.31, p = .19$).

Table 6.11.

Descriptive Statistics of Utilitarian Moral Orientation Types Mercy Killing Scenario

Sample	Variable	<i>n</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Medical and Healthcare	Type 1	96	-3.00	-2.57	1.96
Business		80	-2.00	-1.83	2.09
Social Sciences		44	-1.00	-0.59	2.17
Arts and Design		27	-2.00	-1.37	2.31
Medical and Healthcare	Type 2	96	-3.00	-2.27	2.18
Business		80	-2.00	-1.51	2.44
Social Sciences		44	-1.00	-0.75	2.40
Arts and Design		27	-2.00	-1.30	2.38
Medical and Healthcare	Type 3	96	-3.00	-1.91	2.37
Business		80	-2.00	-1.71	2.15
Social Sciences		44	0.00	-0.36	2.06
Arts and Design		27	-2.00	-1.56	2.36
Medical and Healthcare	Type 4	96	-3.00	-1.77	2.57
Business		80	0.00	-0.35	2.51
Social Sciences		44	0.50	0.20	2.56
Arts and Design		27	0.00	-0.48	2.47
Medical and Healthcare	Type 5	96	-1.00	-0.52	2.62
Business		80	1.00	0.60	2.52
Social Sciences		44	2.00	1.52	2.33
Arts and Design		27	1.00	0.96	2.21
Medical and Healthcare	Type 6	96	-0.50	-0.63	2.64
Business		80	0.00	0.13	2.55
Social Sciences		44	2.00	1.36	2.20
Arts and Design		27	1.00	0.67	2.15

Figure 6.3 displays the range of ethical compositions for utilitarian arguments in the mercy killing scenario for the each of the moral orientation types between professional vocational fields. The y axis presents the participants mean level of agreement (acceptance or rejection) of a particular type of moral orientation for the utilitarian arguments. The x axis displays the six types of moral orientations. Each line represents one of the four study groups. Medical and healthcare students absolute rejection of utilitarian arguments can be seen in Figure 6.3, as all acceptance of Type 1 through to Type 6 moral orientations falls below zero, whereas, other student groups display a steady incline towards higher end moral orientations.

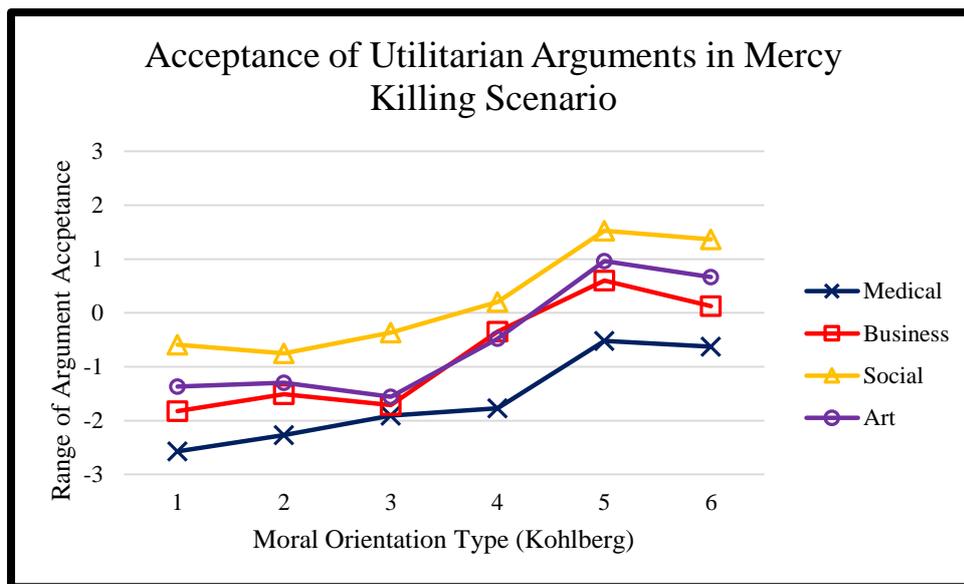


Figure 6.3. Acceptance of utilitarian arguments in the mercy killing scenario between student disciplines.

With regards to the deontological (against) moral orientations in the mercy killing scenario, no significant differences were found for deontological arguments within the mercy killing scenario between the student groups for the following moral orientation types:

Type 1 $H(3, n = 247) = 4.76, p = .19$; Type 2 $H(3, n = 247) = 1.89, p = .60$; Type 3 $H(3, n = 247) = 4.26, p = .24$; Type 5 $H(3, n = 247) = .70, p = .87$; and Type 6 $H(3, n = 247) = 4.55, p = .21$. Though a significant difference was found in Type 4 deontological moral orientations between the groups $H(3, n = 247) = 8.89, p = .03$. A follow analysis of Mann-Whitney U Tests between pairs of groups were conducted for type 4 deontological moral orientation. Holm-Bonferroni method was used to adjust the p-value to correct for multiple comparisons. Descriptive statistics are presented in Table 6.12.

No significant differences were found between the four student groups at the adjusted alpha level of .0083. However medical students displayed a higher acceptance of Type 4 deontological arguments compared to business students ($U = 3043, z = -2.4, p = .02$), social science students ($U = 1752, z = -1.64, p = .10$) and art and design students ($U = 920, z = -2.33, p = .02$). Art and design students did not differ from both business ($U = 972, z = -.79, p = .43$) and social science students ($U = 519, z = -.91, p = .37$); nor did business students significantly differ from social science students ($U = 1711, z = -.26, p = .79$).

Table 6.12.

Descriptive Statistics of Deontological Moral Orientations Mercy Killing Scenario

Sample	Variable	<i>n</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Medical and Healthcare		96	2.00	1.45	2.31
Business	Type 1	80	1.00	1.00	2.10
Social Sciences		44	1.00	1.52	1.95
Arts and Design		27	1.00	0.56	2.64
Medical and Healthcare		96	0.00	-0.51	2.45
Business	Type 2	80	-1.00	-0.61	2.39
Social Sciences		44	0.00	0.00	2.13
Arts and Design		27	-1.00	-0.44	2.72
Medical and Healthcare		96	0.00	-0.28	2.59
Business	Type 3	80	0.00	-0.24	2.14
Social Sciences		44	0.00	0.00	1.80
Arts and Design		27	-2.00	-1.19	2.47
Medical and Healthcare		96	2.00	1.80	2.05
Business	Type 4	80	1.00	0.98	2.28
Social Sciences		44	1.00	1.11	2.30
Arts and Design		27	0.00	0.67	2.32
Medical and Healthcare		96	1.00	0.63	2.63
Business	Type 5	80	1.00	0.64	2.21
Social Sciences		44	1.00	0.55	1.93
Arts and Design		27	0.00	0.26	2.46
Medical and Healthcare		96	1.00	1.13	2.40
Business	Type 6	80	1.00	0.46	2.45
Social Sciences		44	0.50	0.52	2.03
Arts and Design		27	1.00	0.48	2.56

Figure 6.4 displays the range of ethical compositions for deontological arguments in the mercy killing scenario for the each of the moral orientation types between each student group. The y axis presents the participants mean level of agreement (acceptance or rejection) of a particular type of moral orientation for the deontological arguments. The x axis displays

the six types of moral orientations. Each line represents one of the four study groups. It denotes the similar discourses between the student groups, though it manages to highlight medical and healthcare student stronger preference for Type 4 deontological arguments.

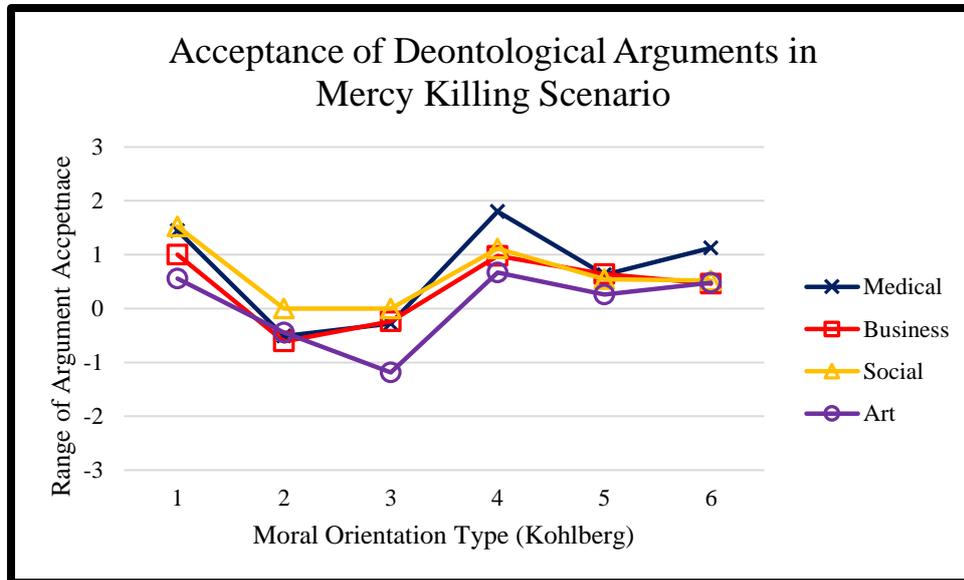


Figure 6.4. Acceptance of deontological arguments in the mercy killing scenario between student disciplines.

To further test the intricacies of ethical compositions in more detail within the practice samples for the vigilantism scenario. A series of independent-samples t-tests were conducted between individuals working within healthcare settings and individual working outside of healthcare settings to compare the level of acceptance of arguments supporting the protagonists' actions (Utilitarian) and arguments opposing the action (deontological) in the vigilantism scenario. The results of the independent samples t-test were more prominent for the mercy killing/ scenario compared to the vigilantism scenario. Table 6.13 and table 6.14 displays the t-test outputs and descriptive statistics. Significant differences were found between healthcare professionals and non-healthcare professionals for the preference of all utilitarian arguments and the majority of deontological arguments, expect for Type 5.

Table 6.13

Results of Independent t-test and Descriptive Statistics for Moral Orientation Type by Profession (Mercy Killing)

Variable	Healthcare			Non-Healthcare			95% CI for		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	mean	<i>t</i>	<i>df</i>
Utilitarian (For) Type 1	118	-3.13	1.23	152	-1.83	2.37	-1.74, -0.86	-5.82*	237
Utilitarian (For) Type 2	118	-2.52	1.89	152	-1.28	2.55	-1.77, -0.70	-4.57*	267
Utilitarian (For) Type 3	118	-2.36	2.18	152	-1.30	2.50	-1.62, 0.50	-3.72*	264
Utilitarian (For) Type 4	118	-2.08	2.35	152	-0.53	2.86	-2.18, -0.93	-4.90*	267
Utilitarian (For) Type 5	118	-1.20	2.55	152	0.45	2.69	-2.30, -1.02	-5.14*	268
Utilitarian (For) Type 6	118	-1.35	2.56	152	0.39	2.68	-2.37, -1.11	-5.41*	268
Deontological (against) Type 1	118	1.45	2.27	152	0.57	2.43	0.31, 1.45	3.03*	268
Deontological (against) Type 2	118	-0.19	2.48	152	-1.05	2.50	0.25, 1.45	2.80*	268
Deontological (against) Type 3	118	0.28	2.68	152	-1.00	2.52	0.65, 1.91	4.02*	268
Deontological (against) Type 4	118	1.86	2.18	152	0.53	2.55	0.76, 1.92	4.56*	268
Deontological (against) Type 5	118	0.17	2.65	152	-0.11	2.65	-0.36, 0.92	0.86	268
Deontological (against) Type 6	118	0.63	2.67	152	-0.07	2.75	0.04, 1.35	2.10*	268

* $p < .05$.

Table 6.14 displays the p -values and effect sizes. The magnitude of the differences in means ranged from small for utilitarian Type 3 and deontological Type 1, 2 and 6; moderate effect sizes for utilitarian Type 2, 4 and 5 and deontological Type 3 and 4; and large effect sizes for utilitarian Type 1 and Type 6. Healthcare professionals are more likely to reject utilitarian style arguments and accept deontological arguments more than individuals working outside of healthcare sectors.

Table 6.14

P-values and Effect Sizes for the Mercy Killing Scenario between Healthcare Professionals and Non-healthcare Professionals

Variable	<i>p</i> - value	Mean Difference	Eta ²
Utilitarian (For) Type 1	>.001**	-1.30	0.11
Utilitarian (For) Type 2	>.001**	-1.23	0.07
Utilitarian (For) Type 3	>.001**	-1.06	0.05
Utilitarian (For) Type 4	>.001**	-1.55	0.08
Utilitarian (For) Type 5	>.001**	-1.66	0.09
Utilitarian (For) Type 6	>.001**	-1.74	0.10
Deontological (against) Type 1	0.003**	0.87	0.03
Deontological (against) Type 2	0.006**	0.85	0.03
Deontological (against) Type 3	>.001**	1.28	0.06
Deontological (against) Type 4	>.001**	1.34	0.07
Deontological (against) Type 5	0.39	0.28	0.00
Deontological (against) Type 6	0.04*	0.70	0.02

* $p < .05$; ** $p < .01$

Figure 6.5 displays the range of ethical compositions for both utilitarian and deontological arguments in the mercy killing scenario for the each of the moral orientation types between professional vocational fields. The y axis presents the participants mean level of agreement (acceptance or rejection) of a particular type of moral orientation for both the utilitarian and deontological arguments. The x axis displays the six types of moral orientations. Each line represents one of the two study groups. It denotes the differences in the mercy killing scenario between these two professionals groups, but also the differences within the healthcare sample, as the acceptance for deontological arguments are opposite poles to the acceptance of utilitarian arguments.

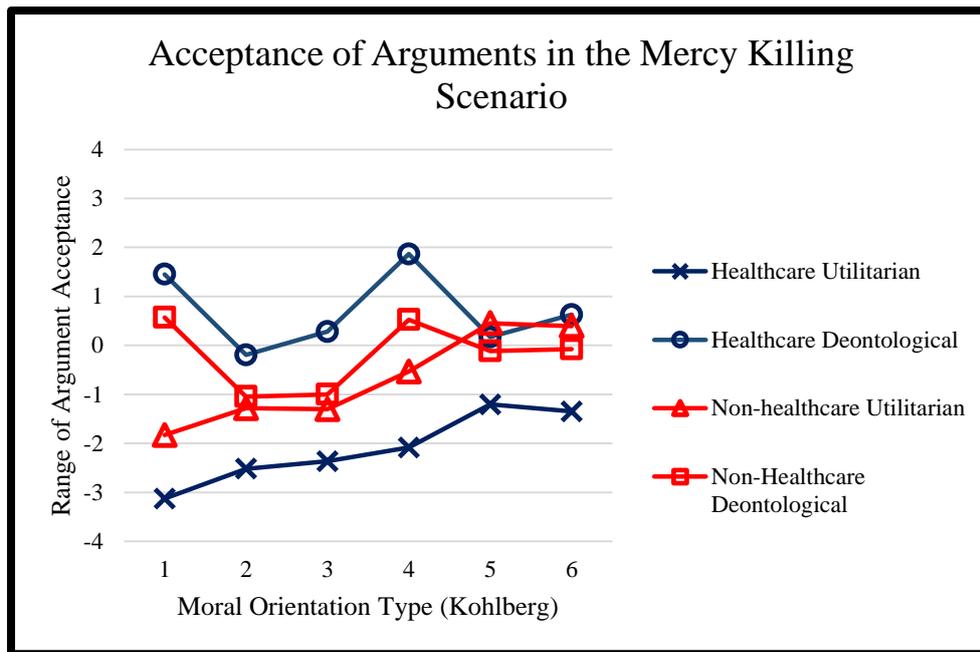


Figure 6.5. Acceptance of utilitarian and deontological arguments in the mercy killing scenario between professional fields.

Furthermore, of interest are the striking similarities between medical and healthcare students and healthcare professionals when analysing the two scenarios. As is evident in Figure 6.6, in the vigilantism scenario both students and professions follow a similar line of thought for the acceptance of deontological arguments and the rejection of utilitarian arguments. Within the mercy killing scenario, similar discourses appear again between healthcare students and professions, with both groups appearing to reject all utilitarian arguments, as all the ranges of acceptance fall below zero from Type 1 moral orientation through to Type 6.

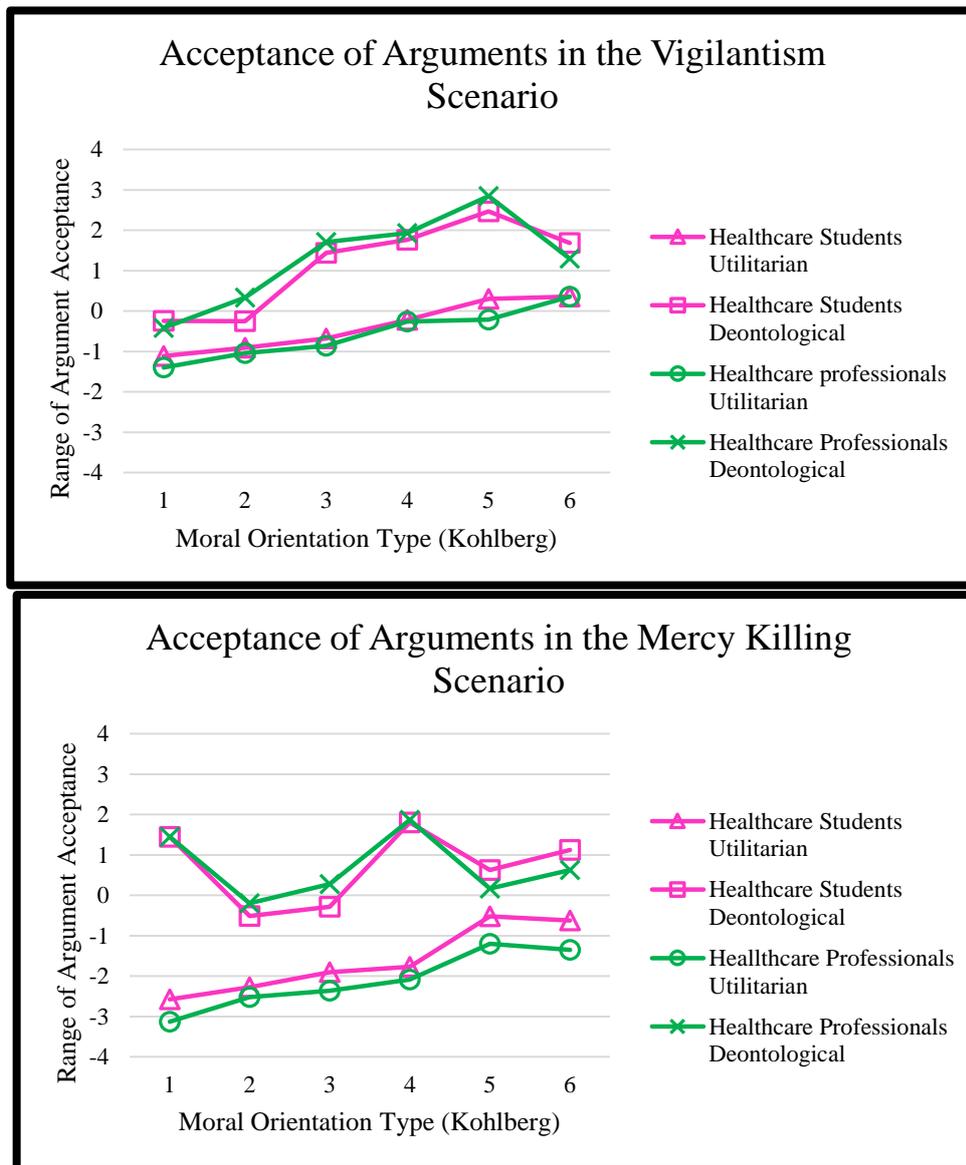


Figure 6.6 comparison of healthcare students with healthcare professionals in ethical compositions in mercy killing scenario.

6.4.4 Inter-correlations of initial decisional choice and ethical compositions

In order to understand the stability and salience of ethical compositions a Spearman's Rank Order (Rho) correlation coefficients was conducted within student sample and practice samples, to explore the relationship between initial decisional choice and ethical compositions for both the vigilantism and mercy killing scenario.

Significant positive correlations were found between initial decisional choice in the vigilantism and initial decisional choice in the mercy killing scenario, in both the student

sample ($r = 0.17, p = .007$) and the practice sample ($r = 0.34, p < .001$) the more participants primarily agreed with the protagonists actions displaying a tendency towards utilitarian outlooks in the vigilantism scenario, the more they were more likely to agree with the protagonists actions in the mercy killing scenario also. Furthermore, significant positive correlations were found between the initial decisional choice in the vigilantism scenario which denotes utilitarian outlooks and total utilitarian support in both the student samples ($r = 0.53, p < .001$) and practice samples ($r = 0.69, p < .001$). Whilst negative correlations were found between initial decisional choice in the vigilantism scenario and total level of deontological support, in student sample ($r = -0.38, p < .001$) and practice samples ($r = -0.43, p < .001$). The same pattern is evidenced in the initial decisional choice of the mercy killing scenario, delineating positive relations with total utilitarian support in student samples ($r = 0.64, p < .001$) and practice samples ($r = 0.69, p < .001$). Further holding negative associations with total deontological support, student sample ($r = -.39, p < .001$) and practice sample ($r = -.50, p < .001$). This pattern, that support for utilitarian aspects are negatively associated with deontological may be indicative of cognitive salience.

6.4.5 Moral competence, opinion strength and ethical compositions

To explore the relationship between moral competence, opinion strength and ethical compositions in the form of utilitarian and deontological support, a Spearman's Rank Order (Rho) correlation coefficient was conducted within both student samples and practice sample.

Support was found for the claim that there will be a significant correlation between moral competence and overall ethical composition patterns of utilitarian and deontological stances (H_4). Significant positive correlations were found between moral competence (C-score) and total utilitarian support within both the student sample ($r = 0.17, p = .008$) and the practice sample ($r = 0.23, p < .001$). Whereas negative correlations were found between moral competence (C-score) and total deontological support in both the student sample ($r = -.34, p < .001$) and the practice sample ($r = -0.43, p < .001$). Possibly indicating that individuals within the sample groups with higher C-scores were more likely to accept and support utilitarian arguments, than those individuals more likely to accept and support deontological arguments.

Furthermore, significant positive correlation was found between opinion commitment strength and total deontological support in both student samples ($r = .13, p = .04$) and practice samples ($r = .17, p = .01$); the more strongly participants agreed or disagreed with the

protagonists actions the more their views were in alignment with deontological stances. Whereas, negative correlations were found between opinion commitment strength and total utilitarian support in both the student sample ($r = -.11, p = .08$) and practice samples ($r = -.26, p < .001$); though this did not reach statistical significance in the student population.

6.5 Key findings and partial discussion

The aim of the study was to;

- To examine the vigilantism and mercy killing moral dilemmas independently through the application of utilitarianism and deontological philosophies to investigate whether different vocational fields differ in their ethical compositions, whether this is dependent on the type of dilemma, and how this effects moral competence scores, as measured by the moral competence test, in the hope to find an explanation for moral segmentations.

6.5.1 Key findings

- Opinion commitment strength in both the vigilantism and mercy killing scenario was found to be negatively correlated with moral competence (C-score), meaning the more strongly participants agreed or disagreed with the protagonists actions, the lower their C-scores. Suggesting that individuals may find it difficult when confronted with opposing views, despite their views sometimes consisting of a greater moral quality.
- The ethical composition analysis revealed little variation between the student groups and between professional groups in the vigilantism scenario. Subtle differences emerged in the moral orientation analysis, with medical and healthcare students displaying a higher rejection of utilitarian Type 2 and healthcare professionals displaying a higher acceptance of Type 4 and 5 deontological orientations. As a whole, all study groups displayed a higher preference for deontological arguments.
- The ethical composition analysis revealed differences within both the student groups and professional groups in the mercy killing scenario. These differences were evident in the initial decisional choices with medical and healthcare vocational fields displaying a higher level of disagreement with protagonist's actions indicative of deontological views. Medical and healthcare vocational fields displayed a higher rejection of utilitarian arguments and a higher acceptance of deontological arguments compared to other vocations.

- Utilitarian aspects were negatively correlated with deontological aspects in both student and practice samples denoting a level of cognitive salience
- Moral competence (C-score) positively correlated with total level of utilitarian commitment and negatively correlated with total level of deontological commitment. This suggests that individuals within the sample groups with higher C-scores were more likely to accept and support utilitarian arguments, than those individuals more likely to accept and support deontological arguments.

6.5.2 Partial discussion

A moral dilemma consists of a short vignette which describes a story containing a level of moral discord, whereby an individual is drawn between opposing moral courses. The conflict arises usually due to the fact that both routes have significant moral explanations to aid decisions (Christensen & Gomila, 2012), such as utilitarianism (consequentialist) and deontological normative ethics (duty based ethics). The present study reanalysed the data of the Moral Competence Test (Lind, 2016) with the application of ethical compositions, namely utilitarian and deontological philosophical positions. It assessed both moral scenarios (vigilantism and mercy killing) independently to investigate whether different vocational fields differ in their ethical compositions and to examine whether this is dependent on contexts of the dilemma presented. In the hope to determine how ethical compositions and the contextual elements of moral dilemmas may effect overall moral competence scores, which may be a contributing factor to the occurrence of moral segmentation. Subsequently, exploring the relationship between opinion and moral competence by adding a contextual and directional element to understanding moral dispositions and to provide further insight into possible reasons why individuals within medical and healthcare vocations display lower moral competence and moral segmentation.

As predicted negative correlations were found between moral competence (C-score) and opinion commitment strength for both the vigilantism and the mercy killing scenario (H_1). The more strongly participants agreed or disagreed with the protagonists actions, the lower their C-scores. The agreement or disagreement with the protagonists actions are not used in the calculation of the C-score, what this aspect manages to do is allow the participant to commit and possibly identify with a particular level of judgement or belief, which is later challenged when they are confronted with both supportive and counter arguments. The fact that opinion commitment strength is negatively associated with C-scores may indicate and

support the notion that individuals find it difficult when confronted with opposing views, despite their views sometimes holding a higher moral stance. On a further note, positive correlations were found between total opinion commitments strength and both vigilantism and mercy killing opinion commitment strength. Which indicates a duality, the more strongly committed an individual is to their opinion on one scenario the more strongly committed they are on another scenario. This supports the findings reported by Keasey (1973) and Stanley et al. (2017) that individuals are less likely to change initial decisions when faced with confronting alternatives in moral dilemmas.

These initial decision choices and range of argument acceptance were explored further in the present study for each moral dilemma, through the application of ethical compositions such as utilitarianism and deontological philosophical stances. The higher a participant's decisional choice and a higher level of agreement with the protagonists' actions denoted utilitarianism and a disagreement of action denoted deontological concepts.

Support was found for the second research hypothesis, that there will be no significant differences between medical and healthcare vocational fields and non-healthcare vocational fields in ethical composition patterns (utilitarian and deontological stances), which includes initial decisional choice, total ethical compositions, and ethical compositions adhering to moral orientations, for the vigilantism scenario, portrayed in the MCT (H_2). Analysis of the vigilantism scenario revealed minor differences between any of the cohorts, none of which held significance.

All cohorts were found to be more inclined towards deontological moral thinking for the vigilantism scenario. Previous literature have termed these decisive routes to be more innate, instinctive and emotionally charged (McDonald et al., 2017), particularly driven by negative affect (Amit & Greene, 2012; Bartels, 2008; Greene et al., 2001, 2008). This is an interesting finding, as the link between deontological decisions and dilemmas are usually, attributed to sacrificial dilemmas. It could be argued that the vigilantism scenario does not provoke a high emotionally charged response and depicts a low notion of harm. Reasons for this result, could lie in the dilemma construction, as Bartels (2008) reported that dilemmas which draws a participants attention to actions which break moral rules stimulates deontological inclinations, whereas shifting attention to the consequences which support the violation endorses more utilitarian inclinations. The vigilantism scenario does state that the workers are unable to pursue legal grounds until they prove their suspicions, though it does also highlight

that the workers break into the office and take the tapes. It could be suggested that the scenario itself draws participant's attention more towards the violation of a moral rule, more so than the positive latter consequences which favour the initial violation.

The most notable disparities in moral thinking occurred within the mercy killing scenario, and offered partial support for the third research hypothesis, which predicted that there will be a significant difference between medical and healthcare vocational fields and non-healthcare vocational fields in ethical composition patterns (utilitarian and deontological stances), which includes initial decisional choice, total ethical compositions, and ethical compositions adhering to moral orientations, for the mercy killing scenario, portrayed in the MCT (H_3). Support for deontological outlooks (against) were prominent in all cohorts, though more strongly within healthcare students and professionals, though this most did not reach statistical significance in the student sample. Healthcare professionals disagreed with the protagonists actions and displayed a consistency in deontological agreement, possibly due to professional ties and identity and given the fact that the act is illegal in the UK. In particular, the higher acceptance of deontological Type 4 moral orientation, which is to respect laws and order of society. Arguably, this is not surprising as medical and healthcare profession is an ethically bound institution and so obeying rules is vowed as valuable and important. This may influence healthcare professional opinion, from moving away from an individual persona to a more collective professional stance and outlook on the mercy killing scenario. This could relate to research on reputational concern and self-preservation of warmth (Lee et al., 2018; Weiss & Conway, 2017). Instead, self-preservation of warmth may be substituted for the self-preservation of professional identity, capability and integrity, as outlined acts of euthanasia are illegal in the UK and so could lead to a higher acceptance of argument opposing the act. Furthermore, research into intergroup bias shows that these forms of biases can impact neural systems (Cikara et al., 2010; Christenson & Gomila, 2012). It may be plausible that healthcare students and professionals identify more with the doctor in the scenario. It is not an intergroup bias per say based on pure support of that individual member, but rather an intergroup bias towards medical and healthcare society as a groups, which deem the act as wrong and illegal and so will not endorse any supportive means at all. These notions coupled with the concept of story pull (Elm & Weber, 1994) may be plausible explanation as to why healthcare students and professionals display a higher preference of deontological views and a stronger rejection of utilitarian views when analysing the mercy killing scenario.

Support was found for the final research hypothesis, which predicted that there will be a significant correlation between moral competence and overall ethical composition patterns of utilitarian and deontological stances (H_4). Moral competence (C-score) was found to be positively correlated with total level of utilitarian commitment and negatively correlated with total level of deontological commitment. This suggests that individuals within the sample groups with higher C-scores were more likely to accept and support utilitarian arguments, than those individuals more likely to accept and support deontological arguments.

Observation of figure 6.6 shows that medical and healthcare students and professionals on average did not accept any of the utilitarian arguments, those in favour of the protagonist's actions within the mercy killing scenario, and were more inclined to support deontological ones. This taken together with how the C-score is calculated could be interpreted as on average healthcare students and professionals accepted most of the arguments opposing the protagonists' actions and rejected the majority of arguments in favour. This could suggest that the particular was that healthcare students and professionals analysed or applied their line of reasoning to the mercy killing scenario, could have in fact negatively affected their C-scores. This taken together with the findings presented in chapter five and the presence of a moral segmentation could suggest that the contextual elements surrounding the mercy killing scenario may have been a leading factor the significantly stronger acceptance of deontological aspects and rejection of utilitarian aspects within healthcare student and professional groups and a possible explanation as to why these groups exhibited the lowest C-scores. Research has highlighted the biases which can be present through the utilisation of hypothetical moral dilemmas and so the context of the scenario with the chosen sample population is an area which needs to be acknowledged and addressed by researchers when exploring moral competence.

Chapter 7:

The role of personality and emotional intelligence in vocational choices, moral competence and ethical compositions

7.1 Introduction

Personality, emotional intelligence and moral development each signify primary domains of psychological research. Yet, the empirical understanding of moral development within the framework of personality is sparse (Walker & Henning, 1997; Williams et al., 2006). The Big-Five factor model of personality is one of the most distinguished paradigms (McCrae & Costa, 1985), with research associating extraversion, agreeableness, conscientiousness, openness to experience to moral reasoning (Cawley et al., 2000; Dollinger & LaMartina, 1998; Williams et al., 2006; Varghese & Raj, 2014). This highlights the significance of basic personality traits to moral decision making abilities (Sijtema et al., 2019).

However, fewer pieces of research have attempted to understand the link between moral development and the darker side of personality, with much research into the darker traits display an over focus on the unconstructive tendencies (Kajonius et al., 2015). One popular avenue for exploring the dark traits is through the Dark Triad. This consists of three socially undesirable characteristics: narcissism, psychopathy and Machiavellianism. Narcissism is characterised by an unjustified feeling of grandiosity and an unusual sense of entitlement; psychopathy is defined by a lack of empathy, remorse, impulsivity, deception and manipulation (Hare, 1999; Jones & Paulhus, 2014), and Machiavellian behaviour exhibits itself as having a callous effect, a strategic calculating orientation and manipulative tendencies.

The relationship between the dark traits and moral constructs tends to be negative, and is usually described as being malfunctioned, with individuals high in the dark traits being deemed as displaying a moral deficit or atypical moral cognition (Campbell et al., 2009; Furnham et al., 2013; Jonason, Baughman, Carter, & Parker, 2015; Kajonius et al., 2015; Noser et al., 2015; Sijtema et al., 2019; Williams et al., 2006; Zuo et al., 2016). Most research notes these main effects usually stem from psychopathy and Machiavellianism. Whereas, narcissism tends to be the more contradictory trait., with research condoning it as being brighter in comparison to the other two traits (Furnham et al., 2013; Rauthmann & Kolar, 2012) and is either found to be unrelated (Campbell et al., 2009; Williams et al., 2006) or positively correlated (Zuo et al., 2016) to moral concepts. To the author's knowledge, only one piece of research has explored the relationship between personality and moral competence. Karamavrou et al. (2016) reported a low positive correlation with conscientiousness and moral competence. Interestingly no other personality factor was

correlated to moral competence. Research exploring the affiliations between the three Dark Triad traits and moral competence requires further grounding.

Despite, the inconclusive associations between the dark traits and moral concepts there has been some interesting speculation surrounding personality and emotions in relation to ethical compositions. Within the literature, two different views are presented on the characteristics of utilitarian moral decision making. There's the view that utilitarian responses are more logical, calculated, reflective, more morally appropriate, and associated with higher working memory (Duke & Bègue, 2015; Foot, 1967; Greene et al., 2001; Moore et al., 2008; Nichols & Mallon, 2006; Quinn, 1989; Tassy et al., 2011; Valdesolo & DeSteno, 2006). Then there's the darker connotations linking utilitarian responses with diminished perception of responsibility, explicit hope to gain power, impaired social cognition, higher levels of anger, and testosterone (Duke & Bègue, 2015; Franklin et al., 2009; Montoya et al., 2013; Sussenbach & Moore, 2015; Ugazio et al., 2012). Interestingly, utilitarian inclinations have been associated with subclinical psychopathy and Machiavellianism (Bartels & Pizarro, 2011; Djeriouat & Trémolière, 2014; Gleichgerrcht & Young, 2013; Kahane et al., 2015; Karandikar et al., 2019; Koenigs et al., 2012; Koven, 2011; Patil, 2015; Patil & Silani, 2014; Rozic et al., 2018; Takamatsu & Takai, 2019; Wiech et al., 2013). Reasons for this association are possibly due to lack of emotional reactivity to harmful acts and a weaker sensitivity to moral norms (Gawronski et al., 2017; Pletti et al., 2017).

The role of dark personality traits in decision making have also been connected to vocational choices and career characteristics, as outlined in chapter 2.4.2 (Babiak & Hare; 2006; Boddy, 2011; Hogan & Kaiser, 2005; Hurley, 2005; Jonason et al., 2014; Krick et al., 2016; Spurk et al., 2016; Schneider et al., 2017; Visser et al., 2014). This interest, has also sparked curiosity in relationship between personality and educational choices; more specifically, the self-selection hypothesis and/ or the indoctrination hypothesis, with numerous studies concluding that business and economic students display higher levels of the dark traits compared to students of other disciplines (Bogdanovic & Cingula, 2015; Krick et al., 2016; Vedel & Thomsen, 2017; Wilson & McCarthy, 2011). A further feature of the present study is to test the outlined hypothesis within the student sample and explore these features within practice.

An additional present construct generating attention and is emotional intelligence which can be defined as the ability to comprehend emotions and to utilise emotions efficiently to develop thinking (Mayer et al., 2004). This construct has received a high level of

consideration within healthcare vocations (Brown et al., 2017), namely, its predicative ability in handling stressful encounters (Arora et al., 2010; McCloughen & Foster, 2018), academic success and performance (Chew et al., 2013; Fernandez et al., 2012; Foster et al 2017; Por et al., 2011; Sharon & Grinberg, 2018; Talarico et al., 2013; Wijekoon et al., 2017), increased empathy and communication (Arora et al., 2010; Libbrecht et al., 2014), critical thinking (Fernandez et al., 2012) and resident wellbeing (Lin et al., 2016; Por et al., 2011). However, with regards to vocational choices in both practice and education results appear inconclusive, as outlined in chapter 2.4.2. This variegated relationship also lies true with the area of morality. With some researchers describing the relationship between moral reasoning and emotional intelligence as being distal in nature (Athota et al., 2009). Whilst others contend, that emotional intelligence may govern decision making in certain dilemmas (Fernandez-Berrocal & Extremera, 2005).

The complexity of relationships between these constructs goes further. With additional developments into the notion of a dark intelligence. Though, the general consensus being negative relations between emotional intelligence, psychopathy and Machiavellianism (Megiasa et al., 2018; Miao et al., 2019; Nagler et al., 2014; Vernon et al., 2011; Zhang et al., 2015). However, narcissism again being highlighted as the trait conflict, with either positive or insignificant associations reported with emotional intelligence (Miao et al., 2019; Nagler et al., 2014; Petrides et al., 2011; Zhang et al., 2015). These studies paint a contradictory picture of the connections between the Dark Triad and emotional intelligence and the support for a dark intelligence appears inconclusive.

Acknowledging the role of dark personality traits and emotional intelligence in decision making, it's imperative that the present research examines links with vocational choices. Based on the findings from previous research 2 (Babiak & Hare; 2006; Boddy, 2011; Hogan & Kaiser, 2005; Hurley, 2005; Jonason et al., 2014; Krick et al., 2016; Spurk et al., 2016; Schneider et al., 2017; Visser et al., 2014) it is hypothesised that non-healthcare students (H_{1a}) and professionals (H_{1b}) will display higher levels of the dark traits compared to medical and healthcare vocational fields. This prediction aligns with studies exploring the self-selection hypothesis, whereby business and economics may attract individual with higher levels of psychopathy due to the chances of attaining powerful positions in the future (Wilson & McCarthy, 2011). Significantly less research has focused on vocational choice and emotional intelligence, with most studies focusing on the positive outcomes of an increased emotional intelligence (Fall et al., 2013; Masole & Dyk, 2016; Othman & Muda, 2018; Singh, 2014).

Consequently, the present research adopts a non-directive stance and predicts that there will be a significant difference in emotional intelligence levels between healthcare students (H_{2a}) and professionals (H_{2b}) compared to non-healthcare vocational fields.

Running parallel to the self-section hypothesis is the indoctrination hypothesis, which suggests that immoral behaviours are more widespread among business students due to the academic training received (Elegido, 2009; Krick et al., 2016). Therefore, the present research further predicts that not only will non-healthcare related vocational fields display higher levels of the dark traits when compared to medical and healthcare vocations (H_1), but that levels of the dark traits will increase across educational span in non-healthcare students (H_{3a}) and across over years of practical experience in non-healthcare professionals (H_{3b}).

Aa outlined, a plethora of studies support the negative relationship between both psychopathy and Machiavellianism with both moral constructs and emotional intelligence (Campbell et al., 2009; Furnham et al., 2013; Jonason et al., 2015; Kajonius et al., 2015; Megiasa et al., 2018; Miao et al., 2019; Nagler et al., 2014; Noser et al., 2015; Sijtema et al., 2019; Vernon et al., 2011; Williams et al., 2006; Zhang et al., 2015; Zuo et al., 2016). Therefore the present research predicts that Machiavellianism will have a significant negative correlation with both moral competence (H_{4a}) and total emotional intelligence (H_{4b}) and psychopathy to also have a significant negative correlation with both moral competence (H_{4c}) and total emotional intelligence (H_{4d}). However, considering the contradictory accounts of the role of narcissism in both moral decision making and emotional intelligence (Campbell et al., 2009; Furnham et al., 2013; Miao et al., 2019; Nagler et al., 2014; Petrides et al., 2011; Rauthmann & Kolar, 2012; Williams et al., 2006; Zhang et al., 2015; Zuo et al., 2016) and the proposed distal association between moral constructs and emotional intelligence (Athota et al., 2009), the present research predicts narcissism will have a significant correlation with moral competence (H_{4e}) and total emotional intelligence (H_{4f}), and moral competence will have a significant correlation with total emotional intelligence (H_{4g}), obtaining a non-directive stance.

With regards to ethical compositions, research has documented the link between utilitarian inclinations and subclinical psychopathy and Machiavellianism (Bartels & Pizarro, 2011; Djeriouat & Trémolière, 2014; Gleichgerrcht & Young, 2013; Kahane et al., 2015; Karandikar et al., 2019; Koenigs et al., 2012; Koven, 2011; Patil, 2015; Patil & Silani, 2014; Rozic et al., 2018; Takamatsu & Takai, 2019; Wiech et al., 2013). Due to a lack of emotional

reactivity to harmful acts and a weaker sensitivity to moral norms (Gawronski et al., 2017; Pletti et al., 2017). Therefore, the present study predicts that there will be a positive correlation between utilitarian ethical composition patterns and the darks traits Machiavellianism (H_{5a}), narcissism (H_{5b}), psychopathy (H_{5c}), and a negative relationship with total emotional intelligence (H_{5d}).

The present study aims to overcome inconclusive disparities in the literature by exploring the relationships between three primary domains within psychological research, within both student and practice samples. Given the importance of personality, emotional intelligence and moral development to behaviour and decision-making, this grouping offers a primary area of study. The trajectory relationship between morality, personality and emotional intelligence will be the focal point.

7.2 Aims of the Study

The aim of the study was to;

- To assess individual differences through the exploration of personality and emotional intelligence and the relationship with both vocational choice and vocational span, and to further explore the extent personality pre-dispositions and levels of emotional intelligence influence moral competence and ethical compositional choice in moral dilemma analysis.

7.3 Methods

Participants

Data was collected from a total of 254 students and 270 individuals working in practice. Data from English and Humanities students have been omitted from the analysis due to a small sample size ($n = 7$), leaving a final sample size of 247 students. Of the student sample, a higher portion of the sample were aged between 18 and 24 years (79.76%), with 80 males (32.39%) and 167 females (67.61%). Of the sample 79 (32%) were in their first year of academic study, 55 (22.3%) in their second year, 73 (29.6%) in their third year, and 40 (16.2%) were higher than their third year of study indicative of postgraduate study. A total of 96 (38.87%) students were enrolled on medical and healthcare courses (e.g. medicine, nursing, pharmaceutical sciences), 80 (32.39%) on business related courses (e.g. business studies, accountancy and finance, management), 44 (17.81%) on social science courses (e.g. psychology, sociology), and 27 (10.93%) were enrolled on art and design courses (e.g.

graphic design, drama, music). Of the data, the full student sample completed the Moral Competence Test and 97% ($n = 240$) completed the Dark Triad. For the Genos Emotional Intelligence Inventory 44% ($n = 108$) of the total sample completed the survey, due to this being added at a later date.

Of the practice sample 118 were healthcare professionals working within private healthcare settings, with a total of 46 males (39%) and 72 females (61%), with a mean age of 38.81 ($SD = 10.53$), 40.7% were physicians, surgeons and consultants and 59.3% were nurses, healthcare assistants or sisters. The remainder of the sample consisted of 152 individuals working within various business environments within the UK, with a total of 73 males (48%), 78 females (51.3%) and one not disclosed, with a mean age of 40.38 ($SD = 12.87$). With reference to economic sectors, 19.1% of the sample were employed within secondary production (e.g. manufacturing and assembly), 59.9% from tertiary production (e.g. commercial and public services), 20.4% from quaternary production (e.g. research and development); no data was collected from primary production organisations (e.g. extraction of raw materials). Of the data, the full practice sample completed the Moral Competence Test, 94% ($n = 254$) completed the Dark Triad, and 90% ($n = 243$) completed the Genos Emotional Intelligence Inventory.

Procedure

From the data collected from the student sample 38% of the surveys were paper based, whereby participants were approached on Huddersfield university campus and asked to take part. A research stand was set up in student central surrounded by tables and workstations, allowing participants to return completed surveys in their own time. The remainder of the surveys (62%) were completed through an online platform. For the practice samples (both healthcare and non-healthcare professionals all surveys were distributed and completed through an online platform.

Measures

The Moral Competence Test (MCT; Lind, 2008a)

The MCT applies an experimental and cognitive-structural approach. It presents two moral dilemmas, on a seven point Likert scale ($-3 =$ wrong to $+3 =$ right) participants are asked to evaluate the protagonist's action); showing a commitment to particular opinions about the matters presented. This part of the MCT is not utilised in the calculation of the C-score. In the

present study this was defined as decisional choice, the higher a participants decisional choice displays a level of agreement with the protagonists' actions denoting utilitarianism and a disagreement of action denoting deontological concepts.

For each dilemma, participants are presented with six arguments in favour (utilitarian) and six against the actions (deontological) in the story. They are then asked to indicate whether they accept or reject these arguments on a nine point Likert scale (+4 = completely agree to -4 = completely disagree). This was defined as argument preference; the more participants supported arguments in favour of the protagonist actions is more indicative of utilitarian outlooks and the more participants supported arguments against the protagonists actions was indicative of deontological outlooks. All arguments were selected to represent six moral orientations, as identified by Kohlberg (1984) in a normative hierarchy; one for and one against in the each of the two dilemma stories. Type 1 (avoid physical damage and injury to oneself) and Type 2 (Acquire benefits and rewards) orientations show the pre-conventional category of moral orientation; Type 3 (achieve recognition and avoid disapproval) and Type 4 (respect laws and order of society) show the conventional orientation; and Type 5 (keep contracts) and Type 6 (hold up universal principles of justice, logic and reason) represent the post-conventional orientation.

A further addition was opinion. As the task of the participant is to rate both supportive and counter arguments in regard to their moral quality irrespective of their opinion agreement, a further area of enquiry added by the researcher which was named opinion commitment strength. On a five point Likert scale (-3 = wrong to +3 = right) participants are asked to evaluate the protagonist's action; showing a commitment to particular opinions about the matters presented. This commitment is not included in the calculation of the C-score, but has been used to determine the strength of opinion. The direction of right and wrong in this case is irrelevant, as it is a moral dilemma and there is no definite correct course of action. Thus in order to calculate the opinion commitment strength all minus ratings were transformed to positive numerals, for example -3 = wrong was altered to a +3. That way the strength of opinion commitment can be measured without the directional meanings of right and wrong.

To explore the concept of opinion further the application of ethical compositions were added to the dilemmas presented in the MCT, these were utilitarian and deontological philosophies, to truly assess the extent of opinion, with a directional meaning. The arguments and inferences displaying utilitarian and deontological support for both the vigilantism scenario

and the mercy killing scenario are presented in table 6.1 (reproduced from chapter 6). Moral dilemmas usually capture the conflict between two contrasting philosophical stances, utilitarianism (consequentialist) and deontological normative ethics (duty based ethics). This was assessed in two stages. The first was initial decisional choice, whereby participants are asked if they agree or disagree with the protagonist's actions, an agreement being indicative of utilitarian outlooks and a disagreement with deontological. The second stage was total support; whereby participants are asked the extent they accept or reject arguments in favour of the protagonist's actions (utilitarian support) and arguments against the protagonist's actions (deontological support).

Hedonistic utilitarianism determines the correctness of an action based solely on the amount of pleasure it produces and the amount of pain it reduces, this pleasure can take many forms such as happiness or benefit (Bentham, 1971).

The creed which accepts as the foundation of morals, Utility, or the Greatest-Happiness Principle, holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness. By happiness is intended pleasure, and the absence of pain; by unhappiness, pain, and the privation of pleasure (Mill, 1863, p. 9 – 10)

This is also referred to as the greatest happiness principle which defines moral acts as ones which endorse utility, which is happiness minus pain (Mill, 1879). Arguably, the utilitarian approach could suggest that active voluntary euthanasia is morally permissible as it decreases the level of sadness and despair for all involved parties, such as the patient, family members and friends. In relation to the mercy killing scenario, utilitarianism may determine that the patient who is terminally ill is being kept alive to die slowly which intensifies the level of suffering for all involved parties. Utilitarianism may condone the act if it is at the patient's request and the act relieves unnecessary pain and suffering for the patient. Family and friends of the patient may experience grief and sadness, though this is inevitable as the patient is terminal and incurable and will follow despite the circumstance of death.

Whereas, deontological domains asserts there is a series of moral guidelines, obligations and responsibilities which individuals must uphold in spite of the consequences or circumstantial coincidence (Kant, 2002; Waldmann & Dieterich, 2007). Thus, individuals evaluate whether the aspects of their actions fulfil particular moral duties regardless of whether or not those actions lead to a greater outcome (Broeders et al., 2011).

Table 6.1.*Ethical Composition Argument Assumptions*

Scenario	Variable	A Utilitarian argument	A Deontological argument
Vigilantism	Premise	Actions are judged by their results	One must uphold and follow moral laws and principles
	Assumption 1	Act of stealing is morally wrong but may be context dependent	'Don't steal' is a universal moral law
	Assumption 2	Stealing for the greater good to prevent significant or immediate harm may be permissible	One must uphold and follow moral laws and principles despite consequences of action
	Assumption 3	Company listening in on private conversations is illegal and individuals are being fired	Breaking in and taking the tapes without permission is stealing
	Inference	Act of vigilantism is acceptable	Act of vigilantism in scenario is not acceptable
Mercy Killing	Premise	Minimising pain and maximising pleasure	Constraint against causing harm
	Assumption 1	Pain and suffering minimises pleasure	Causing or committing harm is wrong
	Assumption 2	Cancer (disease) causes pain and suffering	Any form of killing is morally wrong
	Assumption 3	Pain and suffering will not decrease and please will not increase overtime (untreatable). Active voluntary euthanasia will end pain and suffering	Active voluntary euthanasia is ending the life of another
	Inference	Active voluntary euthanasia is acceptable	Inference: Active voluntary euthanasia is not acceptable

The Short Dark Triad (SD3; Jones & Paulhus, 2014)

A 27-item questionnaire which assesses the Dark Triad traits; Machiavellianism, narcissism and psychopathy. On a five point Likert scale participants indicated how much they agreed (1 = strongly disagree to 5= strongly agree) with items such as *'It's not wise to tell your secrets'* (Machiavellianism), *'I like to get acquainted with important people'* (narcissism), and *'I like to get revenge on authorities'* (psychopathy).

The Genos Emotional Intelligence Inventory Concise (Palmer et al., 2009)

A 31-item questionnaire which assess how often individuals exhibit emotionally intelligent workplace behaviours. It is grounded on factor analytic research to present a taxonomic model of emotional intelligence. It renders a general factor (total emotional intelligence) alongside seven implicit elements: 1) Emotional Self-Awareness (ESA), the ability of recognising and understanding individual emotions; 2) Emotional Expression (EE), the ability to sufficiently express individual emotion; 3) Emotional Awareness of Others (EAO), the ability to recognise and understand other people emotions; 4) Emotional Reasoning (ER), being able to use emotional information in decision making tasks; 5) Emotional Self-Management (ESM), the ability to control individual emotion; 6) Emotional Management of Others (EMO, the ability to constructively influence the emotions of others; and 7) Emotional Self-Control (ESC), the skill to control strong emotions efficiently. On a five point Likert scale participants are asked to indicate how often the behaviour is demonstrated (1 = almost never to 5= almost always with items such as *'When I am under stress I become impulsive'* (Emotional Self Control, reversed item), *'I express how I feel at the appropriate time'* (Emotional Expression), and *'I respond to events that frustrate me appropriately'* (Emotional Self-Management). Items selected in the Genos Emotional Intelligence Inventory manage to capture and display a wide range of positive emotions, such as motivation, optimism and engagement, as well as and negative emotions such as, frustration, upset and stress.

Analysis

To investigate whether non healthcare students and professionals display higher levels of the dark traits compared to medical and healthcare vocational fields, a Kruskal-Wallis Test, with a follow up of Mann-Whitney U tests were conducted within the student samples (H_{1a}) and an independent samples t-test was conducted in the practice samples (H_{1b}). To explore

whether different vocational fields display different levels of emotional intelligence, a Kruskal-Wallis Test was conducted within the student samples (H_{2a}) and an independent samples t-test was conducted in the practice samples (H_{2b}). To investigate the indoctrination hypothesis, Kruskal-Wallis Tests were conducted within the student samples (H_{3a}), whereby students were grouped according to their year of study, and within practice samples (H_{3b}), whereby individuals were grouped according to their number of years' experience. To explore the relationship between the dark triad, emotional intelligence, moral competence and ethical compositions (H_{4a} , H_{4b} , H_{4c} , H_{4d} , H_{4e} , H_{4f} , H_{4g} , H_{5a} , H_{5b} , H_{5c} , H_{5d}), a series of Spearman's Rank Order (Rho) correlation coefficients were conducted to examine both the strength and direction between these variables in both student and practice populations. Holms-Bonferroni method (Holm, 1979) was used to adjust the p -value to correct for multiple comparisons where necessary.

7.4 Results

7.4.1 The Dark Triad and Vocational Choices

To investigate the first research hypothesis into whether non-healthcare students (H_{1a}) and professionals (H_{1b}) display higher levels of the dark traits compared to medical and healthcare vocational fields. A Kruskal-Wallis Test was conducted within student samples, to explore levels of Machiavellianism, narcissism and psychopathy across the for different student groups (Gp1, $n = 92$: medical and healthcare, Gp2, $n = 78$ business, Gp3, $n = 44$: social science, Gp4, $n = 26$: art and design).

A statistically significant difference was found in Machiavellianism levels across the four different student groups $H(3, n = 240) = 8.68, p = .03$. Medical and healthcare students recorded a lower median score ($Md = 2.83$), compared to social science ($Md = 3.06$), business students ($Md = 3.11$) and art and design students which recorded the highest ($Md = 3.22$). A follow up analysis of Mann-Whitney U Tests between pairs of groups was conducted. Holm-Bonferroni Method was used to adjust the p -value to correct for multiple comparisons. No significant differences were found in levels of Machiavellianism between; business students and both social science students ($U = 1435, z = -1.51, p = .13$) and art and design students ($U = 982, z = -0.24, p = .81$), social science and art and design students ($U = 476, z = -1.18, p = .24$), and between medical and healthcare and social science students ($U = 895, z = -0.77, p = .44$). A significant difference at the alpha level of $p = .05$ was found in levels of Machiavellianism between medical and healthcare students and both business students ($U =$

2751, $z = -2.62$, $p = .009$, $r = .20$) and art and design students ($U = 895$, $z = -1.96$, $p = .05$, $r = .18$). Though this did not reach significance at the adjusted alpha level of $p = .0083$ and $p = .01$ respectively.

A statistically significant difference was found in Narcissism levels across the four different student groups $H(3, n = 240) = 12.37$, $p = .006$. Medical and healthcare students recorded lower median scores ($Md = 2.56$) compared to social science ($Md = 2.66$), art and design ($Md = 2.83$) and business students which recorded the highest ($Md = 2.88$). A follow up analysis of Mann-Whitney U Tests between pairs of groups was conducted. Holm-Bonferroni Method was used to adjust the p -value to correct for multiple comparisons. No significant differences were found in levels of narcissism between; medical and healthcare and both social science students ($U = 2010$, $z = -0.07$, $p = .95$) and art and design students ($U = 977$, $z = -1.43$, $p = .15$), art and design students and both business students ($U = 959$, $z = -0.41$, $p = .68$) and social science students ($U = 466$, $z = -1.30$, $p = .20$). A significant difference was found at the adjusted alpha level of $p = .0083$ and $p = .01$ respectively between business and medical and healthcare students ($U = 2550$, $z = -3.25$, $p = .001$, $r = .25$) and between business and social science students ($U = 1238$, $z = -2.56$, $p = .01$, $r = .23$), the effect sizes of both were small (Cohen, 1988).

No significant difference was found in psychopathy levels across the four different student groups, $H(3, n = 240) = 4.12$, $p = .25$. Art and design students recorded the highest median scores ($Md = 2.17$), closely followed by business ($Md = 2.11$), with both social science and medical and healthcare students recording a lower median score ($Md = 1.89$).

Business students scored significantly higher on levels of narcissism than medical and healthcare students and social science students. Observation of the median scores, as presented in table 7.1 shows that medical and healthcare students exhibited the lowest scores on all three of the dark traits. Art and design students exhibited highest levels on Machiavellianism and Psychopathy. Business students displayed higher levels of narcissism.

Table 7.1*Descriptive Statistics of the Dark Triad Scores by Field of Study*

Field of Study	<i>n</i>	Machiavellianism			Narcissism			Psychopathy		
		<i>Md</i>	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Medical and Healthcare	92	2.83	2.82	0.72	2.56	2.62	0.63	1.89	1.93	0.62
Business	78	3.11	3.11	0.64	2.88	2.91	0.54	2.11	2.07	0.64
Social Sciences	44	3.06	2.91	0.57	2.66	2.61	0.65	1.89	2.04	0.71
Arts and Design	26	3.22	3.18	0.73	2.83	2.92	0.81	2.17	2.24	0.80

To explore whether non-healthcare professionals display higher levels of the dark traits (H_{1b}), as measured by The Dark Triad (SD3, Jones & Paulhus, 2014), a series of independent samples t-tests were conducted. No statistical differences were found between healthcare professionals ($M = 2.79$, $SD = 0.69$) and non-healthcare professionals in levels of Machiavellianism $t(257) = -.69$, $p = .49$ (two-tailed). No significant differences were found between healthcare professionals ($M = 2.68$, $SD = 0.63$) and non-healthcare professionals ($M = 2.63$, $SD = 0.62$) in levels of narcissism $t(257) = .59$, $p = .56$ (two-tailed). There was a significant difference between healthcare professionals ($M = 1.79$, $SD = 0.57$) and non-healthcare professionals ($M = 1.96$, $SD = 0.67$) in levels of psychopathy; $t(257) = -2.12$, $p = .04$ (two-tailed). The magnitude of differences in the means (mean difference = -0.18 , 95% CI: -0.32 to 0.01) was small (eta squared = $.02$). Individuals working within non-healthcare related businesses displayed slightly higher levels of psychopathy than individuals working within healthcare related fields.

7.4.2 Emotional Intelligence and vocational choices

To explore the role of emotional intelligence, as measured by Genos Emotional Intelligence Inventory (Palmer et al., 2009) in vocational selection within university and practical settings, and to investigate whether there will be a significant difference in emotional intelligence levels between healthcare students (H_{2a}) and professionals (H_{2b}) compared to non-healthcare vocational fields.

A Kruskal-Wallis Test was conducted within student samples (H_{2a}), to explore levels of emotional intelligence and subscales across the four different student groups (Gp1, $n = 46$: medical and healthcare, Gp2, $n = 36$: business, Gp3, $n = 16$: social science, Gp4, $n = 10$: art and design). There was no statistically significant difference at the $p < .05$ level total score of emotional intelligence; $H(3, n = 108) = 1.64$, $p = .65$. Nor were there any significant differences

between the student groups on either of the subscales; emotional self-awareness: $H(3, n = 108) = 1.32, p = .73$; emotional expression: $H(3, n = 108) = 0.73, p = .87$; emotional awareness of others: $H(3, n = 108) = 2.44, p = .49$; emotional reasoning: $H(3, n = 108) = 1.09, p = .78$; emotional self-management: $H(3, n = 108) = 2.75, p = .43$; emotional management of others: $H(3, n = 108) = 2.36, p = .50$; and emotional self-control: $H(3, n = 108) = 4.49, p = .21$.

Inspection of the median scores as presented in table 7.2 shows that medical and healthcare students scored higher than students on levels of total emotional intelligence, though these differences were not great and were not significant.

Table 7.2*Descriptive Statistics of Emotional Intelligence by Field of Study*

Variable	Field of Study	<i>n</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Emotional Self Awareness	Medical and Healthcare	46	16.00	15.30	2.56
	Business and Law	36	14.50	14.72	2.61
	Social Sciences	16	15.50	14.81	2.51
	Arts and Design	10	15.00	15.20	2.44
Emotional Expression	Medical and Healthcare	46	17.00	17.33	3.15
	Business and Law	36	17.00	17.08	3.08
	Social Sciences	16	17.00	17.00	4.07
	Arts and Design	10	16.50	16.30	3.59
Emotional Awareness of others	Medical and Healthcare	46	16.00	15.87	2.35
	Business and Law	36	16.50	15.94	2.59
	Social Sciences	16	16.00	15.63	2.85
	Arts and Design	10	15.00	14.80	2.20
Emotional Reasoning	Medical and Healthcare	46	19.00	18.46	3.30
	Business and Law	36	19.00	18.64	3.51
	Social Sciences	16	18.00	17.94	2.98
	Arts and Design	10	18.00	17.80	2.70
Emotional Self-Management	Medical and Healthcare	46	18.00	18.33	2.35
	Business and Law	36	18.00	17.44	3.47
	Social Sciences	16	18.00	17.88	3.42
	Arts and Design	10	17.00	17.20	1.87
Emotional Management of others	Medical and Healthcare	46	15.00	15.07	2.42
	Business and Law	36	15.00	15.19	2.88
	Social Sciences	16	16.00	15.13	2.92
	Arts and Design	10	14.00	14.00	2.11
Emotional Self-control	Medical and Healthcare	46	15.00	15.33	2.21
	Business and Law	36	16.00	15.58	2.55
	Social Sciences	16	15.00	14.00	2.85
	Arts and Design	10	15.00	15.00	1.15
Total Emotional Intelligence score	Medical and Healthcare	46	117.50	115.67	12.80
	Business and Law	36	113.50	114.61	14.31
	Social Sciences	16	115.50	112.38	17.02
	Arts and Design	10	108.00	110.30	10.14

To explore if any differences occurred between profession type and levels of emotional intelligence (H_{2b}), a series of independent t-tests were conducted, means and standard deviations are presented in table 7.3. There were no significant differences in the total emotional intelligence scores between healthcare professionals ($M = 120.64$, $SD = 14.33$) and non-healthcare professionals ($M = 121.12$, $SD = 14.73$); $t(242) = -0.26$, $p = <.05$ (two tailed).

Nor were there any significant differences on any of the emotional intelligence subscales between the groups; emotional self-awareness: $t(242) = -1.35, p = <.05$ (two tailed); emotional expression: $t(242) = 0.44, p = <.05$ (two tailed); emotional awareness of others: $t(242) = -0.27, p = <.05$ (two tailed); emotional reasoning: $t(242) = -1.54, p = <.05$ (two tailed); emotional self-management: $t(242) = 0.12, p = <.05$ (two tailed); emotional management of others: $t(242) = 0.64, p = <.05$ (two tailed); and emotional self-control: $t(242) = 0.46, p = <.05$ (two tailed).

Table 7.3

Descriptive Statistics of Emotional Intelligence by Profession

Variable	Healthcare			Non-Healthcare		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Emotional Self Awareness	107	15.78	2.32	137	16.18	2.26
Emotional Expression	107	18.89	3.18	137	18.70	3.34
Emotional Awareness of others	107	16.34	2.17	137	16.42	2.37
Emotional Reasoning	107	19.53	2.89	137	20.14	3.16
Emotional Self-Management	107	18.22	3.09	137	18.18	3.36
Emotional Management of others	107	16.24	2.41	137	16.04	2.55
Emotional Self-control	107	15.64	2.71	137	15.48	2.54
Total Emotional Intelligence score	107	120.64	14.33	137	121.12	14.73

7.4.3 The Indoctrination hypothesis and The Dark Triad

To explore the dynamics and direction of personality traits through the exploration of the indoctrination hypothesis in vocational selection within university and practice settings and to investigate whether levels of the dark traits increase across educational span in non-healthcare students (H_{3a}) and across over years of practical experience in non-healthcare professionals (H_{3b}).

A series of Kruskal-Wallis Tests were conducted on each student group (H_{3a}) on levels of Machiavellianism, narcissism and psychopathy across the educational span.

No significant differences were found across the four different year groups within any of the student samples in levels of Machiavellianism, narcissism and psychopathy across the

educational span. Results were as follows, medical and healthcare student sample (Gp1, $n = 28$: 1st year, Gp2, $n = 22$: 2nd year, Gp3, $n = 25$: 3rd year, Grp4, $n = 17$: 4th year or above), Machiavellianism, $H(3, n = 92) = 3.16, p = .37$; narcissism, $H(3, n = 92) = 3.07, p = .38$; and psychopathy, $H(3, n = 92) = 2.92, p = .40$. Business student sample (Gp1, $n = 23$: 1st year, Gp2, $n = 17$: 2nd year, Gp3, $n = 26$: 3rd year, Grp4, $n = 12$: 4th year or above), Machiavellianism, $H(3, n = 78) = 1.98, p = .58$; narcissism, $H(3, n = 78) = 1.73, p = .63$ and psychopathy, $H(3, n = 78) = 3.46, p = .33$. Social science student sample (Gp1, $n = 21$: 1st year, Gp2, $n = 9$: 2nd year, Gp3, $n = 12$: 3rd year, Grp4, $n = 2$: 4th year or above), Machiavellianism, $H(3, n = 44) = 2.52, p = .47$; narcissism, $H(3, n = 44) = 2.35, p = .50$ and psychopathy, $H(3, n = 44) = 1.11, p = .77$. Art and design student sample (Gp1, $n = 5$: 1st year, Gp2, $n = 6$: 2nd year, Gp3, $n = 7$: 3rd year, Grp4, $n = 8$: 4th year or above), Machiavellianism, $H(3, n = 26) = 1.76, p = .62$; narcissism, $H(3, n = 26) = 1.58, p = .66$ and psychopathy, $H(3, n = 26) = 3.49, p = .32$. Descriptive statistics are presented in table 7.4.

Table 7.4*Descriptive Statistics of The Dark Triad by Year of Study*

Variable/Sample	Year of study											
	1st Year			2nd Year			3rd Year			4th+ Year		
	<i>Md</i>	<i>M</i>	<i>SD</i>									
<i>Medical</i>	<i>(n = 28)</i>			<i>(n = 22)</i>			<i>(n = 25)</i>			<i>(n = 17)</i>		
Machiavellianism	3.11	2.30	0.77	2.67	2.73	0.59	2.67	2.79	0.81	2.67	2.71	0.67
Narcissism	2.50	2.48	0.58	2.50	2.59	0.72	2.67	2.70	0.60	2.89	2.79	0.64
Psychopathy	1.89	2.03	0.52	1.83	1.83	0.65	1.67	1.88	0.70	1.89	1.96	0.67
<i>Business</i>	<i>(n = 23)</i>			<i>(n = 17)</i>			<i>(n = 26)</i>			<i>(n = 12)</i>		
Machiavellianism	3.11	3.05	0.52	2.89	3.00	0.75	3.17	3.27	0.68	3.11	3.03	0.57
Narcissism	2.89	2.82	0.47	2.89	2.93	0.62	2.89	2.92	0.55	3.11	3.06	0.52
Psychopathy	1.78	2.06	0.68	2.22	2.05	0.52	2.11	2.21	0.68	1.56	1.79	0.63
<i>Social</i>	<i>(n = 21)</i>			<i>(n = 9)</i>			<i>(n = 12)</i>			<i>(n = 2)</i>		
Machiavellianism	3.11	2.88	0.59	2.89	2.75	0.55	3.22	3.13	0.48	2.72	2.72	1.18
Narcissism	2.67	2.65	0.56	3.00	2.74	0.56	2.28	2.40	0.88	2.89	2.61	0.65
Psychopathy	2.11	2.10	0.79	2.22	2.05	0.63	1.83	2.00	0.71	1.56	1.56	0.47
<i>Art</i>	<i>(n = 5)</i>			<i>(n = 6)</i>			<i>(n = 7)</i>			<i>(n = 8)</i>		
Machiavellianism	3.89	3.33	1.09	3.11	3.30	0.71	3.22	3.33	0.55	3.00	2.85	0.65
Narcissism	2.89	3.29	1.15	2.94	3.02	0.74	2.44	2.63	0.64	3.11	2.86	0.81
Psychopathy	3.00	2.89	1.26	2.39	2.28	0.75	1.89	2.06	0.69	1.83	1.96	0.40

To explore if any differences occurred between years of practical experience (H_{3b}) and levels of the dark traits, as measured by the Dark Triad (SD3, Jones & Paulhus, 2014), a series of Kruskal-Wallis Tests were conducted.

No significant differences were found across the six different year groups in both healthcare and non-healthcare samples in levels of Machiavellianism, narcissism and psychopathy across the practical experience span. Results were as follows, healthcare sample (Gp1, $n = 9$: less than 1 year, Gp2, $n = 38$: 1-2 years, Gp3, $n = 31$: 3-5 years, Gp4, $n = 14$: 6-10 years, Gp5, $n = 11$: 11-15 years, Gp6, $n = 8$: 16 years or more), Machiavellianism, $H(5, n = 111) = 2.93, p = .71$; narcissism, $H(5, n = 111) = 7.62, p = .18$; and psychopathy, $H(5, n = 111) = 3.71, p = .59$. Non-healthcare sample (Gp1, $n = 11$: less than 1 year, Gp2, $n = 39$: 1-2 years, Gp3, $n = 48$: 3-5 years, Gp4, $n = 18$: 6-10 years, Gp5, $n = 16$: 11-15 years, Gp6, $n = 11$: 16 years or more), Machiavellianism, $H(5, n = 143) = 4.08, p = .54$; narcissism, $H(5, n = 143) = 2.66, p = .75$; and psychopathy, $H(5, n = 143) = 10.70, p = .06$. Descriptive statistics are presented in table 7.5.

Table 7.5

Descriptive Statistics of The Dark Triad by Years of Experience

Sample/Years of Exp.	<i>n</i>	Variable								
		Machiavellianism			Narcissism			Psychopathy		
		<i>Md</i>	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>M</i>	<i>SD</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Healthcare										
<1	9	2.56	2.43	0.78	2.44	2.32	0.49	1.44	1.56	0.50
1-2	38	2.83	2.88	0.61	2.83	2.69	0.56	1.67	1.77	0.56
3-5	31	2.78	2.78	0.74	2.44	2.64	0.71	1.67	1.85	0.64
6-10	14	2.89	2.96	0.64	2.72	2.71	0.64	1.83	1.84	0.57
11-15	11	2.78	2.64	0.74	2.89	2.73	0.78	1.56	1.68	0.57
≥16	8	2.94	2.72	0.78	3.00	3.06	0.47	1.83	1.93	0.38
Non-healthcare										
<1	11	2.89	2.71	0.67	2.56	2.48	0.45	1.89	2.01	0.66
1-2	39	3.00	2.97	0.81	2.67	2.77	0.69	2.00	2.14	0.86
3-5	48	2.89	2.88	0.72	2.67	2.58	0.61	1.89	1.91	0.54
6-10	18	2.72	2.64	0.55	2.56	2.53	0.47	1.44	1.52	0.53
11-15	16	2.56	2.65	0.44	2.56	2.52	0.57	2.00	1.97	0.53
≥16	11	2.76	2.82	0.39	2.67	2.65	0.63	1.78	2.01	0.63

7.4.4 The relationship between moral competence, The Dark Triad and emotional intelligence

To explore the relationship between The Dark Triad, levels of emotional intelligence and moral competence a Spearman's Rank Order (Rho) correlation coefficients was conducted with both the student sample and the practice sample. Holm Holm-Bonferroni Method was used to adjust the p -value to correct for multiple comparisons.

It was predicted that Machiavellianism will have a significant negative correlation with both moral competence (H_{4a}) and total emotional intelligence (H_{4b}). No significant negative correlation was found between Machiavellianism and moral competence in both student ($r = .05, p = .45$) and practice samples ($r = .06, p = .32$).

Within student samples, Machiavellianism held small negative relationships with emotional expression ($r = -.26, p = .006$), though this did not reach statistical significance at the adjusted alpha levels of $p = .0045$. All further correlations were minimal, total emotional intelligence ($r = -.07, p = .45$), emotional self-awareness ($r = -.06, p = .61$), emotional awareness of others ($r = .01, p = .89$), emotional reasoning ($r = .16, p = .11$), emotional self-management ($r = -.10, p = .29$), emotional management of others ($r = -.05, p = .61$), and emotional self-control ($r = -.004, p = .97$). Whereas, within practice samples Machiavellianism held small negative relationships with total emotional intelligence ($r = -.17, p = .008$) and with the majority of the subscales for emotional intelligence: emotional self-awareness ($r = -.16, p = .014$); emotional expression ($r = -.14, p = .029$); emotional awareness of others ($r = -.13, p = .04$); emotional self-management ($r = -.13, p = .04$); and emotional self-control ($r = -.13, p = .047$), though these did not reach statistical significance at the adjusted alpha levels. Emotional reasoning ($r = -.04, p = .57$) and emotional management of others ($r = -.09, p = .18$) had minimal relations with Machiavellianism.

Psychopathy was also predicted to have a significant negative correlation with both moral competence (H_{4c}) and total emotional intelligence (H_{4d}). No significant negative correlation was found between psychopathy and moral competence in both student ($r = -.05, p = .44$) and practice samples ($r = .04, p = .46$).

Within student samples psychopathy, held small negative correlations with total emotional intelligence ($r = -.23, p = .016$) and all subscales though these did not reach statistical significance; emotional expression ($r = -.25, p = .009$), emotional awareness of others ($r = -.22, p = .024$), emotional self-awareness ($r = -.14, p = .16$), emotional reasoning ($r = -.07, p =$

.49), emotional self-management ($r = -.13, p = .19$), emotional management of others ($r = -.13, p = .18$), and emotional self-control ($r = -.15, p = .12$).

Whereas, within practice samples, psychopathy held significant small negative relationships with total emotional intelligence ($r = -.28, p < .001$), and the majority of the subscales for emotional intelligence: emotional self-awareness ($r = -.27, p < .001$); emotional expression ($r = -.23, p < .001$); emotional awareness of others ($r = -.25, p < .001$); emotional self-management ($r = -.19, p = .003$); emotional self-control ($r = -.29, p < .001$) and emotional management of others ($r = -.18, p = .006$). Emotional reasoning ($r = -.12, p = .05$) also held small negative relationships but this was not statistically significant at the adjusted alpha levels.

Narcissism was predicted to have a significant correlation with moral competence (H_{4e}) and total emotional intelligence (H_{4f}). No significant correlation was found between narcissism and moral competence in both the student sample ($r = .04, p = .53$) and practice sample ($r = -.03, p = .69$). Narcissism held small positive correlations with emotional reasoning ($r = .2, p = .03$) and emotional management of others ($r = .26, p = .007$) within student samples, though these did not reach statistical significance. All further correlations were weak, total emotional intelligence ($r = .14, p = .15$), emotional self-awareness ($r = .02, p = .81$), emotional expression ($r = .05, p = .61$), emotional awareness of others ($r = .10, p = .29$), emotional self-management ($r = -.05, p = .58$), and emotional self-control ($r = .05, p = .62$). Minimal correlations were also reported within the practice samples; total emotional intelligence ($r = .004, p = .96$), emotional self-awareness ($r = .11, p = .08$), emotional expression ($r = .02, p = .71$), emotional awareness of others ($r = -.05, p = .45$), emotional reasoning ($r = .07, p = .27$), emotional self-management ($r = .06, p = .32$), emotional management of others ($r = .08, p = .21$), and emotional self-control ($r = -.05, p = .48$).

Moral competence was predicted to have a significant correlation with total emotional intelligence (H_{4g}). Small significant positive correlations were found at alpha level of $p = .05$ between moral competence and emotional self-awareness ($r = .24, p = .01$) and emotional self-management ($r = .21, p = .03$) within student samples, though these did not reach statistical significance at the adjusted alpha levels of $p = .0045$ and $p = .005$ respectively. No further significant relations were found between moral competence (C-score) and total emotional intelligence ($r = .13, p = .16$), emotional expression ($r = .09, p = .37$), emotional awareness of others ($r = -.07, p = .48$), emotional reasoning ($r = .09, p = .35$), emotional

management of others ($r = .03, p = .79$), and emotional self-control ($r = .10, p = .33$). Within the practice sample no significant correlations were found between moral competence (C-score) and total emotional intelligence ($r = .04, p = .57$), emotional self-awareness ($r = .01, p = .90$), emotional expression ($r = .004, p = .96$), emotional awareness of others ($r = .04, p = .49$), emotional reasoning ($r = .02, p = .73$), emotional self-management ($r = -.09, p = .18$), emotional management of others ($r = -.09, p = .15$), and emotional self-control ($r = -.10, p = .13$).

7.4.5 The Dark Triad, emotional intelligence and ethical compositions

To explore the relationship between The Dark Triad and ethical compositions in the form of utilitarian and deontological philosophical stances, a Spearman's Rank Order (Rho) correlation coefficients was conducted in both student samples and practice samples. Holm-Bonferroni Method was used to adjust the p -value to correct for multiple comparisons. It was predicted that there will be a positive correlation between utilitarian ethical composition patterns and the darks traits Machiavellianism (H_{5a}), narcissism (H_{5b}), psychopathy (H_{5c}), and a negative relationship with total emotional intelligence (H_{5d}).

Total Utilitarian support held significant positive correlations with all three of the dark traits in both student and practice samples. Machiavellianism, student ($r = .34, p < .001$), practice ($r = .28, p < .001$); narcissism, student ($r = .19, p = .004$), practice ($r = .19, p = .002$); and psychopathy, student ($r = .23, p = .0045$), practice ($r = .32, p < .001$). Whereas, total deontological support held negative correlations with all three of the dark traits in both student and practice samples. Machiavellianism, student ($r = -.12, p = .07$), practice ($r = -.06, p = .31$); narcissism, student ($r = -.09, p = .19$), practice ($r = -.05, p = .43$); and psychopathy, student ($r = -.14, p = .036$), practice ($r = -.23, p = .000172$). However only the latter output within the practice sample was found to be statistically significant.

Utilitarian support held a significant negative correlation with emotional management of others within the practice sample ($r = -.20, p = .002$), but not in the student sample ($r = -.13, p = .19$). Significant negative relationships were found at the alpha level of .05 for emotional expression in both student ($r = -.23, p < .001$) and practice samples ($r = -.13, p = .04$). As well as emotional self-control ($r = -.11, p = .01$), emotional self-management ($r = -.16, p = .02$), emotional self-awareness ($r = -.13, p = .04$), and total emotional intelligence ($r = -.16, p = .01$) in practice samples only. Though neither of these were significant at the adjusted alpha level. Within student samples only, emotional self-control ($r = -.14, p = .14$), emotional

management of others ($r = .13, p = .19$), emotional self-management ($r = -.07, p = .46$), and emotional self-awareness ($r = .04, p = .66$) held minimal relations with utilitarian support. As did, emotional reasoning (student: $r = -.01, p = .091$; practice: $r = -.06, p = .35$) and emotional awareness of others (student: $r = -.15, p = .13$; practice: $r = -.07, p = .26$) in both samples.

Deontological support held a significant positive correlation at the alpha level of .05 with emotional management of other in the practice sample only ($r = .17, p = .009$), though this did not reach significance at the adjusted alpha level, this was not reflective in the student sample ($r = .01, p = .89$). The remainder of the emotional intelligence subscales held weak and minimal relations with deontological support in both samples: total emotional intelligence (student: $r = .02, p = .85$; practice: $r = .06, p = .35$), emotional self-awareness (student: $r = -.15, p = .12$; practice: $r = .01, p = .88$), emotional expression (student: $r = .02, p = .86$; practice: $r = .05, p = .40$), emotional awareness of others (student: $r = .13, p = .20$; practice: $r = .03, p = .66$), emotional reasoning (student: $r = .02, p = .86$; practice: $r = .01, p = .88$), emotional self-management (student: $r = .08, p = .44$; practice: $r = .02, p = .78$), and emotional self-control (student: $r = .08, p = .41$; practice: $r = .08, p = .19$).

7.5 Key findings and partial discussion

The aim of the study was to;

- To assess individual differences through the exploration of personality and emotional intelligence and the relationship with both vocational choice and vocational span, and to further explore the extent personality pre-dispositions and levels of emotional intelligence influence moral competence and ethical compositional choice in moral dilemma analysis.

7.5.1 Key findings

- Students enrolled on business vocational courses significantly displayed significantly higher levels of narcissism compared to students on medical and healthcare and social science vocational courses. Business and art and design students recorded higher levels of Machiavellianism and psychopathy compared to medical and healthcare and social science students, though this did not reach significance.
- Levels of the dark traits did not increase throughout students educational span, which offers partial support for the self-selection hypothesis, possibly refuting the indoctrination hypothesis.

- Individuals working within non-healthcare vocational fields displayed significantly higher levels of psychopathy compared to individuals working within healthcare vocational fields, though this seemed to decrease in individuals with six to ten years of experience, possibly due to career development, though this did not reach statistical significance.
- All vocational field displayed similar levels of emotional intelligence as no significant differences were found with regards to total emotional intelligence and the emotional intelligence subscales.
- Moral competence (C-score) only held positive correlations with two emotional intelligence subscales emotional self-awareness and emotional self-management within student sample only, though this did not reach statistical significance at the adjusted alpha level.
- Moral competence held minimal relations with any of the dark traits, within both samples, which offers partial support for the distal relationship between these concepts, questioning the stability of moral competence.
- Predominantly within practice samples, Machiavellianism and psychopathy held negative correlations with total emotional intelligence and the majority of the emotional intelligence subscales which offers little support to notion of a dark intelligence. Whereas, narcissism was found to hold positive correlations with emotional reasoning and the emotional management of others within student samples and minimal associations in practice samples, denoting the contradictory nature of narcissism.
- With regards to ethical compositions Machiavellianism, narcissism and psychopathy held positive correlations with total utilitarian support and negative correlations with deontological support, in particular psychopathy within practice samples. Emotional expression, emotional self-control, emotional self-awareness, emotional self-management and emotional management of others were negatively associated with utilitarian prospects. Whereas, emotional management of others held positive relations with deontological outlooks. Overall, this offers partial support for the notion that utilitarian decisions are less emotionally arbitrated.

7.5.2 Partial discussion

Personality, emotional intelligence and moral development each represent fundamental areas within psychological research, behaviour and decision making. The present study aimed to capture associations between these three primary domains by exploring individual differences in relation to educational and vocational choice, with further investigations into personality over a time span, with an additional exploration into the relationships of moral constructs with personality and emotional intelligence from educational and student populations to professional practice.

The link between personality and vocational and education choice is gaining momentum in the literature, with an increasing focus on the darker traits of personality. The first research hypothesis predicted that non-healthcare students (H_{1a}) and professionals (H_{1b}) will display higher levels of the dark traits compared to medical and healthcare vocational fields. Findings within the student samples revealed that business students displayed higher levels of Machiavellianism and narcissism compared to medical and healthcare students, with medical and healthcare students exhibiting the lowest levels of the dark traits followed by social science students (Bogdanovic & Cingula, 2015; Krick et al., 2016; Turnipseed & Cohen, 2015; Vedel & Thomsen, 2017). Both of these traits have been linked to a range of counterproductive work behaviours and unethical decision making within practice (Jonason et al., 2012; Jonason et al., 2014). Thus it is plausible that the present study offers partial support the self-selection hypothesis which asserts that business and related courses may attract individuals with higher levels of the dark traits, possibly due to the chances of gaining powerful positions in the future (Wilson & McCarthy, 2011; Krick et al., 2016). Though, support for the self-selection hypothesis is restricted, as it misses the vital construct of psychopathy, as business students in the present study did not significantly exhibit higher levels of psychopathy when compared to students of other disciplines. Nevertheless, these results tend to support the self-selection hypothesis over the indoctrination hypothesis, which asserts suggests that immoral behaviours are more widespread among business students due to the academic training received (Elegido, 2009), as non-significant increases or decreases in the dark traits were detected over educational span. Offering no support for the prediction that levels of the dark traits will increase across educational span in non-healthcare students (H_{3a}).

In relation to practical settings, individuals working within non-healthcare vocational fields displayed significantly higher levels of psychopathy compared to individuals working within healthcare vocational fields. Taken at face value, this would support that claim that within business and management there are a significantly higher level of psychopaths than in other occupational domains (Babiak & Hare; 2006; Boddy, 2011). Offering partial support for the claim that non-healthcare professionals (H_{1b}) will display higher levels of the dark traits compared to medical and healthcare vocational fields. However, despite reaching statistical significance in differences, the mean scores were not so high.

With regards to emotional intelligence and vocational choices, all vocational fields displayed similar levels of emotional intelligence as no significant differences were found with regards to total emotional intelligence and the emotional intelligence subscales. Therefore, no support was found for the prediction that there will be a significant difference in emotional intelligence levels between healthcare students (H_{2a}) and professionals (H_{2b}) compared to non-healthcare vocational fields. A comparison with the results reported by Palmer et al. (2009), it can be assumed that students of various disciplines, healthcare and non-healthcare professionals in the present study displayed adequate levels of emotional intelligence. The fact that no differences were detected between each cohort, in educational or practical settings, suggests that individuals from a wide range of vocations display similar levels of discourse and that that emotional intelligence is not just a vital factor within healthcare domains but within most organisations. This contends the view that nursing or other healthcare students exhibit higher levels of emotional intelligence (Stiglic et al., 2018) compared to business related disciplines.

When exploring the trajectory relationship between moral concepts, personality and emotional intelligence, Machiavellianism and psychopathy held negative correlations with total emotional intelligence and the majority of the emotional intelligence subscales which offers little support to notion of a dark intelligence, supporting the proposed research hypotheses (H_{4b} ; H_{4d}) Whereas, narcissism was found to hold positive correlations with emotional reasoning and the emotional management of others within student samples and minimal associations in practice samples, denoting the contradictory nature of narcissism (H_{4f}). As, the results within the student sample coincides with research reporting a positive relationship between emotional intelligence and narcissism (Nagler et al., 2014; Petrides et al., 201; Zhang et al., 2015), namely, emotional reasoning and the emotional management of others.

Moral competence (C-score) was found to hold positive correlations with emotional self-awareness and emotional self-management, within the student population only, though this did not reach significance at the adjusted alpha level. This failed to support the research hypothesis which predicted that moral competence will have a significant correlation with total emotional intelligence (H_{4g}). This relationship offers partial support for the distal relationship (Athota et al., 2009) as only two positive associations were found between emotional intelligence and moral competence and within the smaller sample size comprised of students. According to this outlook, personality may be a mediator, as Athota et al. (2009) found emotional intelligence to be a significant predictor of Extraversion, Openness, Neuroticism, Agreeableness, which consecutively were significant predictors of moral reasoning; however no such pathway was identified in the present study.

The dark triad held vacant insignificant correlations with moral competence, which fails to support previous studies into moral development and values (Campbell et al., 2009; Furnham et al., 2013; Jonason, Baughman, et al., 2015; Williams et al., 2006; Zuo et al., 2016) and the proposed research hypotheses (H_{4a} ; H_{4c} ; H_{4e}). The absence of a relationship does support findings proposed by Karamavrou et al. (2016). It could be suggested that moral competence is not a stable construct, but rather a learnt ability highly dependent on various contextual factors. Due to this links to high level personality traits and emotional intelligence may become tenuous. Further research should explore in greater detail why this learnt ability was weakly related to individual personality and emotional intelligence, by further exploring the notion of a distal relationship.

However, findings were much more prominent in the exploration of ethical compositions. Support was found for the prediction that there will be a positive correlation between utilitarian ethical composition patterns and the darks traits Machiavellianism (H_{5a}), narcissism (H_{5b}), psychopathy (H_{5c}) and a negative relationship with total emotional intelligence (H_{5d}). Machiavellianism, narcissism and psychopathy held significant positive correlations with total utilitarian support and negative correlations with deontological support, though psychopathy was the only significant relation for deontological support. For emotional intelligence, emotional expression, emotional self-control, emotional self-awareness, emotional self-management, emotional management of others held negative correlations with overall total utilitarian commitment. Thus, the present study supports previous work which link utilitarian inferences to a reduced aversion to carrying out harmful acts, a lack of empathetic concern, subclinical psychopathy and Machiavellianism (Aktas et

al., 2017; Daniel M Bartels & Pizarro, 2011; Gleichgerrcht & Young, 2013; Kahane et al., 2015; Koenigs et al., 2012; Patil, 2015b; Wiech et al., 2013).

Chapter 8:

An investigation into factors of moral distress within healthcare environments and whether these can be attributed to moral competence, ethical compositions and individual differences

8.1 Introduction

Moral aspects are an integral part of the health care sector. Nursing is essentially a moral vocation, compelled by the desire to help and protect patients from harm and suffering. However, when these ambitions are obstructed in some way healthcare professionals may endure moral distress (Corley, 2002). Nurses have been reported to experience higher levels of moral distress than physicians, which is suggested to increase through the number of years of experience; supporting a crescendo effect (Epstein & Hamric, 2009; Hamric & Blackhall, 2007; Hamric et al., 2012).

Despite being a widespread and highly acknowledged phenomenon, there is a substantial volume of varied opinion about the agreed definition of moral distress within the literature, as highlighted in chapter 2.5.1. For the purposes of this study, moral distress rests on the assumption that individuals are aware of the right course of action mixed with a form of restraint; which could be either internal or external (Epstein & Hamric, 2009; Johnstone & Hutchinson; 2015; McCarthy & Deady, 2008; Nathaniel, 2002; Webster & Baylis, 2002; Woods et al., 2015). Though, this perspective is not entirely tangible, it does manage to offer a more patent direction in an attempt to understand the spectrum of experience when exploring moral distress.

Sources of moral distress can be ascribed to many unpredictable and changing factors. The most documented sources are clinical situations involving unnecessary, unjustified or futile care, the gathering of insufficient informed consent, the depersonalisation of care, working with caregivers who are not as competent as care requires, and conflicting duties (Akpınar et al., 2009; Atabay et al., 2015; Burston & Tuckett, 2012; Corley et al., 2011; Eizenberg et al., 2009; Elpern et al., 2005; Englehardt, 1985; Hamric et al., 2006; Hamric & Blackhall, 2010; Karagozoglou et al., 2015; Ohnishi et al 2003; Range & Rotherham, 2010; Silen et al., 2011;; Shoorideh et al., 2012; Trotohaud et al., 2015; Varcoe et al., 2012; Wiegand & Funk, 2012; Wojtowicz et al., 2014; Woods et al., 2015; Zuzelo, 2007).

Primary external factors such as organisational constraints, medical hegemony, interdisciplinary conflicts, and hierarchal decision making are also potent sources of moral distress (Atabay et al., 2015; Austin et al., 2005; Deady & McCarthy, 2010; Elpern et al., 2005; Hamric et al., 2006; Jameton, 1984; Manojlovich, 2007; Mrayyan & Hamaideh, 2009; Repenshek, 2009; Shannon, 1997; Shoorideh et al., 2012; Wojtowicz et al., 2014; Woods et

al., 201; Zuzelo, 2007). As well as related extrinsic factors, such as poor workplace communication, lack of resources, lack of sufficient time, staff shortages, lack of provider continuity, and delivering less than optimal care due to management pressures to reduce costs (Atabay et al., 2015; Corley, 2002; Eizenberg et al., 2009; Forde & Aasland, 2008; Humphrey, 1988; Jameton, 1984; Karagozoglu et al., 2015; Mrayyan & Hamaideh, 2009; Ohnishi et al., 2010; Pauly et al., 2009; Shoorideh, et al., 2012; Silen et al., 2011; Trotochaud et al., 2015; Wolfgang, 1988; Woods et al., 2015; Zuzelo, 2007)

The medial culture itself may create moral conflicts and moral distress (Aasland & Forde, 2005). More specifically, ethical climate has been found to be a predictor of moral distress frequency and intensity (Corley et al., 2005; Hamric et al., 2012; Pauly et al., 2009; Lutzen et al., 2010; Silen et al., 2011; Oh & Gastmans, 2015).

Research has also cast attention onto the internal origins of moral distress. These refer to personal characteristics, such as the lack of assertiveness, which may hinder an individual's ability to speak up in challenging situations (Hamric et al., 2006). They consist of, skills, knowledge, attitude, moral awareness and abilities to make whole judgements and take relevant action. Moral distress has been associated with lower levels of psychological empowerment, moral integrity, lack of knowledge and autonomy, and both low and high levels of moral sensitivity (Kelly, 1998; Corley, 2002; Ham, 2004; Hamric et al., 2006; Laabs, 2011, Lamiani et al., 2017). Yet, the moral competency of healthcare professionals has been largely ignored.

Of further significance within healthcare sectors, is the role of Emotional intelligence, as being able to read and manage emotions is a crucial skill within practical settings (Por et al., 2011), a skill which could relate to the occurrence of moral distress. Research has documented the link between emotional intelligence and stress (Slaski & Cartwright, 2003; Miklolaiczak et al, 2007; Zhang et al., 2016). Infact, there are an increasing number of studies which suggest that emotional intelligence influences psychological distress with the work place (Dulewicz et al., 2003; 2005; Besharat, 2007; Karim, 2009; Martins et al., 2010).

Situations that elicit experiences of moral distress may vary by profession and context. There is a shortage of research into moral distress among nurses and other healthcare professionals in the UK; while there are numerous studies emanating from the USA (Morley, 2016) and other nations.

The general consensus is that nurses have been reported to experience higher levels of moral distress than physicians, which is suggested to increase through the number of years of experience; supporting a crescendo effect (Epstein & Hamric, 2009; Hamric & Blackhall, 2007; Hamric, Borchers & Epstein, 2012). Therefore it is hypothesised that nurses will display significantly higher levels of moral distress than physicians (H_{1a}), which is likely to increase with years of practical experience (H_{1b}). The ethical climate ratings of nurses has been found to be a predictor of moral distress frequency and intensity (Corley et al., 2005; Hamric et al., 2012; Pauly et al., 2009; Lutzen et al., 2010; Silen et al., 2011; Oh & Gastmans, 2015) and so the research further predicts that there will be negative correlation between ethical climate ratings and moral distress scores within the nurse sample (H_2). There has been a plethora of research exploring the effects of moral distress and its association with burnout and intent to leave current position or the healthcare profession altogether (Corley et al., 2001; Lazzarin et al., 2012; O'Connell, 2015; Nathaniel, 2002; Rushton, 2006; Whitehead et al., 2015) and so the third research hypothesis predicts that higher mean moral distress scores will be associated with an intention to leave previous position and current position (H_3).

Given the significance of personality predispositions in decision making, the pressing need to consider internal constraints as a contributor to moral distress (Epstein and Hamric, 2009) and the growing number of studies shedding light on the diversity of moral distress levels between physicians and nurses. It's vital to explore both the differences between physicians and nurses in levels of emotional intelligence and the dark personality traits and the distinguished associations they hold with moral distress. Research exploring the relationship with moral distress and darker personality traits is limited. Whereas, emotional intelligence has been reported to lower psychological distress with the work place (Dulewicz et al., 2003; 2005; Besharat, 2007; Karim, 2009; Martins et al., 2010). Based on this and the documented interdisciplinary conflicts between nurses and physicians (Jameton, 1984; Repenshek, 2009; Shoorideh et al., 2012; Zuzelo, 2007). It is hypothesised that there will be a significant difference in levels of Machiavellianism (H_{4a}), narcissism (H_{4b}) and psychopathy (H_{4c}) and emotional intelligence levels (H_{4d}) between physicians and nurses. There will be a significant correlation between moral distress scores and Machiavellianism (H_{5a}), narcissism (H_{5b}) and psychopathy (H_{5c}). There will be a negative correlation between moral distress scores and levels of emotional intelligence (H_6).

The relationship between moral distress and moral competence has not been widely reported. Studies within the healthcare literature are often focused on diluted themes of morality such as moral sensitivity, moral character and moral awareness. Whilst, these issues are still vital in the understanding of morality when operating within a highly dynamically ethical and in some cases a legally bound working environment they overlook moral competence. Moral competence embodies moral knowledge, the ability to discuss and deliberate differing and sometimes conflicting moral perspectives and having the core ability to utilise these proficiencies efficiently to handle morally challenging circumstances (Johnstone, 2015).

Given the fact that a lack of assertiveness, which may hinder an individual's ability to speak up in challenging situations and is a key contributor to moral distress (Hamric et al., 2006). It seems plausible to predict a negative correlation between moral distress and moral competence. However, it has been further noted that increased moral sensitivity can increase the risk of experiencing moral distress (Hamric et al., 2006). For this reason, the present research adopts a non-directive stance and predicts that there will be a significant correlation between moral distress scores and both moral competence levels (H_{7a}) and ethical compositions (H_{7b}).

There is a pressing need for conceptual work to generate a more robust understanding of moral distress in UK healthcare practice. The present study will examine both the individual and contextual constraints on moral distress, by examining both the frequency and intensity of moral distress, the evaluation of hospital ethical climate and intention to leave for physicians and nurse's working within private healthcare intuitions in the UK. Further focusing on particular characteristics of moral distress through the exploration of personality, emotional intelligence, moral competence and ethical composition evaluations in hypothetical moral scenarios. Overall contributing to the current literature on moral distress, this will not only generate a fuller understanding of the issue in a UK context and provide insight on the prevalence rates of moral distress, but could have possible benefits for healthcare providers and patients. Furthermore, it hopes to understand potential links between how individuals perceive and evaluate hypothetical moral dilemmas and how individuals experience moral distress within their working environment.

8.2 Aims of the study

The aim of the study was to;

- To explore the levels of moral distress and its relationship moral competence, ethical compositions, personality, emotional intelligence and ethical climate within healthcare environments.

8.3 Method

Participants

A total of 118 healthcare professionals working within the UK were recruited through sampling. The target sample being individuals currently working within private healthcare environments. Of the sample, 40.7% were physicians, surgeons and consultants and 59.3% were nurses, healthcare assistants or sisters. There were a total of 46 males (39%) and 72 females (61%), with a mean age of 38.81 ($SD = 10.53$). A higher portion of the sample had completed educational level 6 of a bachelor's degree (39%), held at least one to two years' experience in their job role (34.7%), and worked between 30 and 40 hours per week (61.9%), with weekly overtime ranging from zero (40.7%) to one to five hours per week (27.1%). The Moral Distress Scale Revised (Hamric et al., 2012) and the Hospital Ethical Climate Survey (Olson, 1998) is specifically designed for use within clinical settings, 43.75% of the physician sample and 48.71% of the nurse sample actively worked within a clinical setting and completed the surveys.

Procedure

All surveys were distributed and completed through an online platform. This was completed in two ways, the first approach was conducted through email correspondence seeking approval from private healthcare organisations kindly asking them for their assistance to circulate and take part in the survey and the second approach utilised social media paths where the survey was shared on authors individual pages and with permission private healthcare group pages. A raffle incentive was used to help boost participation rates.

Measures

Moral Distress Scale Revised (MDS-R, Hamric et al., 2012)

A 21 item questionnaire designed to assess moral distress levels in healthcare providers. The MDS-R has been developed and adapted to suit a wide range of healthcare environments. The present study utilised the nurse's version and the physician's version. Differences between these two versions are certain question modifications to fit the targeted population. For example, nurse and other healthcare professional question 'Follow *the physician's request not to discuss the patient's prognosis with the patient or family*' has been altered for physicians to 'Request *nurses or others not to discuss the patient's prognosis with the patient or family*'. On a five point Likert scale participants are asked to rate the items on two dimensions; how often the situation occurs (frequency; 0 never to 4 very frequently) and how disturbing the situation is when it arises (intensity; 0 none to 4 great extent). The frequency and intensity scores can be calculated separately, as well as a composite score. The composite score is calculated by multiplying the frequency score and intensity score for each of the 21 items (fxi) the composite score is then the result of adding each of the items fxi score (Hamric et al., 2012). The ending score can range from 0 to 336, 0 indicating no perceived moral distress and 336 revealing the hugest level of moral distress. This scoring system allows items which are never experienced or are minimally distressing to be removed from the composite score, providing a more precise reading of moral distress. Following the main body of the questionnaire two questions assess intention to leave a current position or a previous position due to moral distress.

Hospital Ethical Climate Survey (Olson, 1998)

A 26-item questionnaire designed to examine healthcare workers perceptions of the ethical climate of their workplace. Within healthcare organisations ethical climate is the implicit and explicit principles which initiate and shape health care delivery (Rodney, Doane & Storch, 2006) and health care providers perception of how ethical issues are handled (Olson, 1995), covering issues of power, trust, and human interaction (Olson, 1998; Ulrich et al., 2007). The Hospital Ethical Climate survey offers a general factor (perceived ethical climate), with higher scores denoting a positive perception, alongside five subscales: 1) peers, 2) patients, 3) Managers, 4) Hospital and 5) Physicians. On a five point Likert scale participants are asked to indicate how true the range of statements apply to work place practice (1 = almost never true to 5= almost always true) with items such as '*Nurses and physicians trust each other*'

(physicians), *'My peers listen to my concerns about patient care'* (peers), and *'My manager is someone I can trust'* (Managers).

Brief demographic and background questionnaire

A brief survey was conducted to assess individual demographic information, job role, professionals field, years of practical experience and highest educational qualification. With regards to education the following five criteria were used to distinguish categories: high school education; further education; higher education; postgraduate education; vocational skills.

The Moral Competence Test (MCT; Lind, 2008a)

The MCT applies an experimental and cognitive-structural approach. It presents two moral dilemmas, on a seven point Likert scale (-3 = wrong to +3 = right) participants are asked to evaluate the protagonist's action); showing a commitment to particular opinions about the matters presented. This part of the MCT is not utilised in the calculation of the C-score. In the present study this was defined as decisional choice, the higher a participants decisional choice displays a level of agreement with the protagonists' actions denoting utilitarianism and a disagreement of action denoting deontological concepts.

For each dilemma, participants are presented with six arguments in favour (utilitarian) and six against the actions (deontological) in the story. They are then asked to indicate whether they accept or reject these arguments on a nine point Likert scale (+4 = completely agree to -4 = completely disagree). This was defined as argument preference; the more participants supported arguments in favour of the protagonist actions is more indicative of utilitarian outlooks and the more participants supported arguments against the protagonists actions was indicative of deontological outlooks. All arguments were selected to represent six moral orientations, as identified by Kohlberg (1984) in a normative hierarchy; one for and one against in the each of the two dilemma stories. Type 1 (avoid physical damage and injury to oneself) and Type 2 (Acquire benefits and rewards) orientations show the pre-conventional category of moral orientation; Type 3 (achieve recognition and avoid disapproval) and Type 4 (respect laws and order of society) show the conventional orientation; and Type 5 (keep contracts) and Type 6 (hold up universal principles of justice, logic and reason) represent the post-conventional orientation.

A further addition was opinion. As the task of the participant is to rate both supportive and counter arguments in regard to their moral quality irrespective of their opinion agreement, a further area of enquiry added by the researcher which was named opinion commitment strength. On a five point Likert scale (-3 = wrong to +3 = right) participants are asked to evaluate the protagonist's action; showing a commitment to particular opinions about the matters presented. This commitment is not included in the calculation of the C-score, but has been used to determine the strength of opinion. The direction of right and wrong in this case is irrelevant, as it is a moral dilemma and there is no definite correct course of action. Thus in order to calculate the opinion commitment strength all minus ratings were transformed to positive numerals, for example -3 = wrong was altered to a +3. That way the strength of opinion commitment can be measured without the directional meanings of right and wrong.

To explore the concept of opinion further the application of ethical compositions were added to the dilemmas presented in the MCT, these were utilitarian and deontological philosophies, to truly assess the extent of opinion, with a directional meaning. The arguments and inferences displaying utilitarian and deontological support for both the vigilantism scenario and the mercy killing scenario are presented in table 6.1 (reproduced from chapter 6). Moral dilemmas usually capture the conflict between two contrasting philosophical stances, utilitarianism (consequentialist) and deontological normative ethics (duty based ethics). This was assessed in two stages. The first was initial decisional choice, whereby participants are asked if they agree or disagree with the protagonist's actions, an agreement being indicative of utilitarian outlooks and a disagreement with deontological. The second stage was total support; whereby participants are asked the extent they accept or reject arguments in favour of the protagonist's actions (utilitarian support) and arguments against the protagonist's actions (deontological support).

Hedonistic utilitarianism determines the correctness of an action based solely on the amount of pleasure it produces and the amount of pain it reduces, this pleasure can take many forms such as happiness or benefit (Bentham, 1971).

The creed which accepts as the foundation of morals, Utility, or the Greatest-Happiness Principle, holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness. By happiness is intended pleasure, and the absence of pain; by unhappiness, pain, and the privation of pleasure (Mill, 1863, p. 9 – 10)

This is also referred to as the greatest happiness principle which defines moral acts as ones which endorse utility, which is happiness minus pain (Mill, 1879). Arguably, the utilitarian approach could suggest that active voluntary euthanasia is morally permissible as it decrease the level of sadness and despair for all involved parties, such as the patient, family members and friends. In relation to the mercy killing scenario, utilitarianism may determine that the patient who is terminally ill is being kept alive to die slowly which intensifies the level of suffering for all involved parties. Utilitarianism may condone the act if it is at the patients request and the act relives unnecessary pain and suffering for the patient. Family and friends of the patient may experience grief and sadness, though this is inventible as the patient is terminal and incurable and will follow despite the circumstance of death.

Whereas, deontological domains asserts there is a series of moral guidelines, obligations and responsibilities which individuals must uphold in spite of the consequences or circumstantial coincidence (Kant, 1785/2002; Waldmann & Dieterich, 2007). Thus, individuals evaluate whether the aspects of their actions fulfil particular moral duties regardless of whether or not those actions lead to a greater outcome (Broeders et al., 2011).

Table 6.1.*Ethical Composition Argument Assumptions*

Scenario	Variable	A Utilitarian argument	A Deontological argument
Vigilantism	Premise	Actions are judged by their results	One must uphold and follow moral laws and principles
	Assumption 1	Act of stealing is morally wrong but may be context dependent	'Don't steal' is a universal moral law
	Assumption 2	Stealing for the greater good to prevent significant or immediate harm may be permissible	One must uphold and follow moral laws and principles despite consequences of action
	Assumption 3	Company listening in on private conversations is illegal and individuals are being fired	Breaking in and taking the tapes without permission is stealing
	Inference	Act of vigilantism is acceptable	Act of vigilantism in scenario is not acceptable
Mercy Killing	Premise	Minimising pain and maximising pleasure	Constraint against causing harm
	Assumption 1	Pain and suffering minimises pleasure	Causing or committing harm is wrong
	Assumption 2	Cancer (disease) causes pain and suffering	Any form of killing is morally wrong
	Assumption 3	Pain and suffering will not decrease and please will not increase overtime (untreatable). Active voluntary euthanasia will end pain and suffering	Active voluntary euthanasia is ending the life of another
	Inference	Active voluntary euthanasia is acceptable	Inference: Active voluntary euthanasia is not acceptable

The Short Dark Triad (SD3; Jones & Paulhus, 2014)

A 27-item questionnaire which assesses the Dark Triad traits; Machiavellianism, narcissism and psychopathy. On a five point Likert scale participants indicated how much they agreed (1 = strongly disagree to 5= strongly agree) with items such as *'It's not wise to tell your secrets'* (Machiavellianism), *'I like to get acquainted with important people'* (narcissism), and *'I like to get revenge on authorities'* (psychopathy).

The Genos Emotional Intelligence Inventory Concise (Palmer et al., 2009)

A 31-item questionnaire which assess how often individuals exhibit emotionally intelligent workplace behaviours. It is grounded on factor analytic research to present a taxonomic model of emotional intelligence. It renders a general factor (total emotional intelligence) alongside seven implicit elements: 1) Emotional Self-Awareness (ESA), the ability of recognising and understanding individual emotions; 2) Emotional Expression (EE), the ability to sufficiently express individual emotion; 3) Emotional Awareness of Others (EAO), the ability to recognise and understand other people emotions; 4) Emotional Reasoning (ER), being able to use emotional information in decision making tasks; 5) Emotional Self-Management (ESM), the ability to control individual emotion; 6) Emotional Management of Others (EMO, the ability to constructively influence the emotions of others; and 7) Emotional Self-Control (ESC), the skill to control strong emotions efficiently. On a five point Likert scale participants are asked to indicate how often the behaviour is demonstrated (1 = almost never to 5= almost always with items such as *'When I am under stress I become impulsive'* (Emotional Self Control, reversed item), *'I express how I feel at the appropriate time'* (Emotional Expression), and *'I respond to events that frustrate me appropriately'* (Emotional Self-Management). Items selected in the Genos Emotional Intelligence Inventory manage to capture and display a wide range of positive emotions, such as motivation, optimism and engagement, as well as and negative emotions such as, frustration, upset and stress.

Analysis

Mann Whitney U Tests were used to explore the differences in moral distress and its characteristics and ethical climate ratings between nurses and physicians. Due to there being a larger sample size, a series of independent t-tests were conducted to investigate individual differences between nurses and physicians. Spearman's Rank Order (ρ) correlation coefficients were conducted to explore the relationships between moral distress, individual differences, ethical climate, moral competence and ethical compositions. Holm-Bonferroni

method (Holm, 1979) was used to adjust the p -value, to correct for multiple comparisons, where necessary.

8.4 Results

8.4.1 Occupational and demographical variances in moral distress

To explore the first research hypothesis which predicted that nurses will display significantly higher levels of moral distress than physicians (H_{1a}), as measured by the Moral Distress Scale Revised (Hamric, 2012), a Mann-Whitney U Test was conducted. No significant difference in the composite scores of moral distress between physicians and nurses; ($U = 196, z = -1.87, p = .06$). Though not significant nurses ($Md = 67.50$) in the present study recorded a higher median score of moral distress than physicians ($Md = 42.00$). No significant difference was found in the total frequency of moral distress between physicians and nurses; ($U = 211, z = -1.56, p = .12$) or intensity levels of moral distress; ($U = 270, z = -.36, p = .72$). However, nurses ($Md = 24.50$) in the present study reported a higher occurrence of morally distressing situations than physicians ($Md = 15.50$). Both nurses and physicians recorded the same median score in levels of intensity ($Md = 57.00$). There was a significant difference in the total frequency of the following moral distress items between physicians and nurse, item 5 ($U = 190, z = -2.15, p = .03, r = .30$) medium effect size, item 17 ($U = 193, z = -1.98, p = .05, r = .28$) small effect size, and item 21 ($U = 175, z = -2.35, p = .02, r = .33$) medium effect size. Descriptive statistics are presented in table 8.1, nurses significantly experience a higher occurrence of these events (items) than physicians.

To explore the prediction that moral distress will increase with years of practical experience in nurses (H_{1b}), a Spearman's Rank Order (Rho) correlation coefficients was conducted. Results revealed that physicians with more practical years of experience in their positions ($r = -.42, p = .08$) and older ($r = -.45, p = .06$) demonstrated lower levels of moral distress, though these did not reach statistical significance. This relationship did not hold with the nurse sample for years of practical experience ($r = -.04, p = .83$) and age ($r = -.09, p = .63$).

Table 8.1

Descriptive Statistics of the Frequency of Moral Distress Items for Physicians and Nurses.

MDS-r Item	Sample	<i>n</i>	<i>Md</i>	<i>M</i>	<i>SD</i>
Item 5. <i>Follow the family's request not to discuss death with a dying patient who asks about dying</i>	Physician	18	0.00	0.44	0.78
	Nurse	32	1.00	1.16	1.25
Item 17. <i>Work with nurses or other healthcare providers who are not as competent as the patient care requires</i>	Physician	18	1.00	1.33	1.08
	Nurse	32	2.00	2.09	1.40
Item 21. <i>Work with levels of nurse or other care provider staffing that I consider unsafe</i>	Physician	18	1.00	1.06	1.06
	Nurse	32	2.00	2.09	1.51

8.4.2 Sources of moral distress and ethical climate within healthcare environments

The most common and least sources of moral distress identified by nurses and physicians are presented in table 8.2. Interesting, nurses and physicians identified the same items which cause the most moral distress, these just vary slightly in rank order. The major roots of moral distress identified within both samples revolve around clinical situations and external constraints. The least common sources of moral distress were the same for both samples (rank 1), which means that this particular situation is rarely experienced by nurses and physicians or they find it minimally distressing.

To explore if any differences occurred between physicians and nurses in ethical climate, as measured by the Hospital Ethical Climate Survey (Olson, 1998), a Mann-Whitney U Test was conducted. There was no significant difference in ethical climate ratings between physicians ($Md = 105$) and nurses ($Md = 94$), ($U = 185$, $z = -1.11$, $p = .27$). Observation of the medians scores shows that nurses rated the ethical climate slightly less favourable than

physicians, though not significantly less. Both sample groups appear to rate the ethical climate as being relatively positive, as scores on this scale range from 26 to 130.

To explore the second research hypothesis which predicted that there will be a negative correlation between ethical climate ratings and moral distress scores within the nurse sample (H_2), a Spearman's Rank Order (Rho) correlation coefficient was conducted. Results revealed that moral distress significantly negatively correlated with ethical climate in the nurses sample ($r = -.54, p = .002$), this was not the case in the physician sample ($r = -.05, p = .86$).

Table 8.2.*Most common sources of moral distress identified by nurses and physicians*

Situation	Nurse				Physician				
	Rank	Mean	Standard Deviation	Rank	Mean	Standard Deviation	Rank	Mean	Standard Deviation
Work with levels of nurse or other care provider staffing that I consider unsafe	1	7.31	6.20	5	3.22	3.66			
Work with nurses or other healthcare providers who are not as competent as the patient care requires	2	7.06	5.93	3	3.61	3.91			
Watch patient care suffer because of a lack of provider continuity	3	5.97	6.21	4	3.44	3.55			
Witness diminished patient care quality due to poor team communication	4	5.72	5.33	1	4.28	3.72			
Provide less than optimal care due to pressures from administrators or insurers to reduce costs	5	4.78	4.92	2	3.94	4.35			
<i>Least common sources of moral distress identified by nurses and physicians</i>									
Situation	Nurse				Physician				
	Rank	Mean	Standard Deviation	Rank	Mean	Standard Deviation	Rank	Mean	Standard Deviation
Increase the dose of sedatives/opiates for an unconscious patient that I believe could hasten the patient's death	1	1.00	1.85	1	0.22	0.55			
Follow the family's wishes of the patient's care when I do not agree with them, but do so because of fears of a lawsuit	2	1.69	2.61	5	1.44	2.96			
Take no action about an observed ethical issue because the involved staff member or someone in a position of authority requested that I do nothing	3	2.72	5.39	11	1.78	2.13			
Ignore situations in which patients have not been given adequate information to insure informed consent	4	2.75	4.82	4	1.39	1.75			
Avoid taking action when I learn that a physician or nurse colleague has made a medical error and does not report it	5	2.78	4.72	6	1.50	2.07			

8.4.3 Moral Distress and the intention to leave profession

The proportion of nurses who had left a previous position or who were considering leaving their current positions now due to moral distress was high (64%), with higher mean MDS-R scores being associated with the intent to leave (table 8.3). This is also true of the physician sample, though the reliability of the results is questionable due to a smaller sample size. This supports the prediction that higher mean moral distress scores will be associated with an intention to leave previous position and current position (H_3).

Table 8.3.

Intention to Leave the Profession with Mean MDS-r Scores

Variable	Sample									
	Physician ($n = 18$)					Nurse ($n = 32$)				
	n	%	M	$MDS-r$	SD	n	%	M	$MDS-r$	SD
Not considered leaving in the past	10	56.00	37.30	24.62	11	34.00	56.82	48.10		
Considered leaving in the past	5	27.00	72.20	19.41	11	34.00	90.82	59.96		
Left a position in the past	3	17.00	28.00	7.55	10	32.00	105.30	82.50		
Not considering leaving now	17	94.00	42.65	24.80	22	68.00	66.86	55.11		
Considering leaving now	1	6.00	93.00	(-)	10	32.00	120.60	74.46		

A Spearman's Rank Order (Rho) correlation coefficients found that moral distress negatively correlated with level of job satisfaction in the physician sample ($r = -.42, p = .09$) and the nurse sample ($r = -.14, p = .16$), though these did not reach statistical significance. Ethical climate held significant positive correlations with level of job satisfaction in the physician sample ($r = .57, p = .05$). This was true in the nurse sample also though it did not reach statistical significance ($r = .16, p = .40$).

8.4.4 Individual differences and moral distress

To explore if any differences occurred between physicians and nurses in the dark traits (H_{4a} ; H_{4b} ; H_{4c}) as measured by the Dark Triad (Jones & Paulhus, 2014) and emotional intelligence (H_{4d}), as measured by the Genos Emotional Intelligence Inventory (Palmer et al., 2009) a series of independent t-tests were conducted. There was no significant differences in Machiavellianism, $t(109) = 0.82, p = 0.41$ (two tailed); narcissism $t(109) = 1.60, p = 0.11$ (two tailed) and psychopathy $t(109) = 1.48, p = 0.14$ (two tailed) between physicians and nurses.

There were no significant differences between physicians and nurses in emotional awareness of others (EAO), $t(105) = -0.96, p = 0.34$ (two tailed); emotional reasoning (ER) $t(105) = -1.48, p = 0.14$ (two tailed); emotional self-management (ESM) $t(105) = -0.26, p = 0.80$ (two tailed); and emotional self-control (ESC) $t(105) = -1.14, p = 0.26$. There were significant differences between physicians and nurses in emotional self-awareness (ESA): $t(105) = -2.10, p = .04$ (two tailed), the magnitude of differences in means was small (mean difference = -0.96 , 95% CI: -1.87 to -0.05 ; eta squared = $.04$); emotional expression (EE): $t(105) = -2.41, p = .02$ (two tailed), the magnitude of differences in means was small (mean difference = -1.50 , 95% CI: -2.73 to -0.27 ; eta squared = $.05$); emotional management of others (EMO): $t(105) = -2.53, p = .01$ (two tailed), the magnitude of differences in means was moderate (mean difference = -1.19 , 95% CI: -2.12 to -0.26 ; eta squared = $.06$); and total emotional intelligence (Total EI): $t(105) = -2.20, p = .03$ (two tailed), the magnitude of differences in means was small (mean difference = -5.69 , 95% CI: -10.81 to -0.56 ; eta squared = $.04$). Nurses displayed higher level of these subscales and total emotional intelligence, table 8.4 displays means and standard deviations.

Table 8.4

Means and Standard Deviations of The Dark Triad and Emotional Intelligence for Physicians and Nurses

Variable	Sample					
	Physician			Nurse		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
Machiavellianism	42	2.86	0.70	69	2.75	0.69
Narcissism	42	2.80	0.57	69	2.61	0.66
Psychopathy	42	1.89	0.65	69	1.73	0.50
ESA	40	15.18	1.92	67	16.13	2.48
EE	40	17.95	2.51	67	19.45	3.42
EAO	40	16.08	1.89	67	16.49	2.32
ER	40	19.00	2.52	67	19.85	3.06
ESM	40	18.13	2.76	67	18.28	3.29
EMO	40	15.50	2.52	67	16.69	2.24
ESC	40	15.25	2.32	67	15.87	2.91
Total EI	40	117.08	10.94	67	122.76	15.71

To explore the relationship between moral distress, and ethical climate with the Dark Triad, Emotional Intelligence, a Spearman's Rank Order (Rho) correlation coefficients was conducted. Holm-Bonferroni method was used to adjust p -values to correct for multiple

comparisons. It was predicted that there will be a significant correlation between moral distress scores and Machiavellianism (H_{5a}), narcissism (H_{5b}) and psychopathy (H_{5c}).

Moral distress was positively correlated with Machiavellianism ($r = 0.16, p = .40$) and narcissism ($r = 0.11, p = 0.54$) in the nurse sample, though these did not reach statistical significance, whereas psychopathy held weak correlations with moral distress ($r = 0.01, p = .97$). Of interest, the opposite was found in the physician sample, with negative correlations found between moral distress and Machiavellianism ($r = -.23, p = .35$) and narcissism ($r = -0.22, p = .39$), positive correlation was found with psychopathy ($r = 0.13, p = 0.62$); though again these did not reach statistical significance.

Ethical climate held positive correlations with Machiavellianism ($r = 0.11, p = 0.71$) and psychopathy ($r = 0.39, p = 0.15$) in the physician sample, whereas the opposite was found in the nurse sample with negative correlations noted with Machiavellianism ($r = -0.15, p = 0.44$) and psychopathy ($r = -0.27, p = 0.14$). Narcissism held negative correlations with ethical climate in both the physician sample ($r = -0.15, p = 0.60$) and the nurse sample ($r = -.15, p = 0.43$). None of which reached statistical significance.

Moral distress held negative correlations with the majority of the emotional intelligence subscales and total emotional intelligence. Offering partial support for the hypothesis that there will be a negative correlation between moral distress scores and levels of emotional intelligence (H_6), however most of which did not reach statistical significance. Two items held weak positive correlations with moral distress, these were emotional reasoning (ER) in the physician sample and emotional self-control (ESC) in the nurse sample. The only statistical significant relationship at the .05 level was between emotional reasoning (ER) and emotional self-management (ESM) with moral distress in the nursing sample, with higher levels of these two subscales being associated with lower levels of moral distress. Though the significance of which did not hold, at adjusted alpha levels, utilising the Holm-Bonferroni method. Table 8.5 displays the correlation coefficients.

Table 8.5

Spearman's Rank Order (rho) Correlations between Moral Distress and Emotional Intelligence

Variable	Sample			
	Physician ($n = 40$)		Nurse ($n = 67$)	
	r	p	r	P
ESA	-0.2	0.44	-0.03	0.86
EE	-0.28	0.25	-0.15	0.43
EAO	-0.29	0.24	-0.13	0.48
ER	0.09	0.73	-0.37	0.04
ESM	-0.21	0.41	-0.35	0.05
EMO	-0.21	0.41	-0.04	0.84
ESC	-0.33	0.18	0.01	0.96
Total EI	-0.31	0.21	-0.18	0.33

Ethical climate held positive correlations with emotional intelligence subscales and total emotional intelligence. Emotional reasoning (ER) held a significant positive relationship with ethical climate in the nurse sample. Table 8.6 displays the correlation coefficients.

Table 8.6

Spearman's Rank Order (rho) Correlations between Ethical Climate and Emotional Intelligence

Variable	Sample			
	Physician ($n = 40$)		Nurse ($n = 67$)	
	r	P	r	p
ESA	0.16	0.56	0.32	0.08
EE	0.23	0.40	0.24	0.20
EAO	0.24	0.39	0.25	0.17
ER	0.23	0.42	0.36	0.05
ESM	0.03	0.91	0.30	0.10
EMO	0.47	0.08	0.12	0.52
ESC	0.01	0.97	0.18	0.34
Total EI	0.28	0.31	0.30	0.10

Moral distress, moral competence and ethical composition analysis between physicians and nurses

To explore the final research hypothesis which predicted that there will be a significant correlation between moral distress scores and both moral competence levels (H_{7a}) and ethical compositions (H_{7b}), a Spearman's Rank Order (Rho) correlation coefficients was conducted.

Moral competence (c-score) held negative correlations with moral distress in the physician sample ($r = -.14, p = .26$) and positive relations in the nurse sample ($r = .14, p = .45$); though none of these reached statistical significance. Moral distress held significant negative correlations with total utilitarian support ($r = -.67, p = .002$) and positive correlations with deontological support ($r = 0.30, p = 0.22$) in the physician sample, though the latter was not significant. This was not the case in the nurse sample, with considerably weaker insignificant positive correlations with total utilitarian support ($r = 0.09, p = 0.63$) and weaker negative correlations with deontological support ($r = -.01, p = 0.96$).

To help understand this relationship further and to see whether differences between physicians and nurses emerged in relation to utilitarian and deontological stances, a series of independent samples t-tests were conducted. There were no significant differences between physicians in the level of argument support for; utilitarian arguments in the vigilantism scenario, $t(116) = 0.30, p = 0.76$ (two tailed); deontological arguments in the vigilantism scenario, $t(116) = -0.86, p = 0.39$ (two tailed); utilitarian arguments in the mercy killing scenario, $t(116) = 0.05, p = 0.96$ (two tailed); total utilitarian support, $t(116) = 0.23, p = 0.82$ (two tailed); and total deontological support, $t(116) = -1.78, p = .08$ (two tailed). Significant differences were found between the groups in levels of argument support for deontological views in the mercy killing scenario, $t(116) = -2.04, p = 0.04$ (two tailed), the magnitude of differences in means was small (mean difference = -4.30, 95% CI: - 8.48 to -0.12; eta squared = .03. Observation of the means presented in table 8.7 indicates that's nurses more strongly preferred deontological arguments in the mercy killing scenario when compared to physicians. This is also evidenced in the differences in mean scores between nurses and physicians in total deontological support.

Table 8.7

Means and Standard Deviations of Utilitarian and Deontological outlooks between Physicians and Nurses

Variable	Sample			
	Physician (<i>n</i> = 48)		Nurse (<i>n</i> = 118)	
	M	SD	M	SD
Utilitarian Vigilantism	-3.02	12.23	-3.69	11.25
Deontological Vigilantism	6.90	9.02	8.26	8.00
Utilitarian Mercy Killing	-12.58	9.89	-12.69	10.92
Deontological mercy killing	1.65	12.12	5.94	10.63
Total Utilitarian	-15.60	18.07	-16.37	18.06
Total Deontological	8.54	18.62	14.20	15.59

8.5 Key findings and partial discussion

The aim of the study was to;

- To explore the levels of moral distress and its relationship moral competence, ethical compositions, personality, emotional intelligence and ethical climate within healthcare environments.

8.5.1 Key findings

- Nurses in the present study reported higher level of moral distress and encountered clinical and external morally distressing situations more frequently compared to physicians; though these did not reach statistical significance. Overall, moral distress for both cohorts was low.
- Nurses and physicians identified similar situations which lead to moral distress, which were found to revolve around clinical situations and external constraints
- For physicians levels of moral distress seems to decrease with both age and years of experience, with negative correlations found between these variables. Whereas, within the nurse sample moral distress negatively correlated with ethical climate. Both findings fail to support the presence of a crescendo effect.
- No significant differences were found in the ethical climate ratings between physicians and nurses, both samples groups reported a relatively positive ethical climate

- Higher mean moral distress scores were associated with intent to leave the profession, with level of job satisfaction being negatively associated with moral distress and positively related to ethical climate.
- Nurses displayed higher levels of emotional self-awareness, emotional expression, emotional management of others and total emotional intelligence compared to physicians, whereas no significant differences were found between the samples in the dark traits.
- Machiavellianism and narcissism held differing roles in the moral distress between physicians and nurses, with negative correlations reported in physician sample and positive correlations in the nurse sample.
- Emotional reasoning and emotional self-management were the only negative predictors of moral distress within the nurse sample. With emotional reasoning also being found to be positively related to ethical climate.
- Moral competence held a differing role in relation to moral distress with small negative correlations reported in the physician sample but small positive correlations in the nurse sample.
- Moral distress held significant negative correlations with total utilitarian support and positive correlations with total deontological support in the physician sample, with weak insignificant association in the nurse sample.
- Nurses displayed a higher preference for deontological arguments in the mercy killing scenario compared to physicians.

8.5.2 Partial discussion

The present study aimed to assess both the frequency and intensity of moral distress, the evaluation of hospital ethical climates, and the intention to leave for physicians and nurse's working within private healthcare intuitions in the UK. Further focusing on particular characteristics of moral distress through the exploration of personality, emotional intelligence, moral competence and ethical composition evaluations in hypothetical moral scenarios. Furthermore, it hopes to understand potential links between how individuals perceive and evaluate hypothetical moral dilemmas and how individuals experience moral distress within their working environment.

Partial support was found for the prediction that nurses will display significantly higher levels of moral distress than physicians (H_{1a}). Although this was not significant, nurses within the

present study displayed higher moral distress composite scores compared to physicians; which supports previous findings (Hamric & Blackhall, 2007; Epstein & Hamric, 2009; Hamric et al., 2012). However, no relationship was found between years of practical experience and moral distress in the nurse sample, and so the present research cannot offer support for the crescendo effect (H_{1b}).

Popular conjectures as to why nurses experience higher levels of moral distress focus on the multifaceted role nurses play and potential interdisciplinary clashes (Jameton, 1984; Englehardt, 1985; Liaschenko, 1995; Zuzelo, 2007; Repenshek, 2009; Shoorideh et al., 2012). However, these themes did not prevail as a leading contributor to moral distress. This could be partly due to the ethical environment (Liaschenko, 1995), as a negative correlation between ethical climate ratings and moral distress scores within the nurse sample was found, supporting the research hypothesis (H_2), offering support for previous research findings detailing ethical climate as a predictor of moral distress frequency and intensity (Corley et al., 2005; Pauly et al., 2009; Lutzen et al., 2010; Silen et al., 2011; Hamric et al., 2012; Oh & Gastmans, 2015). Furthermore, no significant differences in the ethical climate ratings were found between physicians and nurses, both samples groups reported a relatively positive ethical climate.

Instead, poor team communication which impacts patient care was identified in the top five most common sources of moral distress for both nurses and physicians. Poor work place communication has been noted to contribute to moral distress (Karagozoglu et al., 2015; Shoorideh, et al., 2012; Trotochaud et al., 2015). Therefore, it seems that professional conflict is not a direct cause of moral distress in the present study, but possibly a contributory factor emanating through the communication methods of an interdisciplinary team; a situation in which both physicians and nurses experience.

The top five most common sources of moral distress in the study were identical for nurses and physicians. The majority of these were related to extrinsic factors offering support that staff shortages (Corley, 2002; Mrayyan & Hamaideh, 2009; Ohnishi et al., 2010; Pauly et al., 2009; Zuzelo, 2007); lack of provider continuity (Woods et al., 2015; Trotochaud et al., 2015); and delivering less than optimal care due to management pressures to reduce costs (Woods et al., 2015); all contribute to moral distress for nurses and physicians.

Despite nurses in the present study experiencing higher moral distress than physicians, the composite moral distress scores in both samples was relatively low compared to previous

research. This is not to say that moral distress as a whole within UK healthcare systems is low, this is not the case. The issue here highlights the variegated nature of moral distress within a diverse and assorted healthcare system. Despite the lowness in moral distress scores in the present sample, higher mean moral distress scores were associated with intent to leave the profession, which supports the research hypothesis (H_3) and previous research highlighting a link between moral distress and intent to leave (Corley et al., 2001; Lazzarin et al., 2012; Nathaniel, 2002; O'Connell, 2015; Rushton, 2006; Whitehead et al., 2015).

In relation to individual differences, nurses displayed significantly higher levels of emotional self-awareness, emotional expression, emotional management of others and total emotional intelligence compared to physicians, supporting the research hypothesis (H_{4d}). Whereas no significant differences were found between the samples in the dark traits, which failed to support the research hypotheses (H_{4a} ; H_{4b} ; H_{4c}). Furthermore, emotional reasoning and emotional self-management were negatively associated with moral distress within the nurse sample, offering partial support for the research hypothesis (H_6). These two abilities appear to be significant factors in the reduction of moral distress. Offering support for the importance of emotional intelligence in improving overall performance (Al-Hamdan et al., 2017), adequate conflict management styles (Chan et al., 2014; Basogul & Ozgur, 2016), career adaptability (Coetzee & Harry, 2014) and higher job satisfaction, less burnout and increased wellbeing (Slaski & Cartwright, 2003; Besharat, 2007; Mikolajczak et al., 2007; Karim, 2009; Martins et al., 2010; Weng et al., 2011; Zhang et al., 2016).

With regards to the relationship with the dark traits and moral distress, it was hypothesised that there would be a significant correlation between moral distress scores and Machiavellianism (H_{5a}), narcissism (H_{5b}) and psychopathy (H_{5c}). None of the dark traits significantly correlated with moral distress. Instead, Machiavellianism and narcissism held differing roles in the moral distress between physicians and nurses, with negative correlations reported in physician sample and positive correlations in the nurse sample. Is it at all possible that the negative relationship between the dark traits and moral distress in the physician sample could be due to the traits acting like a buffer to reduce stress (Kajonius & Bjorkman, 2018), possibly a reason as to why physicians display lower levels of moral distress. Though this does not account for why the opposite was found in the nurse sample. Further research should aim to overcome this disparity, as dark traits as well as the brighter personality traits are a substance to how individuals mostly understand everyday occurrences (Jones & Paulhus, 2014).

It was predicted that there would be a significant correlation between moral distress scores and both moral competence levels (H_{7a}) and ethical compositions (H_{7b}). No significant correlations were found with moral competence. Interestingly, moral competence held a differing role in relation to moral distress with small negative correlations reported in the physician sample but small positive correlations in the nurse sample. This mirrors speculations surrounding moral sensitivity, as Hamric et al. (2006) notes that nurses with high levels of moral sensitivity may experience distress if they witness the moral elements of nursing being dishonoured, neglected, or poorly managed; meaning that moral sensitivity can increase the risk of experiencing moral distress. Thus, it may be feasible that nurses with high levels of moral competence also experience high levels of moral distress, a contradictory association.

However, moral distress held significant negative correlations with total utilitarian support and positive correlations with total deontological support in the physician sample, with weak insignificant associations present in the nurse sample. This raises some interesting questions surrounding medical ethics, as utilitarian outlooks embody more society centred and accounts for healthcare resources such as time, energy and money, usually propelled by hospital managers and even political figures; whereas, deontological outlooks are reflective of a doctor patient relationship (Mandel, Ponnambath & Parija, 2016). This societal and patient differentiation within medical cultures may account for why the support for utilitarian decisions more macros based decision is associated with lower moral distress in the physician sample, as opposed to a more micro level involving the patient. Utilitarian decisions may be easier to condone and construct when it doesn't involve a strong deontological based patient doctor interaction, which may reduce potential levels of moral distress.

As previously reported both nurses and physicians reported a strong preference for deontological arguments and strong rejection of utilitarian arguments in the mercy killing scenario. One possible reason was the notion of story pull (Elm & Weber, 1994). Though nurses in the present study expressed a significantly higher preference for deontological arguments. This could be due to the differing roles between nurses and physicians and medical ethics; nurses may not have the option to condone utilitarian prospects, like physicians do and so are drawn more towards deontological ideology (Conway & Gawronski, 2013).

Chapter 9: Discussion

9.1. The Theoretical Validity of the Moral Competence Test

The Dual Aspect theory asserts that moral behaviour must be defined in provisions of both affective (ideals and emotions) and cognitive (competencies) features, denoting the dual temperament of moral thinking and behaviour (Lind, 2013). The affective and cognitive aspects can be differentiated and measured during moral behaviour (Lind & Wakenhut, 1985). They are viewed as aspects as opposed to components, on the notion that they can be distinguished but not detached from each other (Lind, 2015b). A complete portrayal of an individual's moral behaviour comprises of the moral principles which advises and guides behaviour (affective orientation) and the cognitive aptitudes (structure) that an individual holds when harnessing moral principles in the decision making processes; both features are required to attain an understanding of human behaviour (Lind, 2001). A sufficient measurement of moral competence should assess both processes and should be responsive to both positive fluctuations as a function of moral learning or to descending changes indicative of competence erosion (Lind, 2002).

The Moral Competence Test (MCT) it is viewed more as an experimental behaviour design, as opposed to a psychometric test (Lind 2016). Thus, response reliability or inaccuracy are related to an individual cognitive makeup, as opposed to measurement fallacies (Lind, 2001). The MCT has not undergone item analysis or reliability testing (Lind, 2001), at least not in the conventional sense. Though, the development of the MCT has been established on an extensive review of the literature, been subdued to expert ratings and been evaluated through thorough empirical validation and cross-cultural validity screening (Wischka, 1982; Lind, 2002, 2015b, 2016; Lee, 2005; Lerkiatbundit et al., 2006; Schillinger, 2006; Slovackova & Slovacek, 2007; Feitosa et al., 2013; Biggs & Colesante, 2015; Abbasi et al., 2017; Agurto et al., 2017).

However, it was vital in the present report to ensure that the use of the MCT had been utilised correctly and screened for any anomalies. The theoretical validity of the MCT was assessed in chapter four of the report and checked against three validation criteria (Lind, 2016). The first criteria was that moral orientations form a hierarchal preference order as indicated in normative theory (Kohlberg, 1964; Lind, 2016), which has been supported in many studies (Lind, 1985; Slovackova & Slovacek, 2007; Feitosa et al., 2013; Lind, 2016). The second conjecture was that moral orientations inter-correlate to form a simplex structure, meaning that adjacent moral orientations will correlate more highly than distant moral orientations

(Lind, 2016). The final assumption was affective-cognitive parallelism, which means that moral orientations and moral competence (C-score) correlate systematically and are in parallel, the more clearly an individual accepts higher types of moral orientations and rejects lower ones, the higher the moral competence level (Lind, 2016).

The theoretical validity of the Moral Competence Test was successfully substantiated on the following three assumptions; i) moral orientations form a hierarchical preference order, ii) moral orientations inter-correlate to form a simplex structure, and iii) affective-cognitive parallelism. This means that within the report the MCT has been utilised correctly screened for any anomalies, and is in line with and supports the Dual Aspect Theory of moral thinking and behaviour (Lind, 2013). This findings is significant as the following studies and results are all based on this premise.

9.2. Moral Development from Education to Practice

Research has highlighted concerns over the triangulated relationship between education, moral development and professional practice. Questions impart on whether education fosters and nurtures moral growth or whether education inhibits this process and what effect does this have on an individual's professional development. These concerns specifically circulate around the medical and healthcare domains. The main aim of Chapter five was to assess the moral competence levels within UK university students and professional practice between medical and healthcare vocational fields and non-healthcare vocational fields. This was to help further understand the dynamics and directions of moral development within these fields with further explorations into educational teaching methods, previous educational endeavours, years of practical experience and the possible occurrence of a moral segmentation. Moral competence is the ability to make moral judgments (based on inner principles) and act in accordance to these judgments (Kohlberg, 1964), through deliberation and discussion, instead of violence and deceit (Lind, 2016).

Based on the literature it is hypothesised that medical and healthcare vocational fields, both students (H_{1a}) and practice professionals (H_{1b}), would display significantly lower levels of moral competence compared to non-healthcare vocational fields. Furthermore, that the moral competence scores of medical and healthcare students would decrease across the educational span (H_{2a}), indicative of a moral regression. Generally, moral competence (C-score) between student disciplines did not vary significantly, nor were they ascendingly or descendingly responsive to the educational span, offering no support for research hypotheses. For this

reason, this study could not offer support to the notion that medical and healthcare students possess lower moral competence scores than students of other disciplines and that they display signs of a moral regression throughout higher education (Lind, 2000a; Slovackova & Slovacek, 2007; Feitosa et al., 2013; Hegazi & Wilson, 2013). This could have been partially due to the cross sectional design of the study. One of the most fundamental explorations with moral psychology focuses questions on the roots and changes in morality across the lifespan (Richardson & Killen, 2013). A cross sectional design may not have been robust enough to explore student moral competence scores throughout education, providing that a sufficient measurement of moral competence should assess both processes and should be responsive to both positive fluctuations as a function of moral learning or to descending changes indicative of competence erosion (Lind, 2002). If moral competence is both sensitive and responsive to subtle changes within a learning environment, a longitudinal design may be more applicable to encapsulate subtle variations. As outlined by Pascarella (2006), longitudinal, pre-test – protest designs yield the most credible evidence.

Though, from an alternative perspective, despite a cross sectional design not being the ideal choice in this study design, perhaps significant differences between year of study and C-scores may not have been evident due to minor fluctuations in moral competence. It may be plausible that the C-scores throughout the educational span are reflective of a moral stagnation in a stationary position (Self et al., 1993; Self & Olivarez, 1996; Self & Baldwin, 1998; Self et al., 1998; Patenaude et al., 2003; Murrell, 2014), as opposed to a full moral regression. Slovackova and Slovacek (2007) found that both Czech and Slovak medical students C-scores decreased according to age and the number of years study undertaken, but were unable to claim a decline or stagnation in moral competence, due to the non-longitudinal study design. To ensure, that this uncertainty can be overcome future studies should consider the use of longitudinal designs as means of capturing a true possible moral regression or stagnation within medical and other student populations.

There were subtle variations in the mean scores of moral competence between disciplines, with medical and healthcare students displaying the lowest and art and design students exhibiting the highest C-scores. Though, the differences are not durable enough to base assumptions on. In relation to business students, support was not found for the assumption that business students exhibit the lowest moral competence scores compared with students of other disciplines (St Pierre et al., 1990; Hummel et al., 2016). The results are in alignment with the works of Snodgrass & Behling (1996) and Krick et al. (2016) who reported no

differences in the moral competence scores of business students with students of other disciplines.

Looking at the broader scope through the categorisation of C-scores (see Figure 5.1), medical and healthcare, business and social science students exhibited low moral competence, with art and design students slightly breaching the sufficient classification of moral competence. If one was to overlook the grouping by discipline and year of study, what is left are slightly low competence scores and somewhat concerning results. Possibly going against previous suggestions that moral reasoning skills increase through higher education (Kitchener et al., 1984; Rest & Thoma, 1985; Shaver, 1985, 1987; Gfellner, 1986; Paradice & Dejoie, 1991; McNeel, 1994; Foster & LaForce, 1999; Cummings et al., 2001; Gielen & Markoulis, 2001; Swaner, 2004; Rose, 2012; Doyle & O' Flaherty, 2013; Myyry et al., 2013) and moving more towards the concerns of the moral values of present millennial students (Ferrell et al., 2008; Mechler & Bourke, 2011; Traiser & Eighmy, 2011; Rana & Parveen, 2014). The alleged differences between student disciplines in moral competence could not be detected as it seems students as whole operate on a similar discourse.

Similar outcomes were noted in the practice samples in relation to practical years of experience. Healthcare professionals significantly displayed lower moral competence scores when compared to non-healthcare professionals, supporting the research hypotheses (H_{1b}). Agurto et al. (2017) found that physicians had sufficient levels of moral competence, though the least amount needed to operate within a social environment (Lind, 2016), through this categorisation of C-scores, healthcare professionals in the current sample held low moral competence. Low moral competence is when C-scores fall between the ranges of ten and twenty, with a mid-point of fifteen. Though the differences between healthcare and non-healthcare professionals were significant it is important to highlight that non-healthcare professionals also exhibited low moral competence. With reference to figure 5.5, the only difference being that both these two fields sit in opposite sections of the classification. Therefore it seems plausible that despite the difference being significant it does not provide a clear distinction between the moral competence levels of healthcare and non-healthcare professionals; as they both subside in the low moral competence category.

In relation to years of practical experience, no significant differences were found in C-scores across the practice span, which failed to support the prediction that the moral competence scores of medical and healthcare professionals, will decrease across the professional span

(H_{2b}), indicative of a moral regression. Observation of the means displayed that within the healthcare sample C-scores appear rather stable throughout years of experience, with a slight increase after sixteen or more years, which fails to support the claim that moral competence decreases between sixteen and twenty years of experience (Agurto et al., 2017). The stability of C-score throughout the practical experience span could be partially due to the cross sectional design of the study which may not have been robust enough to explore professional moral competence scores throughout practice.

It may be plausible that the C-scores throughout the professional span are reflective of a moral stagnation in a stationary position, as may have been the case in education (Self et al., 1993; Self & Olivarez, 1996; Self & Baldwin, 1998; Self et al., 1998; Patenaude et al., 2003; Slovackova & Slovacek, 2007; Murrell, 2014), due to little directive action to help increase moral competence. Within the non-healthcare sample, though not significant it appears that C-scores decrease after one year of practical experience and even more so after eleven years plus, though this increases again after sixteen years of more practical experience. This offers partial support to the notion that ethical decision making is positively related to higher levels employment and work experience.

The assumptions when taken at face value, which can be drawn from this data are very concerning, that both UK students and UK professionals alike generally have low moral competence. These are students drawn from a wide range of universities on a variety of courses and professionals from a diverse array economic sectors. It could be probable, that due to the large diversity of the samples could account for the results and that more stratified and strict sampling techniques would be beneficial to investigate these findings further.

One of the most attributable reasons associated with low moral competence within educational settings is teaching methods and assessments. This was explored through a brief questionnaire assessing the frequency of such methods. Interactive methods were classified as discussion and debate; problem solving; group work; role play; workshops; and non-interactive methods consisted of: lectures; essays; dissertations; exams; presentations. These were categorised based on the level of communication involved, whether one way communication or two way communication. As previously suggested methods only requiring attention and listening (one way communication) suppress discussion, role taking, responsibility and guided reflection (Kohlberg, 1984; Self et al., 1989; Sprinthall et al., 1994; Lind, 2000b; Lind, 2008b; Lind, 2016). Furthermore, working within groups, allows for

discourses and interaction to take place between students which is crucial for both moral and prosocial development (Schuitema et al., 2008), as well as reflective practices and moral exemplar methods (Christenson et al., 2007), diversity courses (Mayhew et al., 2012; Parker et al., 2016), perspective taking (Mayhew et al., 2010), and the use of more active and reciprocal based methodologies (Mouratidou et al., 2007; Carmichael et al., 2009; Solum et al., 2016; Torabizadeh et al., 2018).

It was hypothesised that medical and healthcare student will report higher levels of non-interactive methods (H_{3a}) and that the levels non-interactive teaching methods will negatively affect the moral competence scores of students (H_{3b}). The present study failed to support both of these predictions. It was found that medical and healthcare students significantly engage more in interactive methods than business students and art and design students. Which fails to support both the research hypothesis and the notion that medical students spend less time participating in group work (Wolf et al., 1989, Coles, 1998; Bok, 2001). Whilst art and design students significantly engaged in less non-interactive methods than medical and healthcare, business and social sciences students. The relationship between these methods and moral competence (C-score) was rather weak and not significant. Meaning that the range of interactive methods examined had no overall bearing on moral competence levels.

Perhaps, just the mere existence of such methods are not enough to foster moral development within higher education, instead it is more intricate as previously highlighted the delivery of supportive systems united with prospects which are built on responsibility and guidance are more likely critical for moral development (Lind, 2000b; Schillinger, 2006). Just as, the effects of ethical interventions on the moral development of students is inconclusive and indirective (Burks & Sellani, 2008; Schmailing & Blume, 2009; Traiser & Eighmy, 2011; Murrell, 2014; Arfaoui et al. 2016; Khatiban et al., 2018).

For, non-interactive methods a small negative association was found, though this was not significant. Essay writing appeared to be negatively associated with moral competence (C-score), though this was not significant at the adjusted alpha level for multiple comparisons. Although, this does offer a vital insight into the idea that declarative text book knowledge only requires attention, listening and memory recalls; which may overturn and overrun the involvement in reflective practices, discussion and deliberation and perspective taking (Kohlberg, 1984; Self et al., 1989; Sprinthall et al., 1994; Lind, 2000b; Lind, 2008b; Lind, 2016). Though, the fact that art and design students exhibited the highest mean moral competence scores and significantly engaged less in non-interactive methods could highlight

a deficiency in testing. Art and design courses may be considered more expressive in nature and so may require a whole new level of teaching and assessment which was not captured within the present questionnaire. Which could mean that the link between essay writing and non-interactive methods as whole with moral competence may not be reliable, instead could be due to the study design failing to capture the full extent and range of teaching methods and assessment utilised on various courses.

With regards to previous educational level in the practice samples, it was predicted that the educational background of practice professions would affect the moral competence scores (H_4). The present research offers partial support for this hypothesis, as no significant differences were found in C-scores between the five educational levels in the healthcare sample. However, a significant differences found in the C-scores between the five educational levels in the non-healthcare sample, between individuals educated to high school level and individuals educated to higher education level. Observation of the scores, documents a increase in C-scores throughout education, with lower c-score emanating within high school education and vocational qualifications for the non-healthcare sample. No such patterns were seen within the healthcare sample, which failed to support the claims of Agurto et al. (2017) that postgraduate studies positively influence moral competence. This result could suggest that educational level has no bearing on the development of moral competence with medical and healthcare professions which could be due to either a lack of relevant more directed approach to increasing moral skills possibly through ethics courses (Park et al., 2012) or possibly the participation in ethics courses which are deemed not efficient enough to help develop moral competence (Maluwa et al., 2018). This research did not account for the prevalence of ethics courses within the UK education system. Further studies should attempt to measure the use of ethics orientated courses to help further understand this conflicting relationship.

Besides, the contradictory relationship between education, whether past or present, and moral competence. Research which has investigated the heterogonous postulate of moral dilemma analysis should not be overlooked as it may offer an alternative, yet revolutionary insight. It combines both the inclusive and comprehensive aspects of the education and preceding professional system with the more subtle and omitted contextual measurement fallacies of moral dilemma construction. Cognitive developmental models usually describe the mental stages of moral judgement competence as a structured whole. This means that stages are not detached reactions, but rather an overall array of thought, which are consistent across various

issues (Colby & Kohlberg, 1987). Moral segmentation goes against this heavily held assumption displaying a direction towards more a heterogeneous claim. Bataglia et al. (2003) affirm that despite slight fluctuations between stage five and stage six reasoning when discussing matters of life and death over vigilantism, both dilemmas should elicit moral competence in a similar way, supporting the homogeneity postulate and further suggesting that moral segmentation should not occur.

A further feature of chapter five was that it investigated the moral competence (C-scores) of each moral dilemma separately to explore the possibility of a moral segmentation. It was hypothesised that medical and healthcare students (H_{5a}) and professionals (H_{5b}) are more likely to undergo a moral segmentation effect when analysing mercy killing scenario presented in the MCT, compared to non-healthcare vocational fields. The findings from practice population's supports the research hypothesis (H_{5b}) which predicted a moral segmentation occurring within medical and healthcare vocations when analysing a moral scenario depicting euthanasia. Though, the results within students sample did not reach statistical significance, it provided valid insights into a developing trend in their line of reasoning, partially supporting the research hypothesis (H_{5a}). The C-scores for both medical students and professionals were lower for the mercy killing scenario when compared to the vigilantism scenario. This was also evident within social science students. Whereas, only subtle variations between the C-scores were noted in other vocations. This research supports the heterogeneous claim to moral competence in dilemma analysis, (Zeidler & Schafer, 1984; Senger, 1985; Beck et al., 1999), but only within healthcare related samples.

Explanations for which could lie around the influence of the context bound competencies (Rest, 1979) of the mercy killing scenario, evoking a set of moral schemas within healthcare students and professionals which are related to the specific context. The mercy killing scenario displays an overlap with healthcare vocational experiences and may influence how they analyse the presented dilemma, further supporting the claim that individuals are morally flexible and evoke different stages in response to different dilemmas (Krebs et al., 1991; Handziska, 2006). Hegazi and Wilson (2013) noted that moral segmentation may occur due to the hidden curriculum in medical education, the loss of idealism and individuals being drawn more towards a legalistic focus with regards to moral judgment. This legalistic tendency was also reported by Murrell (2014) further noting that medical students failed to show a tendency towards post conventional reasoning but displayed higher preferences for conventional means, an inclination to think within a set of rules. It has been suggested that

individuals who are against euthanasia find it extremely challenging to judge and deliberate on the topic (Lind, 2000), and so healthcare professionals may in turn fall back on the legalistic emphasis to support their views more strongly.

Interestingly, the results presented in chapter six of the report, noted that healthcare professionals displayed a higher preference for Type 4 moral orientations, which is to respect laws and order of society, against the act of euthanasia. Medical and healthcare profession is an ethically bound institution and so obeying rules is vowed as valuable and important and is something which may be instilled throughout the education process also. This suggest that healthcare professionals are influenced by an outside force, this combined with the fact that the scenario in question is context specific to their working environment could lead to speculations surrounding how this scenario was analysed.

It could be suggested that a professional identity reinforced through company ethics and even law, as the act of euthanasia is illegal in the UK, may influence opinion, moving away from an individual persona to a more collective professional stance and outlook on the mercy killing scenario. A possible reason for the occurrence of a moral segmentation effect when analysing the MCT. The results from the present research offers support for this assumption. Based on the fact that a moral segmentation effect only occurred within medical and healthcare samples, when analysing the mercy killing scenario. However, it needs to be acknowledged that vocational field was the sole independent variable utilised in this research. Therefore, future studies should aim to build on this conjecture with the addition of factors which may influence decision making. Factors of which were not accounted for the present study. For instance, religious affiliations has also been noted to influence moral choice in dilemmas involving euthanasia and is a strong predictor of opposition (Barnett, Cantu, & Galvez, 2018; Broeckaert, Gielen, Van, & Van den Branden, 2009; Caddell & Newton, 1995; DeCesare, 2000; Grassi et al., 1999; Hains & Hulbert-Williams, 2013; McCormack et al., 2012; Moulton, Hill, & Burdette, 2006; Ozcelik, Tekir, Samancioglu, Fadiloglu, & Ozkara, 2014; Portenoy et al., 1997; K. G. Wilson et al., 2007; Szekely et al., 2015)

Nevertheless, this finding questions the reasons put forward in previous research utilising the MCT (Lind, 2008a) which have reported moral regressions or stagnations within medical and healthcare vocations (Lind, 2000a; Slovackova & Slovacek, 2007; Feitosa et al., 2013; Agurto et al., 2017). Based on the current results, it could be argued that rather than witnessing a regression or stagnation in moral development in healthcare related vocations, it

could possibly be a moral segmentation, due to the medical context of the dilemmas presented, as no such effect occurred in the analysis of the vigilantism scenario, nor did aspects of moral segmentation occur within other vocations. This raises questions surrounding the use of hypothetical dilemmas in measuring moral competence, which will be discussed further in chapter 9.3.

9.3. Moral Dilemmas and embedded ethical compositions

A moral dilemma consists of a short vignette which describes a story containing a level of moral discord, whereby an individual is drawn between opposing moral courses. The conflict arises usually due to the fact that both routes have significant moral explanations to aid decisions (Christensen & Gomila, 2012), such as utilitarianism (consequentialist) and deontological normative ethics (duty based ethics). Chapter six reanalysed the data of the Moral Competence Test (Lind, 2016) with the application of ethical compositions, namely utilitarian and deontological philosophical positions. It assessed both moral scenarios (vigilantism and mercy killing) independently to investigate whether different vocational fields differ in their ethical compositions and to examine whether this is dependent on contexts of the dilemma presented. In the hope to determine how ethical compositions and the contextual elements of moral dilemmas may effect overall moral competence scores, which may be a contributing factor to the occurrence of moral segmentation. Subsequently, exploring the relationship between opinion and moral competence by adding a contextual and directional element to understanding moral dispositions and to provide further insight into possible reasons why individuals within medical and healthcare vocations display lower moral competence.

One of the most identified reasons associated with low moral competence (C-score) is that of opinion (Lind, 2016). Support was found for the prediction that there will be a negative correlation between opinion commitment and moral competence scores (H_1). Negative correlations were found between moral competence (C-score) and opinion commitment strength for both the vigilantism and the mercy killing scenario. The more strongly participants agreed or disagreed with the protagonists actions, the lower their C-scores. The agreement or disagreement with the protagonists actions are not used in the calculation of the C-score, what this aspect manages to do is allow the participant to commit and possibly identify with a particular level of judgement or belief, which is later challenged when they are confronted with both supportive and counter arguments. The fact that opinion commitment

strength is negatively associated with C-scores may indicate and support the notion that individuals find it difficult when confronted with opposing views, despite them views sometimes holding a higher moral stance.

This offers partial support to the conclusions drawn by Keasey (1973), the only disparity being that the present sample consisted of participants all over the age of eighteen and not preadolescents. It could suggest that individuals higher cognitive structure are more resistant to change but for an alternative reason. Observation of the mean scores on opinion commitment between the three groups as presented in table 6.2. Generally, it shows little variation, however when looking at the mercy killing scenario in isolation healthcare professionals display a higher level of opinion commitment when compared with non-healthcare professionals and students. The healthcare population evidently feels more strongly about the decision portrayed in the mercy killing scenario. It seems plausible to suggest that other reasons could be a cause for a resistant to change in higher cognitive structures when deliberating on moral dilemmas which may be contextually related to their profession. Though on the other hand, positive correlations were found between total opinion commitments strength and both vigilantism and mercy killing opinion commitment strength. Which indicates a duality, the more strongly committed an individual is to their opinion on one scenario the more strongly committed they are on another scenario. Which could suggest that opinion commitment may be more consistent and more resilient to contextual elements than outlined. Which diminishes the notion of a healthcare related moral contextual attachment and understanding of the two scenarios presented.

Though this does highlights the significance of opinion and its important role when analysing hypothetical moral dilemmas. Though, just measuring the strength of opinion lacks a matter of direction and meaning. Chapter six utilised opinion commitment strength, but with a directional pull. Whether participants agreed or disagreed with the protagonists actions was given meaning, through the application of ethical compositions such as utilitarianism and deontological philosophical stances. This was first explored through participants initial decisional choice; the higher a participants decisional choice displays a level of agreement with the protagonists' actions denoting utilitarianism and a disagreement of action denoting deontological concepts.

The present study found support for the hypothesis that there would be no significant differences between medical and healthcare vocational fields and non-healthcare vocational

fields in ethical composition patterns (utilitarian and deontological stances), which includes initial decisional choice, total ethical compositions, and ethical compositions adhering to moral orientations, for the vigilantism scenario, portrayed in the MCT (H_2). No significant differences were found in the decisional choices, total ethical compositions, and ethical compositions adhering to moral orientations for the vigilantism scenario between the student cohorts or between healthcare and non-healthcare professionals.

Furthermore, the present study offers support for the hypothesis there would be a significant difference between medical and healthcare vocational fields and non-healthcare vocational fields in ethical composition patterns (utilitarian and deontological stances), which includes initial decisional choice, total ethical compositions, and ethical compositions adhering to moral orientations, for the mercy killing scenario, portrayed in the MCT (H_3). Although, results within the student samples did not always reach statistical significance, this study manages to highlight a trend within medical and healthcare student's line of reasoning.

Both medical and healthcare students and healthcare professionals initially disagreed with the protagonists' action displaying a higher preference for deontological moral views. This finding was strengthened further when examining the range of argument acceptance for ethical compositions. After asking whether participants agree or disagree with the protagonists actions the MCT presents participants with six arguments in favour and six against the actions in the story. They are then asked to indicate whether they accept or reject these arguments on a nine point Likert scale (+4 = completely agree to -4 = completely disagree), all arguments were selected to represent six moral orientations, as identified by Kohlberg (1984) in a normative hierarchy. This displays the range of arguments acceptance, as arguments in favour of the actions reflected utilitarian aspects and arguments against reflected deontological aspects. Medical and healthcare student's significantly rejected utilitarian arguments more than students of other disciplines and displayed higher acceptance of deontological views though this was non-significant. Examination of the moral orientations indicated that medical and healthcare students significantly rejected each of the utilitarian moral orientation type arguments.

Similarly, healthcare professionals were more likely to reject/oppose utilitarian arguments and accept deontological cases more than non-healthcare professional groups. Again, further analysis of the moral orientations revealed healthcare professionals were significantly more likely to reject utilitarian style arguments from Type 1 to Type 6 and significantly accept

deontological arguments more than individuals working outside of healthcare sectors; except for Type 5 which healthcare professionals still displayed a higher preference for although this did not reach statistical significance.

The interesting factor surrounding these results were the stark differences between the cohorts for the two moral scenarios. Analysis of the vigilantism scenario revealed minor differences between the any of the cohorts. In relation to decisional choices and the range of ethical composition argument acceptance all students groups, healthcare and non-healthcare professionals were more inclined towards deontological moral thinking. Deontological domains assert there are a series of moral guidelines, obligations and responsibilities which individuals must uphold in spite of the consequences or circumstantial coincidence (Kant, 2002; Waldmann & Dieterich, 2007). Previous literature have termed these decisive routes to be more innate, instinctive and emotionally charged (McDonald, Defever, & Navarrete, 2017), particularly driven by negative affect (Greene et al., 2001, 2008; Bartels, 2008; Amit & Greene, 2012; Saavendra et al., 2015; Malinowski, 2017).

However, these associations are normally evident through the examination of sacrificial moral dilemmas. The fact that deontological moral views were more favourable in the vigilantism scenario is a noteworthy discovery, as the scenario does not embody any sacrificial elements. Instead it details a situation whereby a group of workers take the law into their own hands by breaking in the main office, to steal tapes, to ultimately prove that the company bosses were illegally listening to private conversations, based on the assumption that the company were firing people on the grounds these tapes. Arguably, the dilemma does not provoke a high emotionally charged response, nor does it detail a great notion of harm level in comparison to scenarios detailing a matter of life or death. It does however detail the act of breaking and entering and theft, which are universally encountered moral codes, e.g. one must not steal. Furthermore, the scenario may be too vague for the more logical and calculated deliberations characterised by utilitarianism, as the reader is unclear whether or not the workers could prove their cause through more legal paths or whether or not the previous workers were fired based on the illegal recordings. This coincides with previous research noting that the legal status of the judged and subjective beliefs in outcome possibilities can influence how individuals perceive and evaluate the dilemma (Kortenkamp & Moore, 2014; Pletti et al., 2015; Barbosa & Jimenez, 2017; Shou & Song, 2017).

The issue here is to decipher the specific lines of reasoning behind participants deontological preferences. Perhaps the vagueness surrounding the details of the scenario did not warrant the calculated means of utilitarianism and as a result deontological moral guidelines and obligations were more appealing grounds. Other explanations could lie in the details of the scenario itself. Research has detailed how an individual's line of reasoning can rest on their different focus of attention, which can have a significant effect on how individuals perceive moral scenarios and consequently respond to them. Bartels (2008) reported that dilemmas which draws a participants attention to actions which break moral rules stimulates deontological inclinations, whereas shifting attention to the consequences which support the violation endorses more utilitarian inclinations. The vigilantism scenario does state that the workers are unable to pursue legal grounds until they prove their suspicions, though it does also highlight that the workers break into the office and take the tapes. It could be suggested that the scenario itself draws participant's attention more towards the violation of a moral rule, more so than the positive latter consequences which favour the initial violation. Furthermore, Broeders et al. (2011) concluded that moral rules can even be triggered subliminally and in turn may impact the decisions individuals make in moral dilemmas, even outside of their conscious awareness. This could be a probable explanation of why participants were more draw towards deontological means, despite the scenario being low in the indices of harm in physical terms and being less emotionally charged, in comparison to sacrificial dilemmas. Suggesting that moral rules are context sensitive (Bartels, 2008), as the content of the vigilantism dilemma may have made the moral rule more salient than the consequences of action.

More prominent variations in moral thinking between the cohorts were evident through the analysis of the mercy killing scenario. This could be due to the elements of the scenario being more thought provoking, as variations in the type of dilemma may have incited fluctuations in judgment. As previously outlined, there is a universal tendency that dilemmas which discuss life or death matters require deliberations at the higher stage of moral principles (Lind, 2016). In relation to the decisional choice both healthcare students and professionals disagreed with the protagonists actions, showing an inclination towards deontological means, whereas the remainder of the cohorts displayed more utilitarian tendencies or remained neutral. This altered slightly, when participants were confronted with arguments in favour and against the protagonist's action. As support for deontological (against) were prominent in all cohorts, though more strongly with healthcare students and professionals.

The transition from utilitarian decisional agreement to an overall tendency to support deontological views within non-healthcare samples could highlight the divergence in attitudes on acts of euthanasia between healthcare professionals and on communal levels. Research has noted that healthcare professionals are more likely to be objectionable towards acts of euthanasia, a view which differs from the general public (Grassi et al., 1999; Pasterfield et al., 2006; Dany et al., 2015; Lavoie et al., 2015; British Medical Association, 2017; Dignity in Dying, 2019). Based on the results, it appears that non-healthcare students and professionals were initially more drawn towards the acceptance and more utilitarian based thinking, though when presented with range of arguments in favour and against this initial view changed.

This may offer partial support for the idea that attitudes are often readily malleable and impressionable (Wilson & Hodges, 1992) and can be influenced by a range of unintentional factors such as affective influences and their transient impact on decision making (Skoe et al., 2002; Schwarz, 2007; Greene, 2008; Andrade & Ariely, 2009), and environmental factors (Nakamura et al., 2014; Wippert et al., 2018).

The mercy killing scenario does highlight the patients level of suffering and so hedonistic utilitarianism, which determines the correctness of an action based solely on the amount of pleasure it produces and the amount of pain it reduces (Bentham, 1971) may have been more appealing to individuals outside of the healthcare sector. Though, as the survey progresses the moral rule of not taking one's life may have become the more salient aspect, possibly leading to negative affect and the acceptance of more deontological outlooks. This variation did not present itself within the healthcare samples. Primarily, healthcare professionals disagreed with the protagonists actions and displayed a consistency in deontological agreement, possibly due to professional ties and identity and given the fact that the act is illegal in the UK. This relates to the previous moral segmentation results, with healthcare students displaying a more legalistic tendency (Hegazi & Wilson, 2013; Murrell, 2014).

The preference toward deontological outlooks seems more fitting to the mercy killing scenario. The story outlines consist of a woman who has incurable disease and requests the doctor to administer medicine to end her life as, and the doctors does so; active voluntary euthanasia. In relation to the context sensitivity of moral rules (Bartels, 2008), the scenario does state that the woman will die from the large dose of painkiller, which manages to reinforce the violation of a moral rule, though the scenario does also highlight the extent of the woman's pain and lost future, which highlights the positive consequences of the violation.

It could be due to the scenario being based around issues of life and death, is more emotionally charged and so provides support for the notion that the deontological thinking is linked to the dismissal of harm and connected to affective systems, namely negative affect as the main reinforcement (Greene et al., 2001, 2008; Bartels, 2008; Amit & Greene, 2012).

A further explanation could stem from the locus of intervention. Waldmann & Dieterich (2007) found that lines of reasoning can also be influenced by the locus of intervention in the casual model, noting that utilitarian prospects are more evident when the intervention influences the path of the agent of harm (such as a trolley) as opposed to the intervention of the path of a patient (such as a victim). The scenario is not a sacrificial dilemma and so does not require a level of intervention by the participant. Although, this line of thought does shed an interesting light on the line of reasoning, as the scenario does involve a human life and so the reinforcement of a moral rule becomes stronger, over that of consequence.

As previously mentioned 'a dilemma is something which exists only in the eye of the beholder' (Lind, 2016, p. 21). This statement becomes evident in the mercy killing scenario. Despite all cohorts being drawn more towards deontological lines of reasoning, it is the significant strength surrounding the rejection of utilitarian arguments and the acceptance of deontological within healthcare students and professionals which is intriguing. In particular, the higher acceptance of deontological Type 4 moral orientation, which is to respect laws and order of society. Arguably, this is not surprising as medical and healthcare profession is an ethically bound institution and so obeying rules is vowed as valuable and important. This presents the view that healthcare professionals are directed by an outside force, this coupled with the fact that the scenario in question is context specific to their working environment could lead to speculations surrounding how this scenario was analysed. It could be suggested that a professional identity reinforced through company ethics and even law, as this act is illegal in the UK, may influence opinion, moving away from an individual persona to a more collective professional stance and outlook on the mercy killing scenario.

This collective identity may have ties with research conducted on reputational concern, self-preservation and social impressions, individuals who embraced deontological views are appraised as being warmer and so could lead to a sequence of objective orientated behaviour for the self-preservation of warmth. (Weiss & Conway, 2017; Lee et al., 2018). Rom & Conway (2018) noted that self-preservation forms moral dilemma judgements, which stem from more than cognitive and affective processes, further concluding that multifaceted social

considerations may play a casual role in moral dilemma assessments. If social factors can influence moral dilemma analysis, then it may be safe to presume that professional identity may also have a significant influence. Deontological choices have also shown to be partially bound by self-awareness and individual image concern (Reynolds et al., 2019). Instead, self-preservation of warmth could it be in this case the self-preservation of professional identity, capability and integrity, as outlined acts of euthanasia are illegal in the UK and so could lead to a higher acceptance of argument opposing the act. Which does support the notion that UK healthcare professionals are more likely to dispute the induction of both voluntary euthanasia and physician assisted suicide. Though, this does not inform whether this dispute for the introduction of such measures is due to the reinforcement of law and ethics within UK healthcare practice or from personal opinion, as Terkamo-Moisio et al. (2017) found a divergence between ethical guidelines which lace nursing communities and individual nurse attitudes, noting that nurses deem euthanasia as an agreeable avenue, despite the domains ethical policies.

Further contextual and professional ties to the dilemma may account for a higher preference of deontological views and a stronger rejection of utilitarian views within healthcare students and professionals. The notion of intergroup bias could also be at play, research surrounding sacrificial dilemmas has highlighted that these forms of biases can impact neutral systems when making moral decisions (Cikara et al., 2010; Christenson & Gomila, 2012). Although, the mercy killing was not a sacrificial dilemma and does not have salient in group and out group. It may be plausible that healthcare students and professionals identify more with the doctor in the scenario. It is not an intergroup bias per say based on pure support of that individual member, but rather an intergroup bias towards medical and healthcare society as a groups, which deem the act as wrong and illegal and so will not endorse any supportive means at all.

Furthermore, research has highlighted suggesting that if moral dilemmas are considered to be more 'up close and personal' in terms of proximity and level of involvement results may shift from utilitarian stances to being more deontological. Reasons circulate to the execution of an action rather than the construction of a theoretical decision (Ugazio et al., 2012). The mercy killing dilemma's is purely hypothetical in the made up novel sense, however similar scenarios may have been encountered by UK healthcare professionals in practice. As research has indicated that request for euthanasia from patients and family members fall between 20.5

% and 25% within physician samples (Parpa et al., 2010; Subba et al., 2016). Thus the 'up close and personal' element takes on a new meaning built on previous experiences.

This idea ties into the notion of story pull, which proposes that people apply various levels of moral reasoning reliant on their familiarity and potential previous involvement which in turn may prime a certain response (Elm & Weber, 1994). Common criteria of story pull may be whether individuals can identify with the protagonist, whether they have experienced a comparable situation, or they completely grasp the conflict of the dilemma presented (Elm & Weber, 1994). In this particular case all of these criteria can be met and may be another plausible explanation as to why healthcare students and professionals display a higher preference of deontological views and a stronger rejection of utilitarian views when analysing the mercy killing scenario.

Explanations for this finding within student populations may differ slightly, as they may not have first-hand experience of such an event, but may have undergone a series of ethical instructions, and so the scenario is not necessarily a real life reflection, though it may not be completely hypothetical either. Hypothetical and real life are arguably two juxtaposed points. It is the area between these extremes which remains unquestioned and overlooked. The mercy killing scenario may hold a level of contextual attachment within student populations. This could be a moral scenario which at a given time is considered hypothetical, but yet for that individual may hold the potential to transfer or flourish into a real life moral situation. A scenario which may help clarify this term is giving birth, for males this event is purely hypothetical (for the human species at least) and for females who have given birth this is a real life experience. It is the females who have not yet had children and not given birth who are between these extremes, meaning the experience at the given time is hypothetical to them, but has the likelihood to unfold into a real life experience. Therefore, it is possible that individual's line of reasoning may alter dependent on the elements of an individual's contextual attachment. This proposition could account for the results not always reaching statistical significance, and instead highlights a trend in students line for reasoning, which may be strengthened in practice.

Though, these lines of thinking do not support the findings of Dany et al. (2015) who reported physicians strongly opposed euthanasia until they encountered a particular real life case, which refined their judgement, possibly due to the level of personal familiarity. This disparity relays back to deliberations on the precision of utilising hypothetical dilemmas and

issues surrounding the validity and extent this speculative sense of morality can forecast actual behaviour and decision making in real life situations (Kang et al., 2011; Teper et al., 2011; Bostyn et al., 2018; Haghani & Sarvi, 2018). It is highly unlikely that individuals encounter these extreme scenarios, though for arguments sake in relation to the mercy killing scenario healthcare professionals have a more likely chance of experiencing such incidents, perhaps in reality the types of utilitarian decisions presented to them would actually be a rare occurrence in real life (Knutson et al., 2010) and so deontological means are more justified and probable.

With regard to the calculation of moral competence (C-score), if a participant was to accept all arguments in favour of the protagonists actions and reject all arguments which oppose the protagonists action, or vice versa they are considered to have low moral competence, as it seems they not rating arguments based on their moral quality, but rather other factors such as opinion. It was predicted that there will be a significant correlation between moral competence and overall ethical composition patterns of utilitarian and deontological stances (H_4). In the present study moral competence (C-score) was positively correlated with total level of utilitarian commitment and negatively correlated with total level of deontological commitment, which supported the research hypothesis. Furthermore, higher opinion commitment strength was associated with deontological stances and were less associated with utilitarian prospects. Thus, individuals with higher levels of moral competence were more likely to support utilitarian arguments and less likely to support deontological arguments. Observation of figure 6.6 shows that medical and healthcare students and professionals on average did not accept any of the utilitarian arguments, those in favour of the protagonist's actions within the mercy killing scenario, and were more inclined to support deontological ones. This taken together with how the C-score is calculated could be interpreted as on average healthcare students and professionals accepted most of the arguments opposing the protagonists' actions and rejected the majority of arguments in favour. This could suggest that the particular was that healthcare students and professionals analysed or applied their line of reasoning to the mercy killing scenario, could have in fact negatively affected their C-scores, leading to the occurrence of a moral segmentation. Thus, concluding that healthcare students and professionals exhibited the lowest C-scores in comparison to students of other disciplines and non-healthcare professionals.

Deontological based reasoning appears to be the most active. Though for different reasons, namely two factors; the type/context of the moral scenario and professional ties. The low

indices of harm and the lack of positive consequentialist outcomes in the vigilantism scenario may have shifted the focus to the violation of a moral rule leading to more deontological lines of reasoning. The contextual elements surrounding the mercy killing scenario may have been a leading factor the significantly stronger acceptance of deontological aspects and rejection of utilitarian aspects within healthcare student and professional groups and a possible explanation as to why these groups exhibited the lowest C-scores. Reasons as to why could be partially explained by the level of contextual attachment of the mercy killing scenario itself. Research has highlighted the biases which can be present through the utilisation of hypothetical moral dilemmas and so the context of the scenario with the chosen sample population is an area which needs to be acknowledged and addressed by researchers when exploring moral competence.

9.4. Individual Differences

Personality, emotional intelligence and moral development each represent fundamental areas within psychological research, behaviour and decision making. Chapter seven attempted to shed light on the division offers an important area of study, casting light on the subjective aspect of moral development and personality when deciphering perceptions of moral behaviour. The current research aimed to capture associations between these three primary domains by exploring individual differences in relation to educational and vocational choice, with further investigations into personality over a time span, with an additional exploration into the relationships of moral competence with personality and emotional intelligence from educational and student populations to professional practice.

Research has highlighted a link between personality and vocational choice, though generally before an individual is able to pursue a prosperous career they will most likely go through the education system. There are many factors which can influence an individual's decision regarding future educational endeavours, one upcoming prospect being personality, namely the Dark Triad. It was hypothesised that non-healthcare students (H_{1a}) would display higher levels of the dark traits compared to medical and healthcare vocational fields.

Results indicated that business students displayed higher levels of Machiavellianism and narcissism compared to medical and healthcare students, though only the latter was significant. Medical and healthcare students exhibited the lowest levels of the dark traits followed by social science students. This offers partial support the research hypothesis and the self-selection hypothesis and for previous research which link business and students from

closely related fields such as management and economics to high levels of the dark traits and more so when compared to students of other disciplines such as social sciences (Bogdanovic & Cingula, 2015; Turnipseed & Cohen, 2015; Krick et al., 2016; Vedel & Thomsen, 2017).

Narcissism is characterised by an unjustified feeling of grandiosity and an unusual sense of entitlement (Jones & Paulhus, 2014). Previous research has indicated that narcissists score higher on measures of self-efficacy, this coupled with locus of control and risk propensity may contribute to the concept of the entrepreneurial personality (Mathieu & St-Jean, 2013). Whereas, machiavellian behaviour exhibits itself as having a callous effect, a strategic calculating orientation and manipulative tendencies. Meta-analytic evidence proposes a strong association between Machiavellianism and unethical decision making within the workplace (Kish-Gephart, Harrison, & Trevino, 2010). Both these traits have been linked to a range of counterproductive work behaviours. Jonason et al. (2012) examined tendencies towards manipulation styles in the workplace and found Machiavellianism to be associated with hard tactics such as direct manipulation and assertiveness. Jonanson et al. (2014) explored deception and reported Machiavellianism to be associated more with the use of white lies, narcissism with lying for self-gain with a higher level of self-reported skill for lying, and psychopathy to lying for no reason. The dark traits appear to be highly significant when exploring socially undesirable characteristics within individuals working within financial and economic industries (Jonason et al., 2012). Thus, it would seem that the data supports the claims of the self-selection hypothesis, that individuals with higher levels of the dark traits will decide which educational route to take based on the chances of attaining powerful positions in the future.

Though, one of the durable claims of the self-selection hypothesis resides within the construct of psychopathy. Research has suggested that business and economic students display higher levels of psychopathy (Wilson & McCarthy, 2011; Bogdanovic & Cingula, 2015; Krick et al., 2016; Vedel & Thomsen, 2017). This study did not support this claim, as business students did not significantly exhibit higher levels of psychopathy when compared to students of other disciplines. Instead, the present findings supports the claims made by Bailey (2017) who found that psychopathy levels of accounting students to be significantly lower to students of other disciplines which persists throughout education and prediction into professional practice.

Psychopathy is defined by a lack of empathy, remorse, impulsivity, deception and manipulation (Hare, 1999; Jones & Paulhus, 2014). A possible explanation could rest on the distinguishing values of each of the dark traits. By accounts, psychopathy is arguably the darkest of the three traits, which is evidenced even in definitional accounts. The definition of psychopathy embodies dimensions of both Machiavellianism and narcissism through the use of manipulation and entitlement, though has the addition of darker characteristics such as lack of empathy and remorse, deception and impulsivity. Supported further by the fact that lay peoples perceptions of the dark traits indicate psychopathy to be darker when compared to narcissism (Rauthman & Kolar, 2012). The traits distinguishing aspects are also evident in relation to deception (Jonason et al., 2014), with psychopathy being related to lying for no reason whilst Machiavellianism and narcissism are related to white lies possibly used to save relationships or to ease a hectic situation, or lying for self-gain. The difference being resides in reason and motive; lying for no reason compared to lying for a reason. The suggestion being that Machiavellianism and narcissism is higher in business students for particular reasons and motives such as to aid individuals to success, whereas psychopathy may not be either developed or required as such at this stage.

Despite business students being the central focus in relation to the dark traits. The fact that art and design students exhibited the high levels of the dark traits cannot be overlooked. The only difference being that the comparison with other disciplines the results weren't significant. This could have been due to the sample size of the art and design students being smaller and possibly unrepresentative. Though this does open up an interesting point of discussion. Art and design courses consist around levels of expression and creativity. Narcissism may be more understandable, as opposed to psychopathy in this discipline, as the need for admiration for the expressive endeavour which these individuals partake, are in fact the essence of this institution. On the other hand, psychopathy, when observing the impulsive characteristics, may also serve more fitting for creative tendencies. Jonason, Richardson and Potter (2015) reported that individuals with higher level of psychopathy reported better mechanical skills and lower scholarly ability, further suggesting that this may be the reason for a vocational interest in more practical work. Though the sources of creativity may not be as positive as previously portrayed. Kapoor (2015) found that the dark traits are more associated with negative creativity, which is the use of creative outlets for self-gain and benefit. Jonason, Abboud, Tome, Dummett and Hazer (2017) found that individuals high in narcissism rated themselves as being more creative than others, but were rated as

being less creative by raters. Furthermore, the authors found Machiavellianism and psychopathy to be more associated with harm-based creativity, which was tested using neutral and harmless objects, individuals high in these traits were more likely to utilise the objects in a way to obtain possessions from the world or even to commit crimes.

Moreover, it is not surprising that medical and healthcare students displayed the lowest levels of the dark traits, followed by social sciences; which was anticipated acknowledging that the ethics of the profession is built on compassion, virtue and trust. The results align with Vedel and Thomsen (2017) who found that business students exhibited the highest dark triad scores whilst psychology students displayed the lowest. The authors go on to suggest that the self-selection hypothesis in relation to the assessment of personality traits are significant in the prediction of education choice for both bright and dark traits. Though, the differences in the mean score on the dark traits between student disciplines were not great, the results do shift more towards support for the self-selection hypothesis in educational choice, as opposed to the indoctrination hypothesis, which suggests that immoral behaviours are more widespread among business students due to the academic training received (Elegido, 2009). Theories schooled in business education are said to produce moral misbehaviour (Elegido, 2009), with the primary focus being on profit maximisation, at the expense of promoting moral decision making abilities (Hummel et al., 2016); financial obligation being the priority. It was further predicted that levels of the dark traits will increase across educational span in non-healthcare students (H_{3a}). This hypothesis was not supported. No significant increases or decreases in the dark traits were found in any of the student cohorts which supports the results found by Bailey (2017). This could have been partially due to the cross sectional design of the present study and in the research proposed by Bailey (2017). A cross sectional design may not have been robust enough to explore and capture any fluctuations of the dark traits throughout education; longitudinal, pre-test – protest designs yield the most credible evidence (Pascarella, 2006).

With regards to vocational choice, chapter seven measured levels of the dark traits within a practice sample comprised of individuals working within healthcare environments and individuals working in non-healthcare more business orientated environments. When it comes to moral dimensions both these areas possess social, human and ecological features. Though, it could be suggested that these two fields can be distant on the grounds of responsibility; medical divisions are predominantly concerned with human responsibility and business professions with financial responsibility.

It was hypothesised that non-healthcare professionals (H_{1b}) will display higher levels of the dark traits compared to medical and healthcare vocational fields. This was only partially supported. It was found that non-healthcare professionals significantly displayed higher levels of psychopathy than individuals working within healthcare. This supports the claim that within business and management there is a significantly higher level of psychopaths than in other occupational domains (Babiak & Hare; 2006; Boddy, 2011) and individuals with such traits will overcome any obstacles to receive their goals (Krick et al., 2016). Taken at face value it would be easy to assume that individuals working within business orientated environments have higher levels of psychopathy.

Though a comparison of the results from student samples with practice indicate that students have a higher mean score of psychopathy than their professional counterparts. So even though the results between healthcare and non-healthcare environments were significant, it may not be an indication that business and management domains on a general have a significantly higher level of psychopaths. Instead, other factors might have to be explored, such as job role and position, as it has been noted that individuals with specific socially undesirable traits attain higher positions more frequently than others (Babiak & Hare, 2006). No significant differences were found in levels of Machiavellianism and narcissism between healthcare professionals and non-healthcare professionals and so the notion that Machiavellianism in the workplace perceptivity manipulate conditions in their interest and that narcissists have been linked to speedier promotions due to higher levels of self-promotion and impression management (Hogan & Kaiser, 2005; Hurley, 2005) could not be supported.

With regards to years of practical experience and the dark traits, it was predicted that levels of the dark traits would increase across over years of practical experience in non-healthcare professionals (H_{3b}). This claim could not be supported. No significant differences were found in the dark traits between years of practical experience in both healthcare and non-healthcare professionals. Although, observation of the mean scores as presented in table 7.5 displays an interesting pattern. Non-healthcare individuals with less than one years' experience and those with sixteen years or more exhibited similar mean scores on psychopathy. The fluctuations all remain in the years between these points, the midpoint being around the six to ten year mark. If one was to contend the argument that individuals with specific socially undesirable traits attain higher positions more frequently than others (Babiak & Hare, 2006). It could be suggested that between less than one year and two years' experience is more of a challenge to

attain higher positions within companies, however a possible promotion could be evident and is more likely after six to ten years' experience, which could explain the decrease in psychopathy scores. Though, the results should be treated with caution as the data was examined cross sectionally and may not yield reliable evidence.

In relation to emotional intelligence, no significant difference was found between field of study and professional field on measures of emotional intelligence were found. Which failed to support the research hypotheses which predicted a significant difference in emotional intelligence levels between healthcare students (H_{2a}) and professionals (H_{2b}) compared to non-healthcare vocational fields. Emotional intelligence is a collection of non-cognitive abilities, competence and proficiencies which embody professionalism, honesty and responsiveness to aid individuals handle situational difficulties and pressures within a working environment (Talarico et al., 2013). Palmer et al. (2009) from a sample of 4775 participants reported a mean score of 121.86 ($SD = 13.84$) for total emotional intelligence from a maximum score of 155. Observation of the mean scores for both the student sample and practice samples as presented in tables 7.2 and 7.3 shows that students of various disciplines, healthcare and non-healthcare professionals display adequate levels of emotional intelligence.

Though, student averages are slightly lower than their practice counterparts, this could be possibly due to the Genos Emotional Intelligence Inventory (Palmer et al., 2009) being designed for use within the workplace and so some students may not have been able to fully relate to some of the items or possibly due to a smaller sample size, as only 44% of the student sample completed the survey. Alternatively, it may demonstrate that emotional intelligence develops efficiently throughout education into practical realms, this could be supported by research in the healthcare literature reporting emotional intelligence as a predictor of academic success and performance and the impact it may have on the quality of student learning and comprehension and understanding within practice (Smith et al. 2009; Por et al., 2011; Fernandez, Salamonson & Griffiths, 2012; Chew, Zain & Hassan, 2013; Talarico et al., 2013; Libbrecht et al. (2014); Wijekoon et al., 2017; Sharon & Grinberg, 2018; Snowden et al., 2018). Furthermore, Foster et al. (2017) reported that nursing students level of emotional intelligence increased across curriculum.

This research could not detect any significant differences between healthcare care and non-healthcare professionals on levels of emotional intelligence, rather both professions displayed

similar levels. It would seem plausible that emotional intelligence is not just a vital factor within healthcare domains but within most organisations and is likely a predictor in employee performance (Beauvais et al., 2011; Al-Hamdan et al., 2017); wellbeing (Weng et al., 2011); leadership qualities (Gardner & Stough, 2002; Downer et al., 2006; Alston & Dastoor, 2010; Echevarria et al., 2017) career adaptability (Coatsee & Harry, 2014); and conflict management (Chan, Sit & Lau, 2014; Basogul & Ozgur, 2016) within most organisational settings.

Furthermore, no differences were found between students of various disciplines on the levels of emotional intelligence and so it could not support the claim that nursing or other healthcare students exhibit higher levels of emotional intelligence (Stiglic et al., 2018). Rather each of the fields of study displayed similar levels of discourse and all displayed medium to high levels of emotional intelligence and so the research does support the claims that students on business and other related courses display adequate levels of emotional intelligence (Singh, 2014; Coco & Guttikonda, 2015; Akers et al., 2017); despite the conjecture that business students exhibit higher levels of dark personality traits (Bogdanovic & Cingula, 2015; Turnipseed & Cohen, 2015; Krick et al., 2016; Vedel & Thomsen, 2017).

This amalgamated connection between emotional intelligence and the dark traits poses some interesting questions and indulges the notion of a dark side of emotional intelligence.

Previous narratives have suggested that individuals high in emotional intelligence may be able to create positive impressions of themselves for personal gain and self-interest (Kilduff, Chiaburu, & Menges, 2010). Though, research investigating a dark intelligence appears inconclusive. Subtle differences were found between student samples and practice samples in the relations between emotional intelligence and the dark traits. Machiavellianism held a negative correlation with emotional expression in student samples, whereas in practice sample it held negative association with the majority of emotional intelligence subscales, except for emotional reasoning and emotional management of others. Psychopathy held negative correlations with emotional expression, emotional awareness of others and total emotional intelligence, whereas in practice samples psychopathy held negative relationship with the majority of emotional intelligence subscales except for emotional reasoning. For narcissism, positive correlations were found with emotional reasoning and emotional management of others within student samples, whilst minimal correlations were found in practice samples.

The disparity of the results between the two samples could be due to the Genos Emotional Intelligence Inventory (Palmer et al., 2009) being designed for use within the workplace and so some students may not have been able to fully relate to some of the items or possibly due to a smaller sample size, as previously noted only 44% of the student sample completed the survey. Alternatively, it could be due to the darker use of emotional intelligence to create positive impressions of themselves for personal gain and self-interest may not be apparent within universities as it is in practice. Or rather the need to manipulate and use emotional intelligence through darker channels may be weaker within universities possibly due to a lower level of competitiveness which may be present in within professional realms. Jauk Freudenthler & Neubauer (2016) found lower emotional intelligence to be associated with psychopathy in females and narcissism in males which highlights differences when exploring gender. Thus, it may be possible that even differences based on current life phases, such as whether an individual is at university or within professional practice may also provide different results.

The results were more prominent within practice samples. Machiavellianism and psychopathy were found to correlate negatively with the majority of the emotional intelligence subscales which supports previous research (Petrides, Vernon, Schermer & Veselka, 2011; Nagler, Reiter, Furtner & Rauthmann, 2014; Zhang, Wang & Finy, 2015; Megiasa, Gomez-Leala, Gutierrez-Coboa, Cabellob & Fernandez-Berrocala, 2018; Miao, Humphrey, Qian & Pollack, 2019). Though, this does not necessarily support the idea of a dark intelligence as it is a negative association, it would be expected that in order for individuals high in emotional intelligence to create positive impressions of themselves for self-gain and interest, a positive association with the dark traits should have been evident.

The only subscales with insignificant associations to either Machiavellianism and psychopathy were emotional reasoning, which is being able to ask others how they feel about various solutions when problem solving in the workplace (Palmer et al., 2009) The second being the emotional management of others for Machiavellianism only, which is being able to create a positive work environment which enables other towards work related goals (Palmer et al., 2009). The associations though insignificant were still negative. Arguably, asking people how they feel could draw out the externally orientated dimensions of Machiavellianism and why psychopathy is considered to be the darkest of the three traits (Rauthmann & Kolar, 2012).

With regards to narcissism, positive correlations were found with emotional reasoning and emotional management of others within student samples, whilst minimal correlations were found in practice samples. This offers support for the contradictory nature of narcissism in relation to emotional intelligence. As, the results within the student sample coincides with research reporting a positive relationship between emotional intelligence and narcissism (Petrides et al., 2011; Nagler et al., 2014; Zhang et al., 2015), namely, emotional reasoning and the emotional management of others. Furthermore the study supports research displaying minimal insignificant relations between narcissism and emotional intelligence (Miao et al., 2019). Narcissism is characterised by an unjustified feeling of grandiosity and an unusual sense of entitlement (Jones & Paulhus, 2014) and has been considered the brightest of three traits (Rauthmann & Kolar, 2012). Possible reasons why narcissism might be related to higher levels of emotional intelligence circulate around narcissists attempting to uphold their grandiose self-image by appropriately interacting with others, as they do not really need to understand and interpret other emotions to do this (Nagler et al., 2014).

When exploring the trajectory relationship between moral competence, personality and emotional intelligence, moral competence (C-score) only held positive correlations with emotional self-awareness and emotional self-management, within the student population only. Emotional Self-awareness is the individual awareness of experiencing negative feelings at work and understanding how this may influence colleague interactions. Emotional self-management is being able to handle and respond effectively to events which frustrate individuals at work, without rumination. This relationship supports the notion put forward by Athota et al. (2009), as both emotional intelligence and moral reasoning share an overlap, as moral reasoning requires the deliberation of an individual's values and principles to direct decision making, these values are highly dependent on the regulation and perception of both individual emotion and that of others. However, it also offers partial support for the distal relationship between the two concepts, as only two positive associations were found between emotional intelligence and moral competence and within the smaller sample size comprised of students. According to this outlook, personality may be a mediator, as Athota et al. (2009) found emotional intelligence to be a significant predictor of Extraversion, Openness, Neuroticism, Agreeableness, which consecutively were significant predictors of moral reasoning; however no such pathway was identified.

As the Dark Triad's relationship with moral competence was tenuous, with vacant correlations between any of the variables, which fails to support the research hypotheses

(H_{4a} ; H_{4c} ; H_{4e}) and the notion of an unturned and malfunctioned morality (Williams et al., 2006; Campbell et al., 2009; Furnham et al., 2013; Jonason et al., 2015; Zuo et al., 2016). However, the results do coincide with Karamavrou et al. (2016), who proposed a weak positive correlation with conscientiousness. To the author's knowledge, including the present research, to date there has been two pieces of research utilising the Moral Competence Test with two very prominent personality measures, both of which have been unable to find any strong associations between personality and moral competence.

Reasons for which could lie in the issue of stability or dispositional nature. According to personality psychologists personality is considered to be stable across the lifespan, becoming more stable from childhood to adulthood (McCrae & Costa Jr, 1994). It could be due to the issue of stability that high level personality traits may be linked more to moral orientations. The *instability/stability* change of complexities (Kohlberg, 1964) suggested that the early stages of moral development lacked universality resulting in more impulsive and unpredictable behaviour. However, higher stages of moral development were considered to be more consistent and anticipated, as stages were characterised by more stable and wide ranging principles (Kohlberg, 1964; 1984) a probable reason why they may be considered to be universally encountered (Lind, 2016).

Alternatively, it has been suggested that moral competence is learnt (Lind, 2016) and adheres to certain environmental conditions, such as decent (Lind, 2000b). As demonstrated in the fluctuation of C-index scores in the present report and studies noting a moral competence regression (Lind, 1985; Slovackova & Slovacek, 2007; Feitosa et al., 2013), suggested that moral competence is not a stable construct, it was a learnt ability highly dependent on various contextual factors. Due to this links to high level personality traits and emotional intelligence may become tenuous. Further research should explore in greater detail why this learnt ability was weakly related to individual personality and emotional intelligence, by further exploring the notion of a distal relationship.

Though with regards to ethical compositions, it was predicted that there would be a positive correlation between utilitarian ethical composition patterns and the darks traits Machiavellianism (H_{5a}), narcissism (H_{5b}), psychopathy (H_{5c}) and a negative relationship with total emotional intelligence (H_{5d}). This was supported for the dark traits, but only partially supported with emotional intelligence. Machiavellianism, narcissism and psychopathy held significant positive correlations with total utilitarian support and negative correlations with

deontological support, though psychopathy was the only significant relation for deontological support. For emotional intelligence, emotional expression, emotional self-management, emotional management of others held negative correlations with overall total utilitarian commitment, the latter two were from practice sample only. As did total emotional intelligence which also held positive correlations with deontological aspects, again within the practice sample only. This disparity of the results between the two samples could be due to the Genos Emotional Intelligence Inventory (Palmer et al., 2009) being designed for use within the workplace and so some students may not have been able to fully relate to some of the items or possibly due to a smaller sample size of the student population.

These findings do not support the claim that utilitarian decisions are the morally appropriate option as they are more reflective, but offers partial support for the notion they are less emotionally arbitrated (Foot, 1967; Quinn, 1989; Green et al., 2001; Valdesolo & Desteno, 2006; Nichols & Mallon, 2006; Tassy et al., 2011), though not through positive means. Instead this supports previous work which link utilitarian inferences to a reduced aversion to carrying out harmful acts, a lack of empathetic concern, subclinical psychopathy and Machiavellianism (Bartels & Pizarro, 2011; Koenigs, Kruepke, Zeier & Newman, 2012; Gleichgerrcht & Young, 2013; Wiech et al., 2013; Kahane et al., 2015; Patil, 2015; Aktas, Yilmaz & Bahcekapili, 2017). Research has defined narcissism as being characterised by an unjustified feeling of grandiosity and an unusual sense of entitlement; psychopathy is by a lack of empathy, remorse, impulsivity, deception and manipulation (Hare, 1999; Jones & Paulhus, 2014), and machiavellian behaviour exhibits itself as having a callous effect, a strategic calculating orientation and manipulative tendencies. Characteristics which seem fitting to the cost benefit calculation which adheres to utilitarian prophecy.

An interesting factor resides in the types of dilemmas used, neither of the scenarios are sacrificial dilemmas which are considered to be extreme, nor are they written in the first person, which draw participants into that persona and situation and warrant an individual response. Instead, the moral scenarios proposed, outlines vigilantism and mercy killing which is arguable a common discussion within society, furthermore they construct around an anonymous person or group and participants are asked for their level of agreement on the issues and arguments presented. This lack of personal involvement and in the scenario could have made the choice for utilitarian prospects more accessible due lack of accountability, supporting the claim that utilitarian responses are associated with a diminished perception of responsibility and a reduced aversion to carry out harm (Franklin, McNally & Rienmann,

2009; Patil, 2015). Furthermore, the lack of extremities in the current moral scenarios add further support to the notion that the dark traits association with utilitarianism may be as result of a defective emotional function which lead these individuals to reject moral deontism as irrelevant (Djeriouat & Tremoliore, 2014).

The tenuous relationship between the dark traits, emotional intelligence and moral competence could possibly be due to the relatively small sample size of the student population, which could have impacted the reliability and interpretation of findings and the experimental design. The MCT utilises scenarios not only from a hypothetical viewpoint but also from a third person perspective. It could be suggested that these designs are not robust enough to capture the interest of individuals high on the dark traits. Alternatively, it must be noted that student samples and practice samples which don't adhere to job roles or positions may not be the most representative if research intends to capture individuals on the higher spectrum of the dark triad traits. Research exploring the affiliations between the three dark triad traits, emotional intelligence and moral competence requires further grounding.

9.5. Practical Explorations: Moral Distress

Moral distress is progressively being acknowledged as a significant challenge for healthcare systems and providers. Extensive research has been conducted on this phenomena, most highlighting the potent causes of moral distress within healthcare environments and the serious consequences of its experience. Chapter eight aimed to assess both the frequency and intensity of moral distress, the evaluation of hospital ethical climates, intention to leave for physicians and nurse's working within private healthcare intuitions in the UK. Further focusing on particular characteristics of moral distress through the exploration of personality, emotional intelligence, moral competence and ethical composition evaluations in hypothetical moral scenarios. Professional practice is usually the next step after education within healthcare vocations, with routes being more uni-dimensional. It aims to understand the potential interaction between moral development and moral distress, further addressing reports in the literature that moral distress may stem from internal constraints, such as moral competence. Furthermore, it hopes to understand potential links between how individuals perceive and evaluate hypothetical moral dilemmas and how individuals experience moral distress within their working environment.

Research has documented that nurses experience higher levels of moral distress compared to physicians, which increases throughout of years of experience (Hamric & Blackhall, 2007;

Epstein & Hamric, 2009; Hamric et al., 2012). Therefore it was hypothesised that Nurses would display significantly higher levels of moral distress than physicians (H_{1a}), which is likely to increase with years of practical experience (H_{1b}). This prediction was not supported. Despite the moral distress scores of nurses being higher in the study, no significant differences were found in composite moral distress scores between nurses and physicians and no relationship was found with years of experience in the nurse sample. On the other hand, physicians levels of moral distress seems to decrease with both age and years of experience, which presents the notion of a reversed crescendo effect within physician sample, but with no support of an upright crescendo effect within nurses.

Speculations as to nurses experience higher levels of moral distress focus on the multi role of the nurses, with themes of them being caught in between commitments to patients, physicians and employing organisations, overall acting on decisions made by others (Englhardt, 1985; Liaschenko, 1995). This in turn may spark interdisciplinary conflicts between nurses and physicians (Jameton, 1984; Repenshek, 2009; Shoorideh et al., 2012; Zuzelo, 2007), a power discrepant which has been noted to be a potent source of moral distress (Austin et al., 2005; Deady & McCarthy, 2010; Elpern et al., 2005; Manojlovich, 2007; Wojitowicz et al., 2014). Yet, these potential integrative clashes were not identified in the top five most common causes of moral distress in the study by either nurses or physicians. Liaschenko (1995) notes that the above issues surrounding professional role are highly relevant to the ethical environment of healthcare organisations.

The study found no significant differences in the ethical climate ratings between physicians and nurses, both samples groups reported a relatively positive ethical climate. However, the research supported the second research hypothesis which that there would be negative correlation between ethical climate ratings and moral distress scores within the nurse sample (H_2). Therefore it may seem that in the presence of a positive ethical climate that professional conflicts between nurses and physicians are too a minimal and may not be a probable cause as to why nurses experienced higher moral distress than physicians. Rather, it may be due to the nurses role generally, as a comparison between nurses and physicians based on the frequency and intensity of moral distress situations, revealed that nurses significantly encountered morally distressing situations more frequently, but no differences were revealed in levels of intensity. Two of the items nurses experienced more frequently, as a presented in table 8.1 were centred around patients family, portraying the active and up

close role of nurses. Thus, it may be viable to assume that nurses experience encounter these situations more often, due to their active variegated role within healthcare systems.

Alternatively, if professional conflict is one of the main reasons why nurses experience higher levels of moral distress, it may have been manifested through extrinsic factors. Research has highlighted that interdisciplinary conflicts arise due to the sundry of professionals working within patient care, each of which have been through their own disciplines distinctive educational and socialisation practices and so in turn may convey through disassociated routes of communication and comply with different professional codes (Shannon, 1997; Hamric et al., 2006; Eizenberg et al., 2009). Poor work place communication has been noted to contribute to moral distress (Karagozoglu et al., 2015; Shoorideh, et al., 2012; Trotochaud et al., 2015). Poor team communication which impacts patient care was identified in the top five most common sources of moral distress for both nurses and physicians. Therefore, it seems that professional conflict is not a direct cause of moral distress in the present study, but possibly a contributory factor emanating through the communication methods of an interdisciplinary team; a situation in which both physicians and nurses experience.

Interestingly, the top five most common sources of moral distress in the study were identical for nurses and physicians. With four of the five sources related to extrinsic factors, offering support that staff shortages (Corley, 2002; Mrayyan & Hamaideh, 2009; Ohnishi et al., 2010; Pauly et al., 2009; Zuzelo, 2007); lack of provider continuity (Woods et al., 2015; Trotochaud et al., 2015); and delivering less than optimal care due to management pressures to reduce costs (Woods et al., 2015); all contribute to moral distress for nurses and physicians. The other most common source rests on the category of the depersonalisation of care and quality assurances, as both nurses and physicians highlighted that working with staff not competent enough as the patient care requires, as a main contributor. This finding has been documented previously in the USA (Zuzelo, 2007); New Zealand (Woods et al., 2015); Israel (Eizenberg, Desivilya & Hirschfeld, 2009); Sweden (Silen et al., 2001); Turkey (Karagozoglu et al., 2015) and Iran (Shoorideh et al., 2012) and has now been established within the UK. Reasons as to why this contributes to moral distress highlights the conflicting role of having to choose between professional integrity, adherence to colleagues and maintaining an unwavering work environment (Hamric et al., 2006).

Despite, the results displaying similarities with research on extrinsic factors of moral distress, it also displays some major differences. Some of the most common themes surrounding moral

distress were not highlighted in the present study. Research has highlighted moral distress to be most common when a caregiver perceives care to be unnecessary, unjustified or futile with aggressive tones (Corley et al., 2005; Elpern et al., 2005; Hamric et al., 2006; Zuzelo, 2007; Akpinar, Senses & Er, 2009; Hamric & Blackhall, 2010; Range & Rotherham, 2010; Silen et al., 2011; Burston & Tuckett, 2012; Shoorideh et al., 2012; Varcoe et al., 2012; Wiegand & Funk, 2012; Trotochaud et al., 2015; Woods et al., 2015). Or when a healthcare provider considers that the conditions of informed consent, such as decisional capability, voluntariness, and disclosure of information have been unmerited (Wojtowicz et al., 2014; Atabay et al., 2015; Hamric et al., 2006). These two leading factors were amongst the lowest causes of moral distress in the present study. This does not dispute previous robust findings on these phenomena, instead it highlights some significant issues surrounding samples and the spectrum of experience surrounding moral distress. The present study utilised healthcare professionals within private sectors, whereas the majority of previous research were based in more intensive care settings, where issues of informed consent and extreme treatment plans may be more prevalent. Despite nurses experiencing higher moral distress than physicians, the composite moral distress scores in both samples was relatively low compared to previous research. This is not to say that moral distress as a whole within UK healthcare systems is low, this is not the case. The issue here highlights the variegated nature of moral distress within a diverse and assorted healthcare system.

Though despite the overall low composite scores of moral distress, higher mean moral distress scores were associated with intent to leave the profession, which offers support to the third research hypothesis that higher mean moral distress scores would be associated with an intention to leave previous position and current position (H_3). This also supports previous research highlighting a link between moral distress and intent to leave (Corley et al., 2001; Lazzarin et al., 2012; Nathaniel, 2002; O'Connell, 2015; Rushton, 2006; Whitehead et al., 2015). This denotes, that even though moral distress may have been low overall in the present sample, the occurrence of moral distress even in low forms can have detrimental and negative effects on healthcare providers.

With regards to individual differences, it was hypothesised that there will be a significant difference in emotional intelligence levels (H_{4d}) between physicians and nurses. In the present study, nurses displayed significantly higher levels of emotional self-awareness, emotional expression, emotional management of others and total emotional intelligence compared to physicians. It was further hypothesised that there would be a negative

correlation between moral distress scores and levels of emotional intelligence (H_6). This was not supported in the present study. However, despite not reaching statistical significance, emotional reasoning and emotional self-management was negatively associated with moral distress within the nurse sample. Emotional Reasoning is the ability to use emotional information in decision making tasks, by asking others feel about potential solutions when problem solving and demonstrating that they have acknowledged their feelings; and emotional self-management is the ability to control individual emotion, by not ruminating on issues which cause anger and frustration and being able to respond to such events effectively (Palmer et al., 2009).

These two abilities appear to be significant factors in the reduction of moral distress. High levels of emotional reasoning promote the appearance of an open communication within the workplace, whereby everyone's feelings are acknowledged and considered. Given the fact that poor communication was one of the outlined common causes of moral distress in the present study, coupled with possible interdisciplinary conflicts, emotional reasoning may be a viable solution to combat this problem. High levels of emotional self-management may help overcome the two forms of moral distress outlined by Jameton (1993); initial distress, which are feelings of frustration and anger due to institutional shortcomings; and reactive distress, the tension felt when an individual does not act accordingly to the initial distress. By not ruminating on issues which cause anger and frustration may help reduce the occurrence of a crescendo effect within healthcare providers. Offering support for the importance of emotional intelligence in improving overall performance (Al-Hamdan et al., 2017), adequate conflict management styles (Chan et al., 2014; Basogul & Ozgur, 2016), career adaptability (Coetzee & Harry, 2014) and higher job satisfaction, less burnout and increased wellbeing (Slaski & Cartwright, 2003; Besharat, 2007; Miklolaiczak et al., 2007; Karim, 2009; Martins et al., 2010; Weng et al., 2011; Zhang et al., 2016).

In relation to the dark triad, it was hypothesised that there will be a significant difference in levels of Machiavellianism (H_{4a}), narcissism (H_{4b}) and psychopathy (H_{4c}) between physicians and nurses. This was not supported in the present study. It was further predicted that there would be significant correlation between moral distress scores and Machiavellianism (H_{5a}), narcissism (H_{5b}) and psychopathy (H_{5c}). None of the relationships reached statistical significance. However, Machiavellianism and narcissism held differing roles in the moral distress between physicians and nurses, with negative correlations reported in physician sample and positive correlations in the nurse sample. Research concerning the dark traits and

moral distress is limited, with little research conducted on the dark traits and stress perception. Kajonius and Bjorkman (2018) notes that stress is usually triggered by individual perception of a particular situation and thus by exploring personality researchers take a step closer to understanding the sources and underlying susceptibilities, which can be beneficial in the prediction of long term behaviours such as work performances. In their study between the dark traits and everyday perceived stress they reported grandiose narcissism and psychopathy to hold a negative relationship with perceived stress. Discussion of the results deliberate on ideas such as if individuals have low levels of empathy and high self-esteem, they may in fact thrive in a stressful environment, or if through lack of caring question whether individuals high in in these traits would feel stressed at all. Is it at all possible that the negative relationship between the dark traits and moral distress in the physician sample could be due to the traits acting like a buffer to reduce stress, possibly a reason as to why physicians display lower levels of moral distress. Though this does not account for why the opposite was found in the nurse sample. These findings should be treated with caution, as despite a relationship being present, they did not always reach statistical significance, which could be due to the smaller sample size in the present study. Though further research should aim to overcome this disparity, as dark traits as well as the brighter personality traits are a substance to how individuals mostly understand everyday occurrences (Jones & Paulhus, 2013).

With regards to moral competence it was hypothesised that there would be a significant correlation between moral distress scores and moral competence levels (H_{7a}). No significant relationship was found and thus not supported in the present study. However, results did shed light on the differing relations between nurses and physicians, with small negative correlations reported in the physician sample and small positive correlations in the nurse sample. There has been limited research carried out on the association between moral competence and moral distress. As previously noted, studies within the healthcare literature are often focused on diluted themes of morality such as moral sensitivity, moral character and moral awareness. The definitions of all combined share some level of resemblance to moral competence. Moral competence embodies moral knowledge, the ability to discuss and deliberate differing and sometimes conflicting moral perspectives and having the core ability to utilise these proficiencies efficiently to handle morally challenging circumstances (Johnstone, 2015).). Moral competence is the adeptness to comprehend one's individual intricate, diverging moral feelings, to present them to introspective reasoning and to

participate in ethical discussion with friends, experts and authorities (Lind, 1989; Lind, 2000a).

The contrasting relationship with moral competence between the two samples raises some interesting questions. Factors such as moral sensitivity holds a contradictory relationship with moral distress, Hamric et al. (2006) contends that nurses with high levels of moral sensitivity may experience distress if they witness the moral elements of nursing being dishonoured, neglected, or poorly managed; meaning that moral sensitivity can increase the risk of experiencing moral distress. Others have noted that moral integrity is also a challenge for nurses to uphold their working environment (Kelly, 1998; Ham, 2004; Laabs, 2011). It may be feasible that nurses with high levels of moral competence also experience high levels of moral distress, a contradictory association. Though the definition of moral competence outlines an ability to deliberate and discuss on difficult issues, which should help overcome and combat feelings of distress. This point, moves away from an individual ability possibly towards the healthcare culture; as what good is it being able to deliberate and discuss with friends, experts and authorities if these options are unavailable. Forde and Aasland (2008) note that a medical culture in the absence of openness concerning criticism and the unwillingness to converse on difficult issues may diminish support when dealing with dilemmas and thus may increase moral distress (Forde & Aasland, 2008).

The fact that the opposite was found within the physician sample, brings back speculation surrounding the differing roles between nurses and physicians within the decision making processes. Research has highlighted that hierarchal decision making by physicians can hinder the nurse's aptitude to carry out desired moral actions and is associated with lower levels of psychological empowerment (Austin et al., 2005; Deady & McCarthy, 2010; Elpern et al., 2005; Manojlovich, 2007; Browning, 2013; Wojtowicz et al., 2014). Though these findings should be treated with caution, as despite a relationship being present, they did not always reach statistical significance, which could be due to the smaller sample size in the present study. Further research should aim to address the contradictory relationship of moral competence and moral distress between physicians and nurses.

In relation to ethical compositions, it was hypothesised that there would be a significant correlation between moral distress scores and ethical compositions (H_{7b}). This prediction was partially supported and again managed to highlight differences in the two sample types. Moral distress held significant negative correlations with total utilitarian support and positive

correlations with total deontological support in the physician sample, with weak insignificant associations present in the nurse sample. This suggests that moral distress is associated more with deontological outlooks in the physician sample, implying that physicians experience less moral distress when opting for utilitarian measures. Utilitarianism is a moral concept asserting that the correct action is one which takes into consideration the interests of all involved and produces the most inclusive and advantageous result for the greater amount of people, to maximise benefits and reduce costs through an objective lens (Bentham, 1781; Mill, 1879). Whereas, deontological domains assert that there is a series of moral guidelines, obligations and responsibilities which individuals must uphold in spite of the consequences or circumstantial coincidence (Kant, 1785/2002; Waldmann & Dieterich, 2007).

In relation to medical ethics, utilitarian outlooks consider the same viewpoint, to maximise benefits to the greatest number of individuals, though it is considered more society centred and accounts for healthcare resources such as time, energy and money, usually propelled by hospital managers and even political figures (Mandal, Ponnambath & Parija, 2016). Whereas, deontological outlooks, still abide by the a series of moral guidelines regardless of consequences, yet the doctor patient relationship is thought to be deontologically driven, with it being more patient focused (Mandel et al., 2016).

This societal and patient differentiation within medical cultures may account for why the support for utilitarian decisions is associated with lower moral distress in the physician sample, as utilitarianism calculates the benefits and consequences from a macro level, as opposed to a more micro level involving the patient. This may be considered to be less distressful process, as research on moral dilemmas has highlighted if moral dilemmas are considered to be more 'up close and personal' utilitarian preferences decrease. It seems that when individuals have to be more physically involved the less likely willing they are to inflict harm in hypothetical dilemmas. This could partially be due to these acts requiring the execution of an action rather than the construction of a theoretical decision (Ugazio, Lamm & Singer, 2012). This may have a similar influence within healthcare practice, utilitarian decisions may be easier to condone and construct when it doesn't involve a strong deontological based patient doctor interaction, which may reduce potential levels of moral distress.

This differentiation was not evident in the nurse sample, with weak insignificant associations found between ethical compositions and levels of moral distress. This could be due to a

combination of the fact that nurses reported a higher level of moral distress than physicians and a lower preference for utilitarian preferences. In fact, nurses displayed a higher preference for deontological arguments in the mercy killing scenario compared to physicians. As previously reported both nurses and physicians reported a strong preference for deontological arguments and strong rejection of utilitarian arguments in the mercy killing scenario. One possible reason was the notion of story pull (Elm & Weber, 1994), whereby the healthcare population are able to identify with the protagonists, may have experienced a comparable situation, and completely grasp the conflict of the dilemmas; which may explain the high deontological preference. Though what is of interest here, is the significantly higher preference for deontological arguments displayed by the nurse sample.

Explanations could stem from the differing roles between physicians and nurses. As outlined physicians displaying utilitarian preferences may experience lower levels of moral distress. Utilitarian prospects within medical ethics being associated with cost benefit calculations to maximise benefit to the greatest number, namely society a decision making process. A process by which a nurse may not be part of and so the utilitarian option or outlook may not be readily available or an option for nurses. Conway and Gawronski (2013) utilised the process association procedure and reported that a disposition towards an ideology may transpire due to the absence of a disposition to another. Therefore, in the absence of a utilitarian ideology nurses may be more drawn towards deontological ideology. This is further rooted in the active multi role nurses hold in relation to patients and may account for why nurses experience higher levels of moral distress than physicians.

Alternatively, other frequent predictors of the opposition of euthanasia and PAS among health care professionals are higher religious affiliation (Caddell & Newton, 1995; Portenoy et al., 1997; Grassi et al., 1999; DeCesare, 2000; Moulton, Hill & Burdette, 2006; Wilson et al., 2007; Broeckaert, Gielen, Van Iersel & Van den Branden, 2009; McCormack et al., 2012; Hains & Williams, 2013; Ozcelik, Tekir, Samancioglu, Fadiloglu & Ozkara, 2014; Barnett, Cantu & Galvez, 2018); and a greater activity in palliative care procedures (Lavoie et al., 2015; Peretti-Watel, Bendiane & Moatti, 2005; Marini, Neuenschwander & Stiefel, 2006). The present study did not measure religious affiliation nor the level of involvement in palliative care procedures, but acknowledges these variables as possible significant explanations in ethical composition analysis when deliberating issues of euthanasia (Szexely et al., 2015).

Levels of moral distress were relatively low but were still related to intention to leave the healthcare profession or current post. Which highlights the detrimental effect of even low levels of moral distress can have on both physicians and nurses alike. Though as previous research has highlighted nurses experience higher levels of moral distress than physicians. Interesting speculations emerged in the ethical composition analysis, which questions the role and options available to nurses within medical ethics and may be a possible explanation as to why nurses experience higher levels of moral distress. In relation to the causality of moral distress. Both nurses and physicians highlighted extrinsic external factors as the most potent source. With nurses ethical climate holding a significant association with moral distress in the nurse sample. With regards to more internal and individualistic causes of moral distress. Emotional reasoning and emotional self-management appear to be viable aid to help combat moral distress within nurses and prevent the presence of a crescendo effect. Whereas, the narcissism and Machiavellianism within physician samples may act like a buffer to reduce stress. Whereas, moral competence was found to hold differing roles within the nurse and physician sample, with the possibility that nurses with high levels of moral competence also experience high levels of moral distress, a contradictory association which questions the healthcare culture. Though these findings should be treated with caution, as despite a relationship being present between these variables, they did not always reach statistical significance, which could be due to the smaller sample size. Further research should aim to address the contradictory relationship of emotional intelligence, the dark traits and moral competence and moral distress between physicians and nurses and delve into how medical ethics may shape moral distress.

9.6. Research Summary

Chapter four aimed to examine the theoretical validity of The Moral Competence Test (MCT; Lind, 2008a) against the three validation criteria; hierarchal preference order, a simplex structure, and an affective-cognitive parallelism. The theoretical validity of the Moral Competence Test was successfully substantiated. The MCT was been utilised correctly, screened for any anomalies, and is in line with and supports the Dual Aspect Theory of moral thinking and behaviour (Lind, 2013). This finding is significant as the following studies and results are all based on this premise.

Chapter five aimed to explore moral competence levels; between healthcare and non-healthcare vocational fields in education and practice, investigate the dynamics and directions of moral competence across the educational or professional span, and examine the

relationship between moral competence and educational factors. The results failed to support the claim that medical and healthcare students display lower moral competence levels compared to students of other disciplines. This was also the case within practice samples, despite reaching statistical significance, both healthcare and non-healthcare professionals exhibited low moral competence scores. Overall concluding that all samples in the present research exhibited low moral competence levels.

Further analysis into the dynamics and directions of moral competence throughout the educational span and practical experience offered no support for a regression in moral competence throughout education and practice. The vacant relationship might be due to the cross sectional design of the study, which may not have been robust enough to explore moral competence scores throughout both the educational span and professional practice. Low moral competence is usually ascribed to education and choice of methods, namely an overuse of non-interaction based methods (Kohlberg, 1984; Sprinthall et al., 1994; Lind, 2000b; Lind, 2008b; Lind, 2016). However, no such support was found in the present research. Both interactive and non-interactive methods were found to have a minimal relationship with moral competence, this may have been due to the design of the survey not being robust enough to capture the complexities of educational teaching methods and assessments. Educational level had no bearing on moral competence scores within the healthcare samples. However, this was not the case within the non-healthcare sample, as individuals with a high school educational level exhibited lower moral competence scores compared to those with higher education qualifications. Therefore, it seems apparent that higher education may facilitate moral growth, but may not apply to medical and healthcare vocations. Though only to a certain extent as all samples generally exhibited low moral competence scores.

A further feature of chapter five was to assess the moral competence scores independently for the scenario depicting a) an act of vigilantism and b) an act of euthanasia, to explore the occurrence of a moral segmentation between healthcare and non-healthcare vocations. Results indicated the presence of a moral segmentation effect within medical and healthcare professionals and a trend in students. Both medical and healthcare students and professionals obtained lower moral competence scores within the mercy killing scenario, compared to the vigilantism scenario.

Chapter six aimed to examine the vigilantism and mercy killing moral dilemmas independently through the application of utilitarianism and deontological philosophies to

investigate whether different vocational fields differ in their ethical compositions, whether this is dependent on the type of dilemma, and how this effects moral competence scores, as measured by the moral competence test, in the hope to find an explanation for the moral segmentation effect. Firstly, negative correlations were found between moral competence and mutual opinion commitment strength for both the vigilantism and the mercy killing scenario. The more strongly participants agreed or disagreed with the protagonists actions, the lower their moral competence scores. This indicates and supports the notion that individuals find it difficult when confronted with opposing views, despite them views sometimes holding a higher moral stance.

Ethical composition analysis revealed medical and healthcare vocational fields displayed a higher rejection of utilitarian arguments and a higher acceptance of deontological arguments in the mercy killing scenario, when compared to non-healthcare vocational fields. Healthcare professionals disagreed with the protagonists actions and displayed a consistency in deontological agreement, possibly due to professional ties and identity and given the fact that the act is illegal in the UK. In particular, the higher acceptance of deontological Type 4 moral orientation, which is to respect laws and order of society. Arguably, this is not surprising as medical and healthcare profession is an ethically bound institution and so obeying rules is vowed as valuable and important. This may influence healthcare professional opinion, from moving away from an individual persona to a more collective professional stance and outlook on the mercy killing scenario, due to the scenario contextual relativity. Minor differences were noted between healthcare and non-healthcare vocational fields in the vigilantism scenario. Moral competence positively correlated with utilitarian composition's and negatively correlated with deontological compositions. Suggesting that individuals within the sample groups with higher moral competence were more likely to endorse utilitarian compositions, than those endorsing deontological outlooks. This may be a possible explanation for the observed moral segmentation effect found in chapter five and highlights the dispositional nature of moral competence, and how factors such as vocational affiliation may influence how individuals perceive and evaluate moral dilemmas, paving the way for future research to test this phenomenon further.

Chapter seven aimed to assess individual differences through the exploration of personality and emotional intelligence and the relationship with both vocational choice and vocational span, and to further explore the extent personality pre-dispositions and levels of emotional intelligence influence moral competence and ethical compositional choice in moral dilemma

analysis. The link between personality and vocational and education choice is gaining momentum in the literature, with an increasing focus on the darker traits of personality.

Findings within the student samples revealed that business students displayed higher levels of Machiavellianism and narcissism compared to medical and healthcare students, with medical and healthcare students exhibiting the lowest levels of the dark traits followed by social science students. This offered partial support the self-selection hypothesis which asserts that business and related courses may attract individuals with higher levels of the dark traits, possibly due to the chances of gaining powerful positions in the future (Wilson & McCarthy, 2011; Krick et al., 2016). Though, support for the self-selection hypothesis was restricted, as it misses the vital construct of psychopathy, as business students in the present study did not significantly exhibit higher levels of psychopathy when compared to students of other disciplines. Whereas, within practice samples, non-healthcare vocations displayed higher levels of psychopathy than healthcare professionals. Nevertheless, these results tend to support the self-selection hypothesis over the indoctrination hypothesis, which asserts suggests that immoral behaviours are more widespread among business students due to the academic training received (Elegido, 2009). Levels of the dark traits did not statistically increase throughout either the educational or professional span in non-healthcare vocations.

All vocational fields displayed similar levels of emotional intelligence as no significant differences were found with regards to total emotional intelligence and the emotional intelligence subscales between vocational fields. This contends the view that nursing or other healthcare students exhibit higher levels of emotional intelligence (Stiglic et al., 2018) compared to business related disciplines. This may have been due to the Genos Emotional Intelligence Inventory (Palmer et al., 2009) being designed for use within the workplace and so some students may not have been able to fully relate to some of the items.

The dark triad held vacant insignificant correlations with moral competence, which fails to support previous studies into moral development and values (Campbell et al., 2009; Furnham et al., 2013; Jonason, Baughman, et al., 2015; Williams et al., 2006; Zuo et al., 2016). The Moral Competence Test (MCT) utilises scenarios not only from a hypothetical viewpoint but also from a third person perspective. It could be suggested that these designs are not robust enough to capture the interest of individuals high on the dark traits. Alternatively, it must be noted that student samples and practice samples which don't adhere to job roles or positions may not be the most representative if research intends to capture individuals on the higher

spectrum of the dark triad traits. Moral competence (C-score) was found to hold positive correlations with emotional self-awareness and emotional self-management, within the student population only, though this did not reach significance at the adjusted alpha level. This failed to support the prediction that moral competence will have a significant correlation with total emotional intelligence. This relationship offers partial support for the distal relationship (Athota et al., 2009) as only two positive associations were found between emotional intelligence and moral competence and within the smaller sample size comprised of students.

Interestingly, findings were much more prominent in the exploration of ethical compositions. Positive correlation were found between utilitarian ethical composition patterns and the darks traits Machiavellianism, narcissism, psychopathy and a negative relationship with total emotional intelligence. These variables were found to hold negative correlations with deontological support. Personality pre-dispositions and emotional intelligence may influence decision making in moral dilemmas to an extent (Fernandez-Berrocal & Extremera, 2005), but rather influences individuals line of reasoning. It just may not be reflective in the overall moral competence score. Moral competence is described as being taught (Lind, 2016) and adheres to certain environmental conditions, such as decent (Lind, 2000b). As demonstrated in the fluctuation of C-index scores in the present report and studies noting a moral competence regression (Lind, 1985; Slovackova & Slovacek, 2007; Feitosa et al., 2013), suggested that moral competence is not a stable construct, it was a learnt ability highly dependent on various contextual factors. Due to this links to high level personality traits and emotional intelligence may become tenuous.

Chapter eight aimed to explore the levels of moral distress and its relationship moral competence, ethical compositions, personality, emotional intelligence and ethical climate within UK healthcare environments. Nurses displayed higher levels of moral distress than physicians. Although this was not significant, nurses within the present study displayed higher moral distress composite scores compared to physicians; which supports previous findings (Hamric & Blackhall, 2007; Epstein & Hamric, 2009; Hamric et al., 2012). However, no relationship was found between years of practical experience and moral distress in then nurse sample, and so the present research cannot offer support for the crescendo effect.

The top five most common sources of moral distress in the study were identical for nurses and physicians. The majority of these were related to extrinsic factors (Corley, 2002; Mrayyan & Hamaideh, 2009; Ohnishi et al., 2010; Pauly et al., 2009; Zuzelo, 2007; Trotochaud et al., 2015; Woods et al., 2015). Ethical climate was found to be a predictor of moral distress, offering support for previous research (Corley et al., 2005; Pauly et al., 2009; Lutzen et al., 2010; Silen et al., 2011; Hamric et al., 2012; Oh & Gastmans, 2015).

Despite nurses experiencing higher moral distress than physicians, the composite moral distress scores in both samples were relatively low compared to previous research. This is not to say that moral distress as a whole within UK healthcare systems is low, this is not the case. The issue here highlights the variegated nature of moral distress within a diverse and assorted healthcare system, as the present research focused on private healthcare. Nevertheless, it was found that higher moral distress scores were associated with a higher intent to leave (Corley et al., 2001; Lazzarin et al., 2012; Nathaniel, 2002; O'Connell, 2015; Rushton, 2006; Whitehead et al., 2015). This denotes, that even though moral distress may have been low overall in the present sample, the occurrence of moral distress even in low forms can have detrimental and negative effects on healthcare providers.

Emotional Reasoning and emotional self-management were negatively associated with moral distress in the nurse sample. Despite this finding not reaching statistical significance, it still provides a vital insight into how these constructs may be used to combat feelings of moral distress. The ability to use emotional information in decision making tasks and the ability to control individual emotion, by not ruminating on issues which cause anger and frustration and being able to respond to such events effectively (Palmer et al., 2009) may help the reduction of moral distress. Offering support for the importance of emotional intelligence in improving overall performance (Al-Hamdan et al., 2017), adequate conflict management styles (Chan et al., 2014; Basogul & Ozgur, 2016), career adaptability (Coetzee & Harry, 2014) and higher job satisfaction, less burnout and increased wellbeing (Slaski & Cartwright, 2003; Besharat, 2007; Miklolaiczak et al., 2007; Karim, 2009; Martins et al., 2010; Weng et al., 2011; Zhang et al., 2016).

Nurses and physicians did not differ in levels of the dark personality traits. However, Machiavellianism and narcissism held differing roles in the moral distress between physicians and nurses, with negative correlations reported in the physician sample and positive correlations in the nurse sample. Based on the findings of research exploring stress and dark

personality traits (Kajonius & Bjorkman, 2018), it is suggested that characteristics, behaviours and attitudes embodied within the dark traits may act like a buffer to reduce stress, possibly a reason as to why physicians display lower levels of moral distress.

Further contrasting results were also noted between physicians and nurses. An additional discovery was the relationship between moral distress and moral competence. A small negative correlation was found in the physician sample and a small positive correlation in the nurse sample. There has been limited research carried out on the association between moral competence and moral distress. Furthermore, with regards to ethical compositions moral distress held significant negative correlations with total utilitarian support and positive correlations with total deontological support in the physician sample, with weak insignificant associations present in the nurse sample. This suggests that moral distress is associated more with deontological outlooks in the physician sample, implying that physicians experience less moral distress when opting for utilitarian measures.

The societal and patient differentiation discussed within medical cultures (Mandal et al., 2016) may account for why the support for utilitarian decisions were associated with lower moral distress in the physician sample, as utilitarianism calculates the benefits and consequences from a macro level, as opposed to a more micro level involving the patient. This may be considered to be less distressful process, as research on moral dilemmas has highlighted if moral dilemmas are considered to be more 'up close and personal' utilitarian preferences decrease. It seems that when individuals have to be more physically involved the less likely willing they are to inflict harm in hypothetical dilemmas. This could partially be due to these acts requiring the execution of an action rather than the construction of a theoretical decision (Ugazio et al., 2012). This may have a similar influence within healthcare practice, utilitarian decisions may be easier to condone and construct when it doesn't involve a strong deontological based patient doctor interaction, which may reduce potential levels of moral distress. Further highlighting the differing roles between nurses and physicians within the decision making processes. Utilitarian prospects within medical ethics being associated with cost benefit calculations to maximise benefit to the greatest number, namely society a decision making process. A process by which a nurse may not be part of and so the utilitarian option or outlook may not be readily available or an option for nurses. Conway and Gawronski (2013) utilised the process association procedure and reported that a disposition towards an ideology may transpire due to the absence of a disposition to another. Therefore, in the absence of a utilitarian ideology nurses may be more drawn towards deontological

ideology. This is further rooted in the active multi role nurses hold in relation to patients and may account for why nurses experience higher levels of moral distress than physicians.

9.7 Study Limitations

The present research adopted a cross sectional design to explore both moral competence levels and personality pre-dispositions, in two independent samples across either the educational span or practice span. No evidence was found to support the notion of a regression in moral competence throughout education or practical years of experience within medical and healthcare vocations (Agurto et al., 2017; Feitosa et al., 2013; Lind, 2000a; Slovackova & Slovacek, 2007). Furthermore, no evidence was found to support the indoctrination hypothesis, connotes an increase in the dark traits across both the educational and practice span in non-healthcare vocations indoctrination hypothesis (Elegido, 2009). As one of the most fundamental explorations within moral psychology focuses questions on the roots and changes in morality across the lifespan (Richardson & Killen, 2013). It must be acknowledged that the use of a cross sectional design may not have been robust enough to explore both moral competence scores and personality traits throughout education and practice. Providing that the Moral Competence Test (Lind, 2008a) has research documenting positive fluctuations as a function of moral learning or to descending changes indicative of competence erosion (Lind, 2002). Suggesting that moral competence can both be sensitive and responsive to subtle changes within a learning environment. Based on this premise a longitudinal design may have been more applicable to encapsulate subtle variations, as well as pre-test – protest designs yields the most credible evidence (Pascarella, 2006).

A brief survey was conducted to assess student's field of study and prevalence of teaching methods and assessments utilised within the disciplines. The assessments were categorised into interactive and non-iterative methods based on the level of involvement of the student and form of communication, whether one way communication or two way communication teaching. The interactive methods consisted of: discussion and debate; problem solving; group work; role play; workshops. Non-interactive methods consisted of: lectures; essays; dissertations; exams; presentations. It was found that neither interactive nor non-interactive methods had any significant bearing on moral competence scores within student samples. This may have been due to the survey being one-dimensional, focusing on basic educational teaching methods and assessments. This may have overlooked non-curricula teaching methods, such as reflective practices, critical thinking skills, supportive systems, guidance and ethics courses. Furthermore, the survey design may have omitted more disciplinary

relevant methods. It was highlighted that art and design courses may be considered more expressive in nature and so may require a whole new level of teaching and assessment which was not captured within the present questionnaire.

With regards to emotional intelligence there was some disparity of the results between the student and practice samples. This may have been due to the Genos Emotional Intelligence Inventory (Palmer et al., 2009) being designed for use within the workplace and so some students may not have been able to fully relate to some of the items. Another reason may be due to a smaller sample size, as previously noted only 44% of the student sample completed the emotional intelligence survey.

The present study utilised healthcare professionals within private sectors, whereas the majority of previous research exploring moral distress were based in more intensive care settings, where issues of informed consent and extreme treatment plans may be more prevalent. Despite nurses experiencing higher moral distress than physicians, the composite moral distress scores in both samples was relatively low compared to previous research. This is not to say that moral distress as a whole within UK healthcare systems is low, this is not the case. Furthermore, results did not always reach statistical significance and so discussions were based around the trends in results. This may have been due to a smaller sample size within the healthcare vocation sample. Therefore, it must be acknowledged that there are numerous roles and departments within healthcare practice and the present research may have captured a small section. The issue being, highlights the variegated nature of moral distress within a diverse and assorted healthcare system and the results should be treated with caution and not be generalised to all avenues of healthcare.

9.8 Study Implications and Directions for Future Research

One of the most intriguing revelations of the present research is that both students and professionals from a wide variety of vocational choices and pathways are displayed low levels of moral competence. Low moral competence was not strictly limited to medical and healthcare vocations.

Opinion or rather the strength of agreement/disagreement with the protagonists actions, was found to be negatively associated with moral competence; the higher participants opinion strength the lower their moral competence (c-score). Which means that individuals find it difficult when confronted with opposing views, despite their views sometimes consisting of a higher moral stance. A very plausible explanation.

However, further examinations of the data revealed that the role of opinion and what constitutes as opinion may be influenced by the contextual elements of the scenario and professional affiliation. Potentially creating a moral segmentation within medical and healthcare vocations. The medical undertones of the mercy killing dilemma may have led medical and healthcare vocations to view the dilemma from a more professional stance. The fact that this finding was also evident within educational settings further suggests that education in a less directive way, influences the evaluation and perception of such dilemmas, possibly with an over focus on the legalistic qualities, which may have ultimately influenced their overall moral competence scores.

Moving away from a more homogenous view (Colby & Kohlberg, 1987) towards a more heterogeneous view (Beck et al., 1998; Krebs et al., 1991; Senger, 1985; Zeidler & Schafer, 1984) of moral assessment. Due to the context bound competencies of the mercy killing scenario, working as an anchor or focalism, allowing more dissonant information to be displaced by evoking a set of moral schemas within healthcare and students and professionals alike. Ultimately influencing judgements and decision making ability. This finding questions the external validity of previous research and subsequent conclusions made from the finding that medical and healthcare vocations have lower moral competence.

The conclusions drawn from previous studies denoting low moral competence, regressions, stagnation and moral segmentations within medical and healthcare vocations, builds generalisations. One must question whether it is enough to assume or draw these conclusions based on the results from one measure, which utilised two scenarios, one in which may have evoked a moral segmentation effect. That across most situations or all moral scenarios that medical and healthcare vocations have low moral competence. This thesis has highlighted the dispositional nature of moral competence, and how factors such as vocational affiliation may influence how individuals perceive and evaluate moral dilemmas. So it is of great importance to fully understand how particular features of the measures being used can embody particular salient aspects to recipients.

The debate circles around the reliability of measure, namely The Moral Competence Test (Lind, 2008a). Not so much the consistency of the measure, as it seems to measure exactly what it is intended and the baseline of results in the present study aligns with previous research (Agurto et al., 2017; Feitosa et al., 2013; Lind, 2000a; Slovackova & Slovacek, 2007). Rather the potential cognitive biases it may elucidates in participants. It appears to be

a reliable and consistent measure, however when applied to particular samples, in this case medical and healthcare, coupled with a contextual professionally relevant scenario, creating a shift in results. It may be that only one of the two scenarios which make up the MCT in its entirety, is being viewed as a dilemma (vigilantism) whereas, the mercy killing scenario is seen as a professional issue, one informed by ethics, policy and procedures. Overall affecting the moral competence scores. Researchers need to acknowledge and be aware of these intricacies and potential biases when conducting research, but most importantly when drawing conclusions from data.

It would be beneficial for future research to further test the assumption that particular ethical compositions learnt within the medical and healthcare vocations, may lead to a moral segmentation effect. This could be achieved by creating different experimental conditions, with the dependent variable being the context of the moral scenario presented; a neutral and contextually rich; a neutral and a neutral; a contextually rich and contextually rich vocational based dilemma. It is of huge importance for further research to address the findings highlighted in the present thesis. In the hope to determine how ethical compositions and the contextual elements of moral dilemmas may effect overall moral competence scores, which may be a contributing factor to the occurrence of a moral segmentation effect. That contextual aspects of measures can have an effect on moral competence and overall moral competence score. One must question the accuracy of the moral competence reading when there is an occurrence of a moral segmentation. Thus, potentially research would need to establish whether using two non-healthcare scenarios would a) elicit the same response b) whether medical and healthcare professionals when not confined within the parameters of medical context culture still exhibit low moral competence. To see if this 'ceiling effect' or limit occurs only when discussing deliberating on parts of their profession. If it is only limited to contextually relevant scenarios and in actual fact they exhibit high levels of moral competence, then expecting healthcare individuals to operate outside of the legal, ethical produces and codes of conduct which surround their vocation is unjust. A vocation which deals with the forefront of human life and wellbeing, would seem unreasonable. As these factors are there not just to protect the organisations, the patients but members of staff as well.

The above details potential reasons why the moral competence levels of medical and healthcare professionals were low in the present study and directions for future research. Though, reiterating the fact that the most concerning result was the low levels of moral

competence across all student disciplines, and within practice sample also. It would be valuable to further examine, more in depth, the range of methodologies and the role education plays in the development of moral competence within UK universities. Which may be connected to lack of insufficient educational opportunities which aid moral development throughout education. Even though the present study didn't find such connection it was concluded that teaching method questionnaire utilised may not have been robust enough to capture the complexities of such influences.

Future research should investigate potentially overlooked non-curricula teaching methods, such as reflective practices, critical thinking skills, supportive systems, guidance, ethics courses and more disciplinary relevant methods. This would help provide a richer understanding of the relationship between education and moral competence. Having further implications for practice by possibly changing these aspects could help foster educational experiences of students, in order for them individuals to solve problems and conflicts adequately and fairly through deliberation and discussion. By creating more targeted methods could help create a learning environment for developing both professional and moral knowledge. The potential applications of which may not just limited to education. Targeted methods and interventions could be enrolled within prisons and other workplaces which may discourage such levels of deliberation and discussion. To help create a supportive learning environment, to foster moral learning and competence; without violence, deceit and force (Lind, 2016). One potential avenue to consider is the Konstanz Method of Dilemma Discussion (KMDD) and Discussion Theatre (Lind, 2016). The KMDD has been used in various institutions of education and fields of learning and teaching. Its applications are not solely limited to schools and education, and can be utilised in military settings, prisons, and work with young children. Customary, universal moral ideals are essential. The stepping stone and qualification towards democratic civil society (Lind, 2012). In order to confine the gap between moral ideals of democracy and everyday life; democratic competencies must be fostered throughout education (Lind, 2008b). It is of huge significance to both understand and aid the moral development of potential future leaders in both healthcare and non-healthcare fields, combined with the capability to not put financial or human welfare of others at risk or perform hazardous practices.

As previously outlined, one limitation of the study was the use of a cross sectional design to explore both moral competence levels and personality pre-dispositions, in two independent samples across either the educational span or practice span. No evidence was found to

support the notion of a regression in moral competence throughout education or practical years of experience within medical and healthcare vocations (Agurto et al., 2017; Feitosa et al., 2013; Lind, 2000a; Slovackova & Slovacek, 2007). Furthermore, no evidence was found to support the indoctrination hypothesis, connotes an increase in the dark traits across both the educational and practice span in non-healthcare vocations indoctrination hypothesis (Elegido, 2009). The results of the present study are in alignment with a stagnation in moral competence, however this not mean that regression in moral competence scores would not happen. To ensure, that this uncertainty can be overcome future studies should consider the use of longitudinal designs as means of capturing a true possible moral regression or stagnation within medical and other student populations.

The tenuous relationship between the dark traits, emotional intelligence and moral competence could possibly be due to the relatively small sample size of the student population, which could have impacted the reliability and interpretation of findings and the experimental design. The MCT utilises scenarios not only from a hypothetical viewpoint but also from a third person perspective. It could be suggested that these designs are not robust enough to capture the interest of individuals high on the dark traits. Alternatively, it must be noted that student samples and practice samples which don't adhere to job roles or positions may not be the most representative if research intends to capture individuals on the higher spectrum of the dark triad traits. Of further interest is the differing role personality dispositions held with moral distress between nurses and physicians. It was suggested that the negative relationship between the dark traits and moral distress in the physician sample could be due to the traits acting like a buffer to reduce stress (Kajonius & Bjorkman, 2018), possibly a reason as to why physicians display lower levels of moral distress. Research exploring the affiliations between the three dark triad traits, emotional intelligence and, moral distress and moral competence and the proposed distal relationship (Athota et al., 2009) requires further grounding. Further research should aim to overcome this disparity, as dark traits as well as the brighter personality traits are a substance to how individuals mostly understand everyday occurrences (Jones & Paulhus, 2014).

9.9 Conclusion

The assumption that medical and healthcare students and business students alike possess lower moral competence scores than students of other disciplines, or the moral regression of disciplines, could not be supported in the present research. Though, revelations regarding the low moral competence of student populations on a general level raise greater concerns. It is a

common conjecture that the lack of a poor moral environment the development of moral competency does not reverse or become obstructed in any way (Lind, 1985); so why reports based on the macro level of university education prevail. Furthermore, despite there being a significant difference in moral competence scores between healthcare and non-healthcare professionals, as both cohorts displayed low levels of moral competence. This is a concern which future research should aim to address.

Overall the results suggest that both students and professionals from a wide variety of vocational choices and pathways are displaying low levels of moral competence. Personality pre-dispositions and levels of emotional intelligence appear to have no bearing on the overall moral competence score, proposing a distal relationship between these variables. However, positive correlation were found between utilitarian ethical composition patterns and the darks traits Machiavellianism, narcissism, psychopathy were found to be positively associated with utilitarian outlooks and negatively associated with deontological outlooks. Emotional intelligence was negatively associated with utilitarian outlooks. It is proposed that personality constructs and levels of emotional intelligence instead guide and influence decision making when analysing hypothetical moral dilemmas, through opinion selection. Concluding that personality pre-dispositions and emotional intelligence may influence decision making in moral dilemmas to an extent (Fernandez-Berrocal & Extremera, 2005), but rather influences individuals line of reasoning.

Additionally, the present research proposes that vocational affiliation may be a further explanation as to why medical and healthcare vocational fields display low moral competence. Healthcare and non-healthcare vocations may be displaying low moral competence for two different reasons. The reason being the presence or absence of a moral segmentation effect. Individuals who displayed low moral competence in the absence of a moral segmentation effect, namely non-healthcare vocational fields, may be more likely to rate arguments based on their personal opinion, influenced possibly by personality pre-dispositions, as opposed to the moral quality of the arguments presented. However, those individuals, namely healthcare students and professionals, of which displayed low moral competence with the occurrence of a moral segmentation effect, may have been more likely influenced by the contextual elements of the mercy killing scenario, overall effecting their moral competence scores. This insight questions the reasons put forward in previous research utilising the MCT (Lind,2008a) which have reported moral regressions or stagnations within medical and healthcare vocations (Lind, 2000a; Slovackova & Slovacek, 2007; Feitosa et al.,

2013; Agurto et al., 2017). Based on the current results, it could be argued that rather than witnessing a regression or stagnation in moral development in healthcare related vocations, it could possibly be a moral segmentation effect, due to the medical context of the dilemmas presented coupled with the professional affiliation of the target sample, as no such effect occurred in the analysis of the vigilantism scenario, nor did aspects of moral segmentation occur within other vocations.

This raises questions surrounding the use of hypothetical dilemmas in measuring moral competence. The contextual elements surrounding the mercy killing scenario may have been a leading factor the significantly stronger acceptance of deontological aspects and rejection of utilitarian aspects within healthcare student and professional groups and a possible explanation as to why these groups exhibited the lowest C-scores. Reasons as to why could be partially explained by the level of contextual attachment of the mercy killing scenario itself. Professional affiliation coupled with a context specific dilemma discussing matters of life and death, seems to have been a contributing factor in the occurrence of a moral segmentation, and as a result negatively influenced the moral competence scores.

Not only were distinctions made between healthcare and non-healthcare vocations. Some interesting differentiations were also noted between nurses and physicians within the healthcare sample. Machiavellianism, narcissism, and moral competence held differing roles in its relationship with moral distress. On a further note, moral distress held significant negative correlations with total utilitarian support and positive correlations with total deontological support in the physician sample. These findings highlights the differing roles between nurses and physicians within the healthcare working environments, medical ethical culture and involvement in decision making processes. Utilitarian prospects within medical ethics being associated with cost benefit calculations to maximise benefit to the greatest number, namely a societal decision making process. A process by which a nurse may not be part of and so the utilitarian option or outlook may not be readily available or an option for nurses.

These findings provide further insight into the medical culture and opens up new questions and avenues to explore. As, healthcare vocations may exhibit low moral competence scores possibly due to the moral segmentation effect. Yet, within that moral segmentation effect lies a different discipline motivation from nurses and physicians, fuelled by their own disciplines distinctive educational and socialisation practices (Hamric et al., 2006).

Yet, the findings of the present research still circle back to the reliability of The Moral Competence Test (MCT; Lind, 2008a). Not so much the consistency of the measure, but rather the potential cognitive biases it may elucidates in participants. It appears to be a reliable and consistent measure, however when applied to particular samples, in this case medical and healthcare samples, coupled with a contextual professionally relevant scenario, creates a shift participants line of reasoning. Suggesting that only one of the two scenarios which make up the MCT in its entirety, is being viewed as a dilemma (vigilantism) whereas, the mercy killing scenario is seen as a professional issue, one informed by ethics, policy and procedures. Overall affecting the moral competence scores. Research has highlighted the biases which can be present through the utilisation of hypothetical moral dilemmas and so the context of the scenario with the chosen sample population/ professional affiliation is an area which needs to be acknowledged and addressed by researchers when exploring moral competence or utilising moral dilemmas.

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