

The Dark Tetrad and moral decision-making

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Thesis submitted to the University of Nottingham for the degree of Doctor in Forensic Psychology

September 2022

Thesis Abstract

This thesis comprises an investigation into the Dark Triad, Dark Tetrad and moral decision-making. This is achieved through a systematic review, a psychometric critique and two research studies. A systematic review of the current literature concerning the Dark Triad and moral decision-making noted inconsistent evidence of the implication of these traits on moral judgements. It also highlighted issues with study methodology which are addressed in two empirical studies. The psychometric critique examined the reliability, validity, and normative sample of the Short Dark Triad Scale (SD3), and a brief commentary on the new Short Dark Tetrad Scale (SD4). It noted that while the SD3 demonstrated adequate reliability and validity, the normative sample required further development. A quantitative cross-sectional primary research study investigated individual differences in moral judgements using real-world moral scenarios. It highlighted that moral judgements were best predicted by an amalgamation of 'dark' and 'light' traits, and moral disengagement. Finally, the secondary research study utilised linguistic analysis to explore an alternative method of analysing moral judgements. It noted significant contributions of Dark Tetrad traits but emphasised issues with the methodology used. Limitations, suggestions for future research and implications of results are discussed throughout.

Acknowledgements

Firstly, I would like to express my deepest gratitude to Dr Vincent Egan. Your support and advice throughout the masters and doctoral programme was invaluable. I would also like to extend my thanks to Professor Kevin Browne for his continued support with the final part of this lengthy journey. I am also extremely appreciative of the support I received from Dr Keely Jo Frasca.

I am grateful to my BMC colleagues for their role in pushing me to complete this thesis. You challenged my proclivity for procrastination with some necessary tough love. I am exceptionally appreciative of my parents for their considerable emotional, practical, and financial support over these many years. None of this would have been possible without you. Brad – your encouragement and support over the past two years has been remarkable. I know you are just as excited as I am to finally submit this thesis. A special acknowledgement to an unexpected companion on this journey, my son – the final push I needed to complete this thesis.

Lastly, thank you to all the participants who participated in this research and took the time to complete the online questionnaire.

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Chapter One

Introduction

This chapter provides an overview of the main topics considered in this thesis.

Dark Triad and Dark Tetrad

The concept of the Dark Triad was first published 20 years ago. It consists of three disagreeable personality traits: Machiavellianism, psychopathy and narcissism (Paulhus & Jones, 2002). Narcissists have a grandiose sense of self and constantly crave attention; Machiavellians are masters at manipulating; and psychopaths are callous, impulsive and engage in antisocial behaviour (Paulhus, 2014). While these traits have been studied individually predominantly in clinical populations, the 'Dark Triad' refers specifically to the simultaneous study of these three traits in subclinical populations.

Since its inception, discussions about the multidimensionality versus unidimensionality of the Dark Triad traits have persisted. Consideration has been given to whether the Dark Triad may be better referred to as 'Dark Monads' (e.g. Heym, Firth, Kibowski, Sumich, Egan & Bloxsom, 2019), the 'Dark Dyad' or the 'Dark Tetrad' when considering the inclusion of everyday sadism. Some of this criticism stems from the seminal Dark Triad paper by Paulhus and Jones (2002), and the fact there is no explicit reason provided clarifying why these three specific traits have been grouped under the 'Dark

Triad' umbrella (see Kowalski, Rogoza, Saklofske & Schermer, 2021). More than a decade after the Dark Triad literature was first published, Jones and Figuerdo (2013) suggested a trait can only be described as 'dark' if there is a deliberate malevolence and its core, a combination of interpersonal manipulation and callousness most accurately reflected by the honesty-humility facet of the HEXACO personality inventory (Ashton & Lee, 2009).

Proponents of the 'Dark Monads' suggest that the three dark traits are individual traits (as described above) without a shared, common core. Others propose that the 'Dark Dyad' is most appropriate, where psychopathy and Machiavellianism are considered to form one construct and narcissism is an entirely separate, albeit correlated, construct (Egan, Chan & Shorter, 2014; Garcia & Rosenberg, 2016; Person et al., 2019). In fact, some suggest that psychopathy is comprised of Machiavellianism (Rogoza & Cieciuch, 2020). Others hypothesize that narcissism and Machiavellianism are actually both features of psychopathy, and that psychopathy is the dominant trait in the Dark Triad (Muris et al., 2017). However, the Dark Dyad has been criticized for having a limited theoretical underpinning and researchers rely mostly on the notion that psychopathy and Machiavellianism are more similar than the 'lighter' trait of narcissism (Kowalski et al., 2021).

Central to the construct of the Dark Triad is that it is comprised of three distinct but overlapping traits. It is suggested that these traits share a 'dark

core', a callous, hostile and manipulative interpersonal style with low honesty-humility as defined by the HEXACO model of personality (Book et al., 2016; Jones & Figueredo, 2013). While honesty-humility is suggested to be the best representation of the shared variance between Dark Triad traits, others suggest it is better represented by lower levels of agreeableness (Stead & Fekken, 2014) or lack of empathy (Jones & Paulhus, 2010).

Finally, more recent research has suggested that non-sexual 'everyday' sadism, typified by the enjoyment of cruelty should be included. Subclinical sadism has been significantly correlated with the Dark Triad traits and has therefore supported the formation of the Dark *Tetrad* (Meere & Egan, 2017; Book et al., 2016). While sadism shares similarities with the other three traits, the 'dark core', it provides a unique contribution in that it is characterised by the enjoyment of the suffering of others. If one considers the definition of Jones and Figueredo (2013) for a trait to be considered 'dark', sadism is negatively correlated with honesty-humility and has demonstrated positive correlations with measures of callousness and interpersonal manipulation (Kowalski et al., 2021).

This thesis considers that the dark monad and dark dyad frameworks do not adequately consider the well-established shared variance and individual contributions of each dark trait. As such, this thesis will consider solely the Dark Triad and Dark Tetrad in subsequent chapters.

Behavioural correlates

Reviews of the Dark Triad and Dark Tetrad have shown these traits are associated with numerous aversive, and immoral, behavioural outcomes (see Furnham, Richards & Paulhus, 2013; Moor & Anderson, 2019; O'Boyle, Forsyth, Banks & McDaniel, 2011). Dark Triad traits have been associated with bullying (Baughman, Dearing, Giammarco & Vernon, 2012; Gibb & Devereux, 2014); trolling behaviours on Tinder (March, Grieve, Marrington & Jonason, 2017); revenge porn (Pina, Holland & James, 2017); dishonesty (Jones & Paulhus, 2017), aggression (Buckels, Jones & Paulhus, 2013); aggressive driving (Burtăverde, Chraif, Aniţei & Mihăilă, 2016); cyberbullying (van Geel, Goemans, Toprak & Vedder, 2017); and intimate partner cyber stalking (Smoker & March, 2017). While research collectively studying the Dark Tetrad and its behavioural correlates is still evolving, everyday sadism has also been associated with cyberbullying (Kircaburun, Jonason & Griffiths, 2018); cyberstalking (Smoker & March, 2017); trolling (Buckles, Trapnell, Andjelovic & Paulhus, 2019); and sadistic behaviour in a laboratory setting (Buckels, Jones & Paulhus, 2013).

Moral decision-making

A common theme central to the Dark Triad and the Dark Tetrad are the aversive and immoral behavioural outcomes. The study of morality is concerned with an individual's view of what is the right and wrong way to behave. It has been a considerable area of interest for researchers with an average of 4,000 publications per year since 2014 (Ellemers, van

der Toorn, Paunov & van Leeuwen, 2019). An important aspect of the study of morality concerns how individuals make decisions on how one should behave in moral situations, or judgements about how morally acceptable the actions of others are (Garrigan, Adlam & Langdon, 2018). Moral judgements are described as the way "people define one or another course of action in a situation as morally right" (Schlaefli, Rest & Thoma, 1985, p. 319).

Traditionally, research into moral judgements proposed that individuals were able to make these judgements through conscious reasoning and deliberation (e.g. Kohlberg, 1969). Others suggest that moral judgements are initially driven by an intuitive and emotionally driven process, as illustrated by Haidt's (2001) social intuitionist model of moral judgement and Greene's (2007) dual process model of moral judgement. Moral Foundations Theory (MFT; Haidt & Joseph, 2004) has amalgamated both models. MFT suggests that humans are born with a basic level of morality, which is expanded upon by environmental factors such as culture, parenting and education (Graham et al., 2013). Similar to Haidt's (2001) social intuitionist model of moral judgement, it is suggested that moral judgements are initially made using moral intuition, followed by slower, conscious moral reasoning where necessary. However, MFT further suggests that humans are born with a basic level of morality, which is expanded upon by environmental factors such as culture, parenting and education (Graham et al., 2013). MFT argues that morality is based on five

foundations: *harm/care*, namely protecting others from harm; *fairness/reciprocity*, concerns relating to adherence to societal rules, inequality and unfair treatment; *ingroup/loyalty*, concerns about self-sacrifice and loyalty to the group; *authority/respect*, concerns about social hierarchy, respect and obedience; and *purity/sanctity*, related to disgust, purity and contamination.

Both Haidt (2001) and Greene's (2007) models of moral judgement and MFT, highlight emotions are an important aspect of deciding what is morally right and wrong. Disgust is one such emotion – an evolutionary response that originated as a feeling of revulsion in response to aversive stimuli, motivating an individual to withdraw from that stimulus (Rozin, Haidt & McCauley, 2000). However, people can also experience disgust towards moral transgressions and exhibit the associated physical symptoms of disgust, such as a loss of appetite and nausea (Luo et al., 2013). Wagemans, Brandt and Zeelenberg (2017) argue that this moral disgust then cues an individual that a transgression has occurred and motivates them to do something about it. Moral disgust has been shown to predict higher scores across all of these foundations (van Leeuwen, Dukes, Tybur & Park, 2017). Both disgust and MFT will be explored further in the current thesis.

The study of moral decision-making is often reduced to deontological and utilitarian responses, the dual process theory of moral judgement. A

utilitarian judgement considers that an action is considered morally acceptable *only* if the action increases the well-being of the individual or group (Gawronski & Beer, 2017). In contrast, a deontological response considers an action morally acceptable if it is in line with social norms (e.g. murder is wrong; Gawronski & Beer, 2017). These judgements are traditionally compared against each other in moral dilemmas. However, not only do moral dilemmas consist of extreme scenarios that are not representative of everyday moral problems and situations, but these dichotomous response styles are also drastic and not reflective of everyday moral decision-making (Everett & Kahane, 2020). These significant limitations will be addressed in the current thesis.

The current thesis

The current thesis sought to critically examine and extend research on the Dark Tetrad and moral decision-making. Given the 'dark core' and individual contributions of the Dark Tetrad traits, it is of no surprise that it has been an area of significant interest for the study of moral decision-making. As will be demonstrated in the systematic review, studies considering the Dark *Triad* and moral decision-making have not produced consistent results. Furthermore, the study of the Dark *Tetrad* and moral decision-making is still in its infancy. As such, the current thesis aimed to review the current literature of the Dark Triad and add new knowledge to the Dark Tetrad evidence base. Specifically, this thesis seeks to explore the highly correlated predictors of moral decision-making, particularly the

contributions of Dark Tetrad traits, disgust and MFT in everyday moral scenarios and to progress beyond the use of typically applied dichotomous response styles.

Thesis overview

Chapter 1 provided an introduction to topics discussed in this thesis.

Chapter 2 is a systematic review of the current literature concerning the Dark Triad and moral judgements. This is the first systematic review to explore the relationship between the Dark Triad and moral decision-making. It will seek to establish whether there is consistent evidence of the impact of Dark Triad traits on moral decision-making.

Chapter 3 examined the reliability, validity, and normative sample of the Short Dark Triad Scale (SD3). To date, there has not been a critique of SD3 despite the fact it is the main psychometric used to measure Dark Triad traits.

Chapter 4 consists of a quantitative primary research study investigating individual differences in HEXACO and Dark Tetrad traits, levels of disgust and moral disengagement on real-world moral judgements. Due to the results of the systematic review, this utilised real-world moral scenarios and is the first study to utilise this and different levels of offences.

Chapter 5 presents a second research study which utilises a quantitative method of analysis to explore qualitative data. The focal objective of this study was to explore relationships between Dark Tetrad traits and moral

foundations using linguistic analysis software. This was the first study to do this.

Finally, Chapter 6 includes a discussion of the findings, in addition to limitations, suggestions for future research and implications of findings on research and practice.

Rationale for Chapter Two

Chapter One introduced a brief overview of the main concepts considered in this thesis. The systematic review sought to synthesise current evidence regarding the Dark Triad and the nature of its relationship to moral decision-making. While this review considered including studies of the Dark Tetrad, scoping exercises revealed a limited number of studies available for analysis. Hence, this chapter focuses solely on the Dark Triad and moral decision-making. Limitations of the current evidence and suggestions for future research are discussed.

Chapter Two

Moral decision-making and the Dark Triad: A systematic review

Abstract

Research investigating the Dark Triad has continued to grow since its inception 20 years ago (see Paulhus & Williams, 2002), but there remains ambiguity about the strength and direction of the link between the Dark Triad and moral decision-making. This systematic review sought to establish whether there is consistent evidence that higher levels of Dark Triad traits affect moral decision-making. Six electronic databases **(**Embase, Medline, PsycInfo, Web of Science, PsycArticles and ASSIA) were searched. Grey literature and expert recommendations were also sought. Included studies needed to consist of adult samples, measure Dark Triad traits individually or collectively, and use a moral decision-making task. Searches resulted in 2206 papers, however following screening and exclusion procedures a total of 15 studies were included in this review. Due to variety in methodologies between studies, it was not possible to complete a meta-analysis. As such, a narrative synthesis of findings is provided. Machiavellianism was most consistently implicated as a significant negative correlate of moral judgements in studies using moral dilemmas, followed by psychopathy. Narcissism was least often reported to be correlated with moral judgements in moral dilemmas. All Dark Triad traits were implicated in studies of everyday/real-world moral judgements

(*n*=3), although certain traits were more relevant to specific moral issues. Limitations of included studies and this systematic review are discussed, as well as suggestions for future research.

Introduction

Moral decision-making

Moral decision-making encompasses a variety of terms and definitions which are often used interchangeably. It includes decisions made about how to behave in a moral situation, or a judgement about how morally acceptable the actions of others are (Garrigan, Adlam & Langdon, 2018). For the purposes of this systematic review moral decision-making will be used to denote any task which involves judgements of moral dilemmas or scenarios.

Research in the field of moral psychology has long suggested that individuals make moral decisions by employing a process of conscious reasoning, acknowledging that while emotion may come into play, this is not the driving force behind the moral judgment (Ham & van den Bos, 2010). More recently an alternative approach has been suggested, advocating that moral decisions are made by an unconscious, automatic and intuitive process and implying that emotions may comprise an important part in this process (Haidt, 2001). However, when it is required, this process can be followed by deliberate, conscious reasoning. It is an intricate amalgamation of both conscious and unconscious processes which help us to arrive at a decision.

Moral decision-making and psychopathy

Psychopaths are renowned for their morally reprehensible behaviour. They are known to be callous and lack empathy, be manipulative and parasitic, and engage in a variety of antisocial and criminal behaviour (Hare, 2003). Psychopaths are often reported to be devoid or lack morality, but this assertion has resulted in mixed and inconclusive findings in research.

A meta-analysis comprising of 23 studies investigated the relationships between psychopathy and the most commonly used measures of moral judgement in mixed community and forensic samples, using both clinical and subclinical measures of psychopathy. They found that there is indeed a significant, although small, relationship between psychopathy and moral judgment (Marshall, Watts & Lilienfeld, 2018). Marshall and colleagues (2018) suggest that 79% of this effect was in line with the idea that psychopathic individuals have deficits in morality, both in personal and impersonal moral dilemmas although not significantly so. It is difficult to delineate whether this relationship holds in solely community and subclinical samples. Furthermore, in a sample of 48 prisoners completing a moral judgement test, researchers found that psychopaths (as measured by the Psychopathy Checklist-Revised; Hare, 2003) were more willing to endorse impersonal harms and rule violations (Koenigs, Kruepke, Zeier & Newman, 2012). Additionally, primary psychopaths were more willing to endorse personal harms which involved committing direct, intimate physical harm to another (Koenigs et al., 2012).

Moral decision-making and Machiavellianism

Machiavellians are considered cold, manipulative and exploitative of others, and evidence a lack of remorse and conscience (Rauthmann & Will, 2011). Others suggest that Machiavellians have the darkest personality and are "the most morally suspect" (Furnham, Richards & Paulhus, p. 208, 2013), tending to make decisions based on self-interest, and by using manipulation and deception (Dalton & Radtke, 2012). It also suggested that Machiavellians have the ability to take others' perspective in moral dilemmas but act in their own interest regardless (Rauthmann & Will, 2011). This body of evidence would suggest that Machiavellians are likely to behave in an immoral manner, with a disregard for moral values and norms if it were in their own interest, affecting their moral decision-making.

In comparison to research on psychopathy and moral decision-making, there have been few studies that have discussed or directly established the potential association between Machiavellianism and moral decision-making. Additionally, these studies tend to investigate ethical decision-making in the fields of business and leadership (see O'Fallon & Butterfield, 2005). A review of ethical decision-making identified 10 studies that considered Machiavellianism and noted that those with higher levels of Machiavellianism were more likely to make unethical decisions (O'Fallon &| Butterfield, 2005). However, they presented no description of the studies included in the review, it is unclear which measures were used to measure

Machiavellianism, and gave no information about the sample size and type of sample (i.e. clinical or subclinical) for each study.

Moral decision-making and narcissism

Narcissists have an inflated sense of self, need for attention and recognition, and a strong desire for self-enhancement – in essence, their need for "…getting ahead is more important than getting along" (Hepper, Hart & Sedikides, 2014, p.1079). There is again limited research on narcissism and its implications in moral decision-making, and most information is contained within the Dark Triad literature (discussed further in the next section). An investigation of the Dark Triad and fraud suggested that higher levels of narcissism motivate an individual to act immorally for their own benefit (Harrison, Summers & Mennecke, 2018). However, others suggest that in order to gain admiration from others, narcissists will make attempts to please others around them and tend to act in a moral manner (Liu, Chiang, Fehr, Xu & Wang, 2017). Both studies utilised the Narcissistic Personality Inventory in subclinical populations (NPI-16; Ames, Rose & Anderson, 2006). Given the intense need to promote a positive self-image to others, narcissists may be more motivated to act in a moral manner, and therefore immoral or unethical behaviour is more likely to be due to an impairment in moral reasoning rather than an absence of morality (Zuo, Wang, Xu, Wang & Zhao, 2016). Given the limited research, and lack of clarity of the role of narcissism in moral decision-making in existing research, this is an area that warrants further exploration.

Moral decision-making and the Dark Triad

A brief overview of each dark monad and its relationship to moral decision-making has been presented. These studies predominantly consist of clinical samples, and specifically in the case of psychopathy have primarily been investigated using clinical diagnostic measures. More recently, moral decision-making research has investigated these traits collectively under the Dark Triad umbrella. The Dark Triad consists of subclinical forms of psychopathy, Machiavellianism and narcissism (Paulhus & Williams, 2002). It has been outlined in the introduction chapter of this thesis, that at the *core* of all three Dark Triad traits is a tendency to engage in a variety of socially aversive and often immoral behaviour such as threatening and aggressive behaviour, and cheating and plagiarism (Furnham, Richards & Paulhus, 2013), making it an interesting avenue for moral decision-making research.

Previous research has highlighted that there are more significant associations between moral judgements and the Dark Triad traits when looking specifically at social moral judgements, such as homosexuality and the death penalty (Arvan, 2013b). It has also been proposed that those with higher levels of narcissism appear to behave more morally, and have a stronger motivation to do so, than those with higher levels of Machiavellianism and psychopathy (Zuo et al., 2016). Research investigating the Dark Triad has continued to grow since its inception 20 years ago (see Paulhus & Williams, 2002), but there remains ambiguity

about the strength and direction of the link between the Dark Triad and morality.

Aim

There have been previous reviews of individual 'dark' traits and their relationship to moral decision-making, but this is the first systematic review to explore research on the Dark Triad and moral decision-making. This review sought to systematically evaluate evidence relating to Dark Triad traits and moral decision-making to establish if these traits are consistently implicated as significant predictors of moral decision-making.

Scoping search

A scoping search was conducted in October 2019 and repeated in June 2022. There were no systematic reviews identified which investigated similar exposures and outcomes on either occasion, highlighting the need for this review. It is of note that this review considered studies utilising the Dark Tetrad, however scoping exercises revealed a limited number of studies and as such it was not felt appropriate to complete a systematic review of the Dark Tetrad and moral decision-making.

Method

This systematic review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA; Page et al., 2021) to ensure transparency and consistency among reviews.

Inclusion criteria

The focus of this review was the relationship between Dark Triad traits and moral judgements. Studies were only eligible for inclusion if they met pre-defined criteria specified in Table 1.

Table 1

Inclusion Criteria

Population	Adults (no other restrictions on population)
Exposure	Dark Triad traits (psychopathy, Machiavellianism and narcissism)
Outcome	Moral judgements
Study type	All study designs will be considered although likely that it will be predominantly cross-sectional studies
Language	No restrictions
Year	No restrictions
Exclusion criteria	Samples which include those under the age of 18, studies which do not include a measure of all three Dark Triad traits

Population

The population investigated in this systematic review were adults of any gender, occupation and nationality. Studies were excluded if the sample included participants under the age of 18.

Exposure

The exposure investigated were Dark Triad traits: psychopathy, Machiavellianism and narcissism. The traits could be measured together, using the Short Dark Triad Scale (SD3; Jones & Paulhus, 2014) or the Dirty Dozen (Jonason & Webster, 2010). Alternatively, Dark Triad traits could be measured individually using measures such as the MACH-IV (Christie & Geis, 1970), Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988) or Self-Report Psychopathy Scale (SRP-III; Paulhus, Neumann & Hare, 2009). For the study to be included in the systematic review, all three traits must have been measured although this could have been done individually or collectively.

Outcome

Studies investigating the Dark Triad and moral decision-making utilise a number of different measures. For a study to be included, it needed to report the outcome of a task where participants were required to make a judgement about the morality of a situation. This resulted in certain common morality measures being excluded. For example, the Moral Foundations Questionnaire (Graham, Haidt & Nosek, 2009) is commonly used in studies investigating moral decision-making, however it considers the underlying reasons for why someone may judge something as right or wrong and does not specifically ask individuals to judge a scenario.

Language

In order to minimise selection bias, there was no restriction on language. For papers which were not in English, researchers were contacted to see if English version was available and if not, Google Translate was used.

Types of studies

All types of studies were included in this review however due to the nature of this topic, studies were mostly cross-sectional.

Search strategy

Bramer, Rethlefsen, Kleiinen and Franco (2017) note that systematic reviews should include searches of Embase, Medline, Web of Science and Google Scholar to obtain optimal search results, but also include databases which are unique to the topic of investigation. As such, Ovid Embase, Ovid Medline, Ovid PsycInfo, Web of Science, PsycArticles and Applied Social Sciences Index and Abstracts (ASSIA) databases were searched. Grey literature (e.g. unpublished theses and dissertations) was also reviewed via Proquest Dissertation and Theses. Google Scholar was also searched, as well as reference lists of included studies although these did not identify any further studies for inclusion. Finally, requests for unpublished studies were sent to well-known academics and researchers in the fields of morality and the Dark Triad.

Search terms

Population was not specified in the search strategy as scoping exercises indicated that most studies consisted of adult samples.

- Dark Triad OR Dirty Dozen OR Short Dark Triad OR psychopathy OR psychopath OR psychopathic OR Machiavellian* OR narcissist* OR narcissism

AND

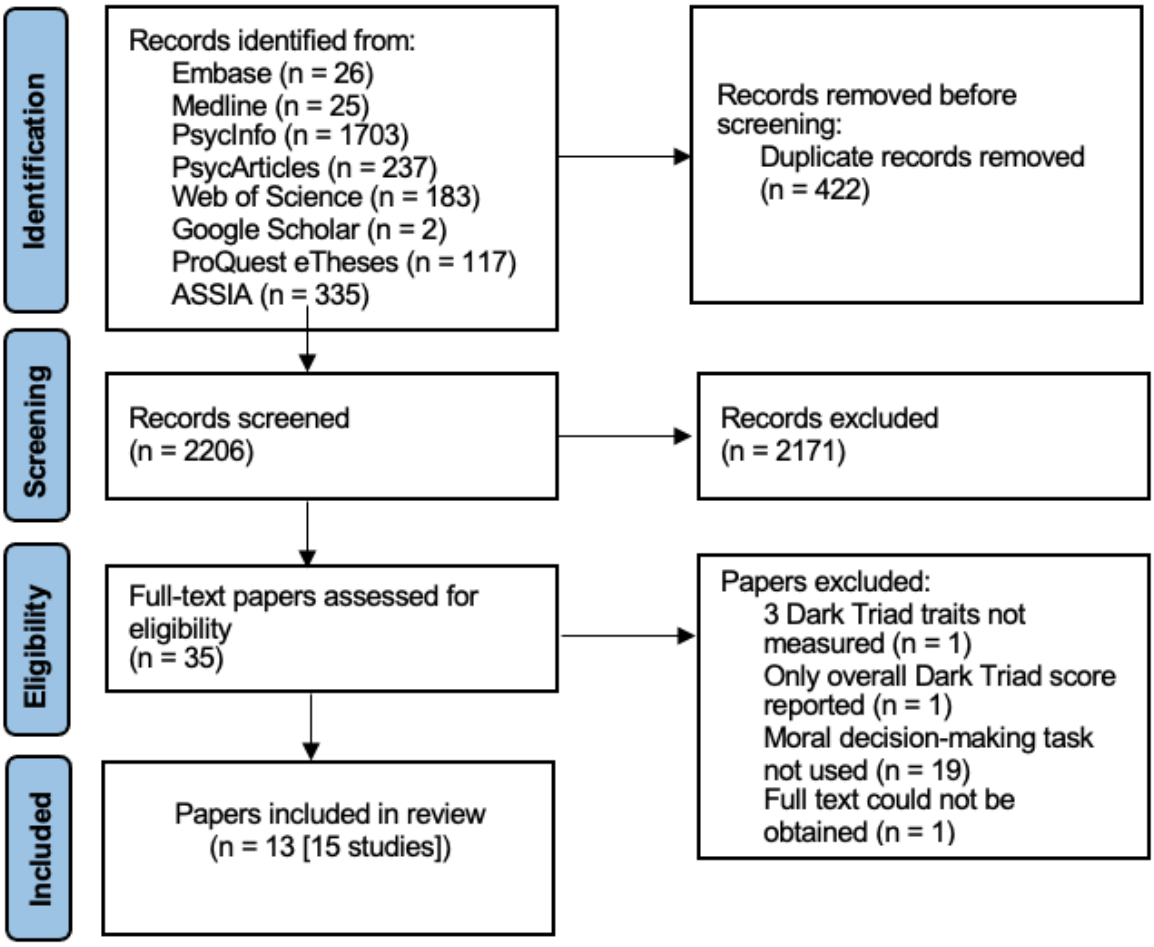
- Moral decision* OR moral judg?ment OR moral evaluation OR moral task OR moral dilemma OR moral* OR moral choice OR moral stimuli

Full search syntax for all electronic databases is included in Appendix A.

Study selection

Systematic literature searches identified a total of 2628 papers, however 422 were duplicates and removed prior to screening. After screening titles and abstracts, 35 papers met the inclusion criteria. After accessing full-text papers, a total of 13 papers met the inclusion criteria consisting of 15 studies. The list of excluded studies and reason for exclusion is provided in Appendix B. Figure 1 shows the PRISMA flowchart outlining number of papers at identification, screening, eligibility and inclusion stages of this review.

Figure 1
PRISMA flowchart detailing study selection process



Data extraction

A data extraction form was created and piloted on three studies indicating the utility of the form (see Appendix C). General study information was collected, followed by study characteristics (aims of study, design), participant characteristics (recruitment, age, gender, ethnicity, total participants and description of sample), and measurement/outcomes (definition of outcomes, measures used, findings).

Quality assessment

Included studies were quality assessed using an adapted version of the Critical Appraisal Skills Programme (CASP, 2013) for Cohort studies. CASP do not provide a tool for cross sectional studies, so questions from the AXIS critical appraisal tool (Downes, Brennan, Williams & Dean, 2016) for cross-sectional studies were also used. Questions included in the quality assessment form aimed to identify any issues with validity, selection bias, measurement bias and reporting of results. A copy of the quality assessment form is provided in Appendix D.

Once the final sample of studies was established, 3 studies (20%) were screened by a second reviewer. Agreement between raters was assessed by calculating Cohen's kappa coefficient, a measure of inter-rater agreement which indicated 100% agreement. Quality assessment information for all studies included in this review are provided in Table 2.

Table 2

Quality assessment of included studies

	Quality Assessment													
	Research question/objective clearly stated?	***Study design appropriate for study objective/research questions?***	***Sample size justification or power description provided?***	***Selection process likely to select participants representative of the population?***	***Study population clearly specified?***	***Dark Triad measure(s) clearly defined, valid and reliable?***	***Outcome measures clearly defined, valid and reliable?***	***Methods sufficiently described to enable them to be repeated?***	***Is it clear what was used to determine statistical significance?***	***Were results presented for all the analyses described in the methods?***	***Was the method of data analysis appropriate?***	***What are implications of the study and are they supported by evidence?***	***Limitations discussed?***	***Quality rating (/26)***
Arvan (2013a)	Y	Y	N	Y	P	P	N	Y	Y	Y	P	Y	N	17
Halm & Möhring (2019)	Y	Y	Y	Y	Y	Y	P	Y	Y	Y	Y	Y	Y	25
Wrenn (2020)	Y	Y	Y	N	Y	P	Y	Y	Y	Y	Y	Y	Y	23
Djeriouat & Trémolière (2014)	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	22

Czarna, Jonason, Dufner & Kossowska (2016) *Study 5*	Y	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	22
Dinić, Milosavljević & Mandarić (2021)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	26
Rožić, Švegar & Kardum (2018)	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	24
Amiri & Behnezhad (2017)	Y	Y	N	N	N	Y	Y	P	Y	Y	Y	Y	N	17
Zamora, Ungson & Seidman (2022)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	26
Arvan (2013b)	Y	Y	N	Y	P	P	N	Y	Y	Y	P	Y	P	18
Karandikar, Kapoor, Fernandes & Jonason (2019)	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	24
Moore, Ross & Brosius (2020)	Y	Y	N	Y	P	Y	Y	Y	Y	Y	Y	Y	N	21

Trémolière & Djeriouat (2016)	Y	Y	N	Y	P	Y	Y	Y	Y	Y	Y	Y	N	21
Study 1														
Trémolière & Djeriouat (2016)	Y	Y	N	Y	P	Y	Y	Y	Y	Y	Y	Y	N	21
Study 2														
Trémolière & Djeriouat (2016)	Y	Y	N	Y	P	Y	Y	Y	Y	Y	Y	Y	N	21
Study 3														

Note. Y = Yes, 2 points; P = Partial, 1 point; N = No, 0 points.

Analysis

Study characteristics

All studies included in this review and relevant characteristics are highlighted in Table 3. Studies were published between 2013 and 2022, yet the concept of the Dark Triad was first published in 2002 (Paulhus & Williams, 2002). Fourteen studies were cross-sectional in nature and one was causal comparative. The total number of participants comprised in this review is 5,369, but sample size varied from 70 to 1154 participants in individual studies. Most studies consisted of more female participants (*n*=9) ranging from 51.8 to 70%. Four studies consisted of more male participants, ranging from 50.3 to 58.9%. Finally, one sample consisted of solely male participants and one study consisted of solely female participants. Samples were mostly from the general population (*n*=11), followed by university students (*n*=3). One study considered both employed individuals and students. Studies were conducted in a variety of countries, although predominantly in the United States (*n*=5) and Europe – France (*n*=4), Sweden (*n*=1), Poland (*n*=1), Serbia (*n*=1), Croatia (*n*=1). Only two studies were outside of western countries, conducted in Iran and India.

Table 3

Summary of study characteristics of included studies

Author, Date and Country	*Sample size*	*Population*	*Mean age in years*	*Gender*	*Dark Triad measure*	*Moral decision-making measure*	*Study Design (Manipulation)*
Arvan (2013a) *USA*	567	General population	*Not specified* Median age = 28 years	45.3% female; 53.3% male	SD3	Moral Intuition Survey	No manipulation
Halm & Möhring (2019) *Sweden*	254	75% student; 21% employed; 4% unemployed	34.0	63% female; 37% male	SD3 (English and German)	8 moral dilemmas (English and German version; from Greene et al., 2001)	Greater good and self-interest
Wrenn (2020) *USA*	205	University students	20.5	58.8% female; 39.2% male	Mach-IV Machiavellian Personality Scale (MPS) NPI-40 Five-Factor Narcissism Inventory Short Form SRP-III TriPM	16 moral dilemmas (from Greene et al., 2001)	Personal, impersonal, disgust and sadness
Djeriouat & Trémolière (2014)	180	General population	37.1	63.3% female; 36.7% male	SD3	11 moral dilemmas (from Bartels, 2008;	No manipulation

France						Bartels & Pizarro, 2011)	
Czarna, Jonason, Dufner & Kossowska (2016) *Study 5* *Poland*	70	University students	23.2	100% male	Dirty Dozen (Polish)	3 moral dilemmas (from Bartels & Pizarro, 2011)	No manipulation
Dinić, Milosavljević & Mandarić (2021) *Serbia*	758	General population	26.6	62.9% female; 36.7% male	SD3 (Serbian)	4 moral dilemmas (from Bartels & Pizarro, 2011)	Personal, impersonal, active and passive
Rožić, Švegar & Kardum (2018) *Croatia*	210	General population	28.3	70% female; 30% male	NPI-40 (Croatian) Mach-IV (Croatian) SRP-III (Croatian)	4 moral dilemmas (from Greene et al., 2001)	No manipulation
Amiri & Behnezhad (2017) *Iran*	120	University students	22.7	100% female	SD3 (Persian)	Moral dilemmas (number of dilemmas not specified; from Greene et al., 2004)	Personal and impersonal
Zamora, Ungson & Seidman (2022)	155	General population	37.8	49.7% female; 50.3% male	Mach-IV LSRP NPI-40	8 moral dilemmas (Greene et al., 2004, Bartels & Pizarro 2011)	Self-interest

USA							
Arvan (2013b) *USA*	1154	General population	*not specified* Median age = 29	40.9% female; 58.9% male	SD3	Moral Intuition Survey	No manipulation
Karandikar, Kapoor, Fernandes & Jonason (2019) *India & Australia*	355	General population	24.9	70.4% female; 29.6% male	LSRP MACH IV NPI-16	10 moral dilemmas (from Greene et al., 2001)	Personal and impersonal
Moore, Ross & Brosius (2020) *USA*	272	General population	*not specified* 18+	46.7 female; 53.3% male	SD3	Morality of Everyday Life Scales (MELS; Lovett, Jordan & Wiltermuth, 2012)	No manipulation
Trémolière & Djeriouat (2016) *Study 1* *Replication* *France*	247 265	General population General population	*38.0* *36.8*	61.1% female; 38.9% male 56.2% female;43.8% male	SD3 SD3	3 dilemmas (adapted from Cushman, 2008; Young et al., 2010)	Attempted harm, intentional harm and accidental harm

Trémolière & Djeriouat (2016) *Study 2* *France*	291	General population	*38.4*	51.8% female; 48.2% male	SD3	2 dilemmas (adapted from Cushman, 2008)	Causal and non-causal
Trémolière & Djeriouat (2016) *Study 3* *France*	266	General population	*37.9*	57.9% female; 42.1% male	SD3	3 dilemmas (from Bartels & Pizarro, 2011)	Attempted harm, intentional harm and accidental harm

Overview of study methodologies

Study methodology varied greatly across studies, specifically with regards to measures of the Dark Triad traits and types of outcome measures. As such, an overview of methodologies is discussed prior to synthesising results.

Measures of Dark Triad traits

Twelve of the 15 studies included in this review used the Short Dark Triad scale (SD3; Jones & Paulhus, 2014) to measure Dark Triad traits. Arvan (2013a) and Arvan (2013b) did not report reliabilities of either the total SD3 score or subscale scores. Halm and Möhring (2019) used both the English and German version of the SD3, and reported reliabilities of .70 for Machiavellianism, .63 for narcissism and .63 for psychopathy. However, authors do not specify to which version of the SD3 these reliabilities pertain. Amiri and Behnezhad (2017) piloted a Persian version of the SD3 and reported subscale reliabilities of .71 for Machiavellianism, .82 for narcissism and .69 for psychopathy. Dinić, Milosavljević and Mandarić (2021) used the Serbian version of the SD3 (see Dinić, Petrovic & Jonason, 2018) and reported reliabilities of .79 for Machiavellianism, .77 for narcissism and .73 for psychopathy. Trémolière and Djeriouat (2016) used the English version of SD3 in three of their studies but only reported reliabilities for Study 1 – .81 for Machiavellianism, .75 for narcissism and .82 for psychopathy. Finally, Czarna, Jonason, Dufner and Kossowska (2016) used the Polish

version of the Dirty Dozen and reported reliabilities of .83 for Machiavellianism, .78 for narcissism and .74 for psychopathy. Overall, studies which provided reliabilities for the SD3 and Dirty Dozen indicated acceptable internal reliabilities. While both the SD3 and Dirty Dozen are generally considered reliable measures of Dark Triad traits, the SD3 has evidenced stronger convergent and incremental validity (Maples, Lamkin & Miller, 2014).

Four studies used individual measures to assess Dark Triad traits. Wrenn (2020) used two measures to assess each Dark Triad trait – total scores were *z*-scored, and subsequently averaged to create one composite score per trait. As such, narcissism was composed of the 40-item Narcissistic Personality Inventory (NPI-40; Raskin & Terry, 1988) and the Grandiose Narcissism subscale of the Five-Factor Narcissism Inventory Short Form (FFNI-SF; Sherman et al., 2015); Machiavellianism was composed of total scores of the MACH-IV and Machiavellian Personality Scale (MPS; Dahling, Whitaker & Levy, 2008); and psychopathy was composed of the Self-Report Psychopathy scale (SRP-III; Paulhus et al. 2009) total scores and average of two Triarchic Psychopathy Measure (TriPM; Patrick et al., 2009) subscales. Omega reliabilities for all scales and subscales range from .68 to .91. Rožić, Švegar and Kardum (2018) used the Croatian versions of the NPI-40, Mach-IV and SRP-II and report reliabilities of .82, .70 and .82 respectively. Karandikar, Kapoor, Fernandes and Jonason (2019) used the

16-item Narcissistic Personality Inventory (NPI-16; Ames, Rose & Anderson, 2006), MACH-IV and LSRP reporting reliabilities of .72, .76 and .87 respectively. Finally, Zamora, Ungson and Seidman (2022) used the MACH-IV, NPI-40 and LSRP and reported omega reliabilities of .72, .85 and .93 respectively. All individual measures used in studies included in this review have an acceptable level of reliability.

Outcome measures

Studies included in this review used two main forms of outcomes measures: moral dilemmas (*n*=11) and everyday/real-world moral judgements (*n*=3).

Moral dilemmas

Ten studies used moral dilemmas citing Greene et al. (2001; 2004) or Bartels and Pizarro (2011), and two studies used moral dilemmas from Cushman (2008). The number of moral dilemmas varied between studies (*min*=3, *max*=16). It is of note that moral dilemmas have suffered significant criticism for their limited external validity, particularly as they represent unrealistic hypothetical situations that individuals are highly unlikely to encounter in the real-world (Kahane, 2015). Another criticism of dilemmas pertaining to this review is that studies do not report any reliabilities of moral dilemmas. One reason for this is most likely due to responses to moral dilemmas consisting of one to three items, making it difficult to assess internal consistency.

Everyday/real-world moral judgements

Two studies (Arvan, 2013a; Arvan, 2013b) used the Moral Intuition Survey. It is important to note that while the survey has the same title in both studies, they are considerably different. The 'original' version of the MIS contains 17 items, and has items covering economic moral judgements, social moral judgements, and uncategorised items. The subsequent MIS consists of 15 items which only assess social moral judgements. Arvan (2013a; 2013b) acknowledges that the MIS is untested but suggests that it has high face validity, yet there is no reporting of reliabilities or validation efforts in either study which significantly affects the generalisability of results. One study used the 30-item Moralization of Everyday Life Scale (MELS; Lovett, Jordan & Wiltermuth, 2012), which asks participants to provide moral judgements to a number of situations correlating to six subscales. Again, no reliabilities are reported.

Results

Due to the varying methodologies used in included studies, it was not possible to complete a meta-analysis. The current review focussed only on the direct relationships between Dark Triad traits and moral judgements. However, there were a number of different manipulations used in included studies which are discussed below.

Moral dilemmas

Personal vs. impersonal

Four studies distinguished between personal and impersonal dilemmas. Dilemmas are considered personal if they meet three criteria: it is likely to cause bodily harm, that harm must transpire against a person or people, and the harm must be a direct result of the agent (Greene et al., 2004). A dilemma is considered impersonal if it does not meet the aforementioned criteria. Wrenn (2020) assessed Dark Triad traits and their relationships with moral judgements to 16 moral dilemmas. It was noted that only Machiavellianism (r=.15, p<.05) and psychopathy (r=.14, p<.05) had significant main effects on moral judgements overall, but there was no main effect for narcissism. Furthermore, there were no significant differences between Dark Triad traits and personal or impersonal scenarios**.** Dinić et al (2020) investigated dark traits and their impact on moral judgements using four dilemmas of personal and impersonal involvement, and whether the victim was known or unknown. Similar to the previous study, Dinić and colleagues (2020) found that Machiavellianism had significant positive effects on utilitarian moral judgement irrespective of the dilemma type (F(1,753)=6.68, p<.05), as did narcissism (F(1,753)=5.49, p<.05). They also noted that psychopathy had significant effects in dilemmas where the victim was known (F(1,753)=4.31, p<.05). Comparatively**,** Karandikar and colleagues (2019) observed that all Dark Triad traits were related to both personal and impersonal moral dilemmas. Effect sizes for Machiavellianism

($r_{impersonal}$ =.35, p<.001; $r_{personal}$=.18, p<.001) and psychopathy ($r_{impersonal}$=.37, p<.001; $r_{personal}$=.27, p<.001) were stronger than for narcissism ($r_{impersonal}$ =.22, p<.001; $r_{personal}$=.13, p<.05), particularly for impersonal moral dilemmas.

Amiri and Behnezhad (2017) noted that those 'high' on Machiavellianism scored higher than psychopathy on the impersonal moral dilemma ($M_{difference}$ = 1.35, p<.05). There was no significant difference between any Dark Triad traits or control group for personal moral dilemmas. However, there are a number of limitations associated with this study that impact the relevance of this finding. Firstly, participants were assigned to 'high' Machiavellianism, narcissism, psychopathy or a control group, but it is unclear how participants were allocated – there is no suggestion of what scores are considered 'high'. Furthermore, since Dark Triad traits are also correlated with each other, there is no indication of how this was controlled for – were participants who scored high on psychopathy not also scoring high on the other two traits? There was also no indication of how many dilemmas were used, nor any reliabilities of subscales reported. Finally, the sample consisted solely of female participants, who are noted to score lower than males on Dark Triad traits (Muris, Merckelbach, Otgaar & Meijer, 2017).

There are clear methodological differences between studies – three measured Dark Triad traits as continuous variables, one compared individuals high on one trait; three studies compared levels of the traits and one compared traits against each other. It appears that there is no consistent evidence regarding Dark Triad traits and their relationship to personal and impersonal moral dilemmas. Machiavellianism is shown to be a significant correlate of impersonal moral dilemmas as identified in two studies, although one study noted no significant difference, and one study noted a relationship with both personal and impersonal dilemmas. Psychopathy and narcissism were related to both personal and impersonal moral dilemmas in two studies, but no significant relationship was found in two studies.

Self-interest/greater-good dilemmas

Two studies used a self-interest manipulation for moral dilemmas. Halm and Möhring (2019) examined the relationship between Dark Triad traits and utilitarianism in the workplace using adapted self-gain and greater-good moral dilemmas. They noted positive correlations between psychopathy and overall utilitarianism (r=.32, p<.001), and between Machiavellianism and utilitarianism (r=.31, p<.001). Furthermore, significant relationships were noted between psychopathy and self-gain (r=.26, p<.001) and greater good (r=.30, p<.001) dilemmas, as well as between Machiavellianism and self-gain (r=.26, p<.001) and greater good

(r=.29, p<.001) dilemmas. Hierarchical regressions further supported this, and indicated that psychopathy was a significant predictor of both types of dilemmas, whereas Machiavellianism was only a significant predictor of greater-good dilemmas when controlling for demographics. However, a limitation of the study is that authors adapted moral dilemmas to workplace contexts, yet 75% of the sample were students. For individuals who may not have had much experience of the work environment, these dilemmas may be very abstract similar to criticisms of sacrificial moral dilemmas. More recent research based on a general population sample, asked participants to make utilitarian 'greater good' or deontological choices on four self-interest dilemmas and four neutral dilemmas (Zamora, Ungson & Seidman, 2022). Results indicated that Machiavellianism and psychopathy predicted more utilitarian decisions, as well as stronger endorsement of utilitarian decision only in self-interest dilemmas. These studies provide consistent evidence of the role of Machiavellianism and psychopathy in moral dilemmas concerning self-interest and greater-good across two different samples. Despite the limitations of the first study, it is interesting that findings are similar for both the general population and a mix of students and employees.

Moral dilemmas without manipulations

Three studies used moral dilemmas without manipulations. Czarna and colleagues (2016) noted that psychopathy was positively correlated (r=.25,

p<.05) with utilitarian judgements, but no significant effects were found for Machiavellianism or narcissism. It is important to note that this sample consisted solely of a small sample of male participants. Research has highlighted that Dark Triad traits are often noted to be more present for men (Muris et al., 2017). As such, the results of the aforementioned study may not be comparable to studies which include mixed genders. Illustrating this, Rozic and colleagues (2018) used a mixed-gender sample and found similar interactions for psychopathy (*r*=.27, p<.01), but also noted a positive correlation with Machiavellianism (*r*=.24, p<.01). Comparatively, Djeriouat and Trémolière (2014) found psychopathy, Machiavellianism and narcissism to be positively related to utilitarian moral judgements, although psychopathy was the strongest correlate (*r*=.38, *p*<.001) and narcissism was the weakest correlate (*r*=.18, *p*<.05).

Studies in this group were similar – samples were collated from the general population, similar sample sizes, similar mean age, and found comparable effects between studies. All studies used different measures of Dark Triad traits – the Dirty Dozen, individual measures of traits and the SD3 respectively – yet the main effects of Dark Triad traits appear to replicate. It is of note that there was a large difference in the number of moral dilemmas used between studies– Djeriouat and Trémolière (2016) used 11 dilemmas whereas the other two studies used three and four dilemmas. As such, a larger number of moral dilemmas may have inflated the chance of

finding significant results – a type 1 error – which do not appear to have addressed with statistical correction (e.g. Bonferroni correction). Nonetheless, there is evidently agreement that psychopathy is an important correlate of utilitarian moral judgements, but there is limited clarity about the importance of Machiavellianism and narcissism.

Harm

Three studies used manipulations of harm and all studies were completed by Trémolière and Djeriouat (2014). Participants were asked to judge whether the action was morally wrong, whether the agent should be punished and if the agent should feel guilty. In study 1, all Dark Triad traits were negatively related to wrongness judgements for intentional, attempted and accidental harm scenarios (*r*-values between .13 and .52). Furthermore, all Dark Triad traits suggested that the agent should not feel guilty when intending to harm someone in intentional and attempted scenarios (*r*-values between .22 and .51). Finally, Dark Triad traits were negatively related to punishment judgements for intentional and accidental harm scenarios, although only psychopathy and Machiavellianism were negatively correlated with punishment judgements for attempted harm scenarios (*r*-values between .14 and .48). A major strength of study 1 is that the authors sought to replicate findings before proceeding to study 2. However they found inconclusive results – only effects of psychopathy and Machiavellianism interactions were similar. Narcissism was no longer a

significant correlate of any judgements in the intentional harm scenario, only a significant correlate of guilt judgements in the attempted harm scenario and positive correlate of wrongness and punishment judgements for accidental harm scenario. This suggests that the effects are not robust and could possibly have been found by chance. Moreover, the results of Study 3 of this paper which used the same study design except three different scenarios again found different outcomes – there were no significant associations for Machiavellianism on intentional and attempted harm scenario, and it was only positively associated with wrongness judgements for accidental harm (r=.12, p<.01). Psychopathy was negatively associated with all three judgements for intentional harm scenario, wrongness and guilt for attempted harm but positively associated with wrongness and punishment in accidental harm (r-values between .25 and .36). Again, authors did not highlight any reasons for differences in this area as more time was devoted to explaining the effects of sadism. Nonetheless, these inconclusive findings are intriguing and indicate that more research needs to be conducted in this area.

Study 2 utilised a different design to study 1, its replication and study 3 whereby they examined guilt and punishment judgements of two moral dilemmas: causal and non-causal harm. All Dark Triad traits were significant negative correlates of punishment judgements for the causal scenario (r-values between .15 and .37), whereas only narcissism (r=.21,

p<.05*)* and psychopathy (*r*=.29, *p*<.001) were significant correlates of guilt in the causal scenario. Only psychopathy was a significant negative correlate of guilt judgements in the non-causal scenario (*r*=.26, *p*<.01). Taken together, these studies have indicated an array of different effects despite adopting similar methods and samples.

Everyday moral scenarios

The study of Dark Triad traits and moral decision-making has predominantly involved sacrificial moral dilemmas. The author of both studies utilising the Moral Intuition Survey (MIS; Arvan 2013a; 2013b) suggested each item should be considered individually, as each item reflects one specific moral issue. However, there are similarities between items – e.g. items concerning immigration, items regarding the environment – and an argument could be made for grouping items into subscales, in turn addressing the lack of reliabilities reported for outcome measures. Arvan (2013a) divided moral judgements into economic and social judgements, and uncategorised items. Only one item in economic moral judgements – *"A government ought to never intervene in free economic markets except to prevent or punish force (theft, murder) or fraud"* – had a significant positive relationship with Machiavellianism and narcissism. However, there were multiple interactions present for social moral judgements. All three Dark Triad traits were significant when considering issues of terrorism and the death penalty. However, only

narcissism and psychopathy were positively correlated with judgements of the government having the right to wage war on enemy states even if this violates UN resolutions. Finally, psychopathy was negatively correlated with gay marriage.

Arvan (2013b) is meant to be a replication of the previous study, however MIS items included in this study vary and only cover 'social judgements'. Arvan (2013b) tested 45 correlations – a correlation for each of the Dark Triad traits and 15 MIS items. Due to the large number of items tested a Bonferroni correction was applied, resulting in 22 significant correlations. Particularly noteworthy, psychopathy and Machiavellianism were associated with items concerning the government's role in preventing illegal immigration, whereas items concerning the rights of illegal immigrants (healthcare, education) were associated with narcissism. A weakness of this paper was that these items were not fully classified, and hypotheses did not specify which direction effects were expected nor which theory this was based on.

Finally, Moore and colleagues (2020) examined gender differences in Dark Triad associations with MELS subscales. All Dark Triad traits were negatively correlated with deception for men (*r*-values .22 to .35) and women (*r*-values between .32 to .34). Disgust was a positive correlate for men across all DT traits (*r*-values between .20 to .22). Only narcissism and

psychopathy were positively related to the laziness subscale for both genders (*r*-values between .23 to .28), which is concerned with acting in an unjust way due to convenience. Finally psychopathy was also negatively related to harm of an in-group member for both genders.

It is difficult to compare results found between these three studies as they utilised moral scenarios which cover a variety of moral issues. Despite the limitations mentioned, these studies would indicate that there are associations between Dark Triad traits and everyday/real-world moral judgements in the general population.

Discussion

This paper aimed to systematically review evidence relating to Dark Triad traits and moral decision-making, to establish whether there is consistent evidence of the impact of these traits on moral judgments. Taken together, the evidence indicates Machiavellianism was implicated as a significant negative correlate of moral judgements in all studies considering moral dilemmas (*n*=12), followed by psychopathy (*n*=11). Narcissism was least often reported to be correlated with moral judgements (*n*=3). However, all Dark Triad traits were implicated in studies of everyday/real-world moral judgements (*n*=3), although certain traits were more relevant to specific moral issues.

It has already been suggested that narcissism is the least Dark trait in the triad (Rauthmann & Kolar, 2012), and it has been proposed that everyday sadism may be a more appropriate component of the Dark Triad than narcissism (Book et al., 2016). A possible reason for the few reported effects of narcissism results may also be due to the measure used. The narcissism subscale of the SD3 is suggested to measure primarily grandiose narcissism whereas the Dirty Dozen narcissism subscale is suggested to measure both grandiose and vulnerable narcissism (Maples et al., 2014). Grandiose narcissism is considered both adaptive and maladaptive (Cai & Luo, 2018), and perhaps the dilemmas and scenarios used in included studies evoke the more adaptive aspects of narcissism rather than the maladaptive. With regards to sadism, Trémolière and Djeriouat (2016) noted that psychopathy and sadism shared 60 to 70% of the variance in scores of moral dilemmas. Future research should include measures of everyday sadism, such as the Short Sadistic Impulse Scale (O'Meara, Davies & Hammond, 2011) or the Comprehensive Assessment of Sadistic Tendencies (Buckels, 2022), and observe the impact this has on relationships with moral judgements.

Limitations

A major limitation of this review is its reliance on cross-sectional studies. As such, one is not able to make any causal inferences about the relationship between Dark Triad traits and moral judgements. Furthermore,

all studies include self-report measures which give rise to issues with demand characteristics and response bias. Given the deceptive and manipulative core of Dark Triad traits, one would expect social desirability to be a confounding factor. There were no studies in the current review which used measures to address this. Another consideration is that there are likely to be spill over effects and comparisons being made from one moral dilemma or scenario to the next, which may affect the severity of moral judgements made. This is likely to be a particular problem when studying everyday/real-world moral issues. Furthermore, studies are mostly within-subjects designs. Particularly for studies including multiple measures of Dark Triad traits or multiple moral dilemmas, this is likely to cause participant fatigue and may have been a reason for the difference in findings across studies. Additionally, most studies in this review used moral dilemmas which have been shown to lack external validity (Kahane, 2015) significantly affecting the generalisability of results. A final limitation concerns priming effects, specifically relating to participants completing Dark Triad measures prior to moral decision-making tasks. One way of addressing this may be to encourage a time delay between completion of Dark Triad measures and moral judgement tasks. Only one study in the current review employed this method.

Future directions

Research involving the Dark Triad and moral dilemmas helps us to understand moral decision-making, but there is limited research into its predictive value in behavioural outcomes. Bostyn, Sevenhant and Roets (2018) asked participants to complete a hypothetical and real-life version of the Trolley dilemma, asking participants to administer an (imaginary) electric shock to mice. They found that participant responses to hypothetical dilemmas were not predictive of their behaviour in the real-life version. It would be of interest to replicate this study with measures of Dark Tetrad traits, which would in turn address the lack of evidence of behavioural outcomes. Finally, quality assessment highlighted there is a lack of attention paid to providing reliabilities of outcome measures for both moral dilemmas and everyday/real-world moral scenarios. Future research should ensure that these measures are standardized and that reliabilities are reported where possible. Future research may also wish to consider a meta-analysis (when possible) to qualitatively assess findings and derive statistical conclusions.

Rationale for Chapter Three

The systematic review highlighted studies of the Dark Triad and moral decision-making predominantly use the Short Dark Triad scale (SD3) to measure Dark Triad traits. Despite its abundant use, to date there has not been a critical review of its psychometric properties. Chapter Three sought to address this gap in the literature.

Chapter Three

The Short Dark Triad scale: A psychometric critique

Abstract

The aim of this critique was to critically review the psychometric properties of the Short Dark Triad Scale (SD3; Jones & Paulhus, 2014), a measure developed to establish levels of subclinical Machiavellianism, narcissism and psychopathy. While there are individual studies that comment on aspects of the SD3's validity and reliability, there does not appear to have been a collective review paper of its psychometric properties. The validity, reliability and normative sample of the SD3 are discussed in turn. The SD3 is considered to be an internally reliable measure with alpha coefficients almost consistently reported to be .7 or above. Initial evidence of its test-retest reliability appears promising although is limited to two studies. The SD3 appears to possess face validity, and discriminant and convergent validity. It is correlated with individual measures of narcissism, psychopathy and Machiavellianism highlighting its concurrent validity. The SD3 has been associated with a number of negative behavioural outcomes which is evidence of its predictive validity. It has also been translated into a variety of languages with similar reliability and validity outcomes indicative of its cross-cultural validity. Issues with content and construct validity are discussed and are predominantly related to the on-going disputes regarding the theories underpinning the Dark Triad. Concerns about the normative sample are discussed and recommendations made for

future improvement, particularly consideration of gender and age differences. Directions for future research and expansion of the literature base are suggested throughout.

Introduction

Dark Triad

The 'Dark Triad' consists of three socially aversive traits: subclinical Machiavellianism, psychopathy and narcissism (Paulhus & Williams, 2002), which are believed to share a callous, manipulative and malevolent core (Jones & Figueredo, 2013). Whilst there is consistent evidence that the traits are significantly correlated (Egan, Chan & Shorter, 2014), it is argued that they are still distinct enough to warrant individual examination (O'Boyle, Forsyth, Banks & McDaniel, 2012). As the Dark Triad is meant to represent the 'dark' side of personality, it is unsurprising that the traits have been associated with a number of negative behaviours and increased risky behaviour, impulsivity, and sensation-seeking (Crysel, Crosier & Webster, 2013; Jones & Paulhus, 2011).

Review Aims

This review will examine the reliability, validity, and normative sample of the Short Dark Triad Scale (SD3) by Jones and Paulhus (2014). Individual studies have commented on certain aspects of the reliability and validity of the SD3, but there has been limited investigation into the overall psychometric properties for one of the most prominent ways of collectively measuring Dark Triad traits.

Development of the Short Dark Triad Scale

When discussion of the Dark Triad first emerged, researchers used separate measures for each of the three traits. The Narcissistic Personality Inventory (NPI; Raskin & Hall, 1979), the MACH-IV (Christie & Geis, 1970) and the Self-Report Psychopathy Scale-III (SRP–III; Williams, Paulhus, & Hare, 2007) are most commonly used but consist of over 100 items. It is evident that measuring the Dark Triad in this manner is a time-consuming task, which could lead to response fatigue for participants and may not be practical for researchers with a finite amount of time available to them. It also requires standardization of scores across individual measures to ascertain an overall Dark Triad score. Jonason, Li, Webster and Schmitt (2009) calculated overall scores on all three of these measures. These were standardized to create a single Dark Triad score which explained over 50% of the variance. This suggested that measuring the three traits together could be more useful than assessing them individually and led to the development of brief Dark Triad scales.

The first scale to measure the Dark Triad traits collectively was the concise 12 item Dirty Dozen scale, consisting of four items per construct (DD; Jonason & Webster, 2010). The authors concluded the DD showed acceptable convergent and discriminant validity, and test-retest reliability. Nonetheless, the DD faced criticism due to its brief nature, with researchers arguing that there is a fine line between speed and accuracy. Specifically,

concerns were raised about the ability of only four items to measure such complex and comprehensive constructs (Miller, Few, Seibert, Watts, Zeichner & Lynam, 2012).

Following the criticism of the DD, the SD3 scale was developed by Jones and Paulhus (2014). The SD3 consists of 27 items rated on a 5-point Likert-type scale. The scale can be used to produce an overall score, or three subscale scores based on nine items for each of the dark traits. There is some evidence to suggest reporting the total score rather than the subscale scores is more appropriate (Persson, Kajonius & Garcia, 2019), although most studies continue to use subscale scores interpreted with caution (Vaughan, Madigan, Carter & Nicholls, 2019). The SD3 explicitly states that it measures subclinical levels of narcissism, Machiavellianism and psychopathy and is therefore not a diagnostic tool.

Reliability

Internal reliability

Kline (2013) suggests that the internal reliability of a measure should be at least .7. The original SD3 was tested across four studies and indicated Cronbach's alpha of between .7 and .8 for all subscales, except for one occasion where narcissism had a Cronbach's alpha of .68 (Jones & Paulhus, 2014). Subsequent studies using the SD3 have demonstrated similar internal reliabilities for both total and subscale SD3 scores (Vaughan et al.,

2019). The SD3 has also been translated into a variety of languages which also show an acceptable level of internal consistency (see *cross-cultural validation*).

Test-retest reliability

There is limited research concerning the test-retest reliability of the SD3. Researchers used the German adaption of the SD3 to test a sample of 221 participants over a four-week interval and reported the test-retest coefficients to be .81 for Machiavellianism, .74 for narcissism and .83 for Psychopathy (Malesza, Ostaszewski, Büchner & Kaczmarek, 2019). Using the English version of the SD3 Dragostinov and Mõttus (2021) found that the SD3 had an overall test-retest reliability score of .90, .88 for narcissism, and .85 for Machiavellianism and psychopathy respectively when completed over a 12-day interval. These two studies appear to provide initial support for the test-retest reliability of the SD3, although it would be unwise to draw conclusions based on such limited evidence. Furthermore, Kline (2013) suggests that to determine the test-retest reliability of a measure, the two test periods should be separated by at least three months, consist of a sample over 100 and produce a correlation of .8 or above. While both studies contained samples of over 100 participants and indicated a coefficient of at least .8, the SD3 was administered at two close periods of time. Therefore, it is difficult to draw any conclusions about the long-term test-retest reliability of the SD3.

Validity

Face validity

Face validity is a contentious manner of assessing validity and is often not considered an indication of whether a measure is valid or not (Kline, 2013). It is not driven by data but is more concerned with whether the items on a measure appear to be relevant and appropriate to what it is said to be measuring. However, the more evident it is what the measure is assessing, the more likely individuals are to engage in socially desirable responding. This would be of particular concern when studying undesirable characteristics or outcomes such as the Dark Triad. Due to its brief nature, there is no validity scale contained within the SD3 meaning that any concerns about impression management would have to be controlled for using a separate measure (e.g. Paulhus Deception Scale; Paulhus, 1998). One way of assessing impression management or desirable responding is to compare informant ratings to self-report ratings. To date this has only been done in the original SD3 study, where self-report scores were compared to scores of the SD3 completed by a friend, romantic partner or family member. Correlation coefficients of .52 for narcissism, .59 for Machiavellianism and .61 for psychopathy were reported (Jones & Paulhus, 2014), indicating a level of agreement between self-report and peer ratings.

In order to further establish the face validity of the SD3 a brief overview of each of the Dark Triad traits is crucial. Machiavellianism is characterised by interpersonal manipulation, the desire to seek status and power, and the need to win at any cost (Jones & Paulhus, 2009). The Machiavellianism subscale of the SD3 includes items concerning interpersonal tactics, such as planning and coalition building, and disregard for morality (Muris, Merckelbach, Otgaar & Meijer, 2017). Subclinical psychopathy is consistent with high levels of impulsivity and thrill-seeking, alongside low empathy. The psychopathy items on the subscale of the SD3 include antisocial behaviour, callous affect, manipulation and erratic lifestyle. Defining subclinical narcissism is more challenging as there are considered to be multiple types of narcissism (Rhodewalt & Peterson, 2009). At its core, narcissism is predominantly concerned with maintaining self-esteem and enhancing themselves in the interpersonal circumplex. Narcissism items on the SD3 assess elements of grandiosity, entitlement, authority and exhibitionism. Based on the above definitions, 'on the face of it' the SD3 does appear to measure various facets of each of the Dark Triad traits. However, given the complexity of each of the Dark Triad traits the utility of face validity in determining overall SD3 validity is limited.

Construct validity

When developing the SD3, Jones and Paulhus (2014) completed an exploratory factor analysis (EFA) and concluded that the results supported

their three-factor hypothesis – specifically that the SD3 measures psychopathy, Machiavellianism and narcissism as three separate constructs. A network analysis offered further support that the three individual traits should be combined under the Dark Triad umbrella, although acknowledged that psychopathy and Machiavellianism are closely related (Trahair, Baran, Flakus, Kowalski & Rogoza, 2020). Another EFA indicated a two-factor model with one factor comprising of both Machiavellianism and psychopathy items, and the other solely measuring narcissism (Siddiqi, Shahnawaz & Nasir, 2020). Persson and colleagues (2019) completed an EFA which identified that psychopathy items loaded onto Machiavellianism, although not the other way around, but narcissism again only loaded onto one factor.

Since its inception, discussions about the multidimensionality versus unidimensionality of the Dark Triad traits have persisted. Therefore, the above results are not entirely unexpected and there have been many discussions about the fact that the Dark Triad may actually be a 'Dark Dyad', 'Dark Myriad' or 'Dark Tetrad' when considering the inclusion of everyday sadism. Some argue that psychopathy and Machiavellianism are so similar that they could essentially be combined into one trait (Garcia & Rosenberg, 2016; Person et al., 2019). There does appear to be consistent evidence that psychopathy and Machiavellianism are highly correlated in the SD3 (Vize, Lynam, Collison & Miller, 2018). Others hypothesize that

narcissism and Machiavellianism are actually both features of psychopathy, and that psychopathy is the dominant trait in the Dark Triad (Muris et al., 2017). Glenn and Sellbom (2015) suggest that just because there are similarities between narcissism, Machiavellianism and psychopathy, it does not mean that they are indicative of a composite construct such as the Dark Triad. There is no clear indication which theory is considered most accurate, but one must consider that the Dark Triad and SD3 are still relatively new concepts compared to the individual traits, which have been studied over a number of decades.

Convergent and discriminant validity

Construct validity can be further divided into convergent and discriminant validity. It is concerned with ensuring that constructs or outcomes which should be associated with SD3 are associated, and those that should not be associated are not. Convergent and discriminant validity can be identified by investigating the SD3 and its associations with the HEXACO (Lee & Ashton, 2004) and Five-Factor Model of personality (McCrae & Costa, 1997). The Dark Triad traits have been found to be negatively correlated with agreeableness and conscientiousness, particularly for Machiavellianism and psychopathy (Jakobwitz & Egan, 2006) and lower positive moods (Egan, Chan & Shorter, 2014). The Dark Triads relationships with agreeableness is consistently reported and not surprising, as agreeableness is defined by concern for others and a

willingness to sustain positive relationships with others (Moshagen, Zettler, Horsten & Hilbig, 2020). Furthermore, all SD3 traits have been correlated with the Honesty-Humility factor on the HEXACO (Howard & van Zandt, 2020). The Dark Triad traits were also associated with values of excitement, such as looking for adventure, and promotion, such as how important it is to reach one's goals (Jonason, Foster, Kavanagh, Gouveia & Birkás, 2018). It is of note that the effect sizes for the relationships with personality measures are stronger when using the original scales compared to using the SD3 or DD (Muris et al., 2017).

Predictive validity

It is clear that the Dark Triad is associated with negative or antisocial behaviour and a number of reviews have attested to this (see Furnham, Richards & Paulhus, 2013; Moor & Anderson, 2019; O'Boyle, Forsyth, Banks & McDaniel, 2011). They conclude that the Dark Triad is related to antisocial outcomes, although this is predominantly the case for psychopathy and Machiavellianism, and not narcissism (Muris et al., 2017). Unfortunately, these reviews do not always specify which negative outcomes are predicted solely following the use of the SD3 requiring investigation of the individual studies contained in the reviews. However, Vaughan and colleagues (2019) report that the SD3 has shown better predictive validity than the DD.

Studies assessing the SD3 and behavioural outcomes appear a promising

indicator of its predictive validity. High narcissism scores on SD3 predicted mimicry of high-status others in an experimental design (Ashton-James & Levordashka, 2013). Psychopathy was strongly related to engaging in bullying, followed by Machiavellianism and narcissism (Baughman, Dearing, Giammarco & Vernon, 2012; Gibb & Devereux, 2014). SD3 psychopathy predicted engaging in trolling behaviours on Tinder (March, Grieve, Marrington & Jonason, 2017) and revenge porn proclivity (Pina, Holland & James, 2017). Economics students scored higher on subscales of the SD3 than those studying psychology (Vedel & Thomsen, 2017). The SD3 has also been correlated with higher levels of dishonesty (Jones & Paulhus, 2017), aggression (Buckels, Jones & Paulhus, 2013); aggressive driving (Burtăverde, Chraif, Aniţei & Mihăilă, 2016); cyberbullying (van Geel, Goemans, Toprak & Vedder, 2017); and intimate partner cyber stalking (Smoker & March, 2017). This is not an exhaustive list of behavioural outcomes that have been associated with the Dark Triad and SD3 but do give an indication of its predictive validity.

Concurrent validity

Concurrent validity can be established by comparing the SD3 against 'gold standard' measures of the individual traits. Numerous studies continue to use individual measures alongside the SD3 allowing for easy comparison. The SD3 subscales have been shown to have strong correlations with each of their individual scale counterparts (Jones & Paulhus, 2014). Muris and

colleagues (2017) give an in-depth description of the individual trait measures and how they compare to the SD3 subscales. The MACH-IV's two facets – cynical worldview and Machiavellian tactics – correlate with the SD3 Machiavellianism subscale. The SD3 psychopathy subscale correlates with the four main aspects of the SRP-III – manipulation, callous affect, erratic lifestyle and antisocial behaviour. Finally, the narcissism subscale of the SD3 matches the exploitative/entitlement and leadership/authority facets of the NPI. When comparing the DD and SD3, the SD3 consistently performs higher and is considered to have more acceptable validity and reliability (Maples, Lamkin & Miller, 2014).

Content validity

The SD3 is designed as a brief measure and therefore its ability to comprehensively measure the complex constructs of psychopathy, narcissism and Machiavellianism in its entirety is a challenge. It is further hampered by the fact that individual items on the subscales of the SD3 are not grouped equally – for example, there are four items related to grandiosity on the narcissism subscale but only two related to entitlement. It is evident that nine items per trait or 40 items per trait (as in the NPI-40) will affect the amount of information which could be gathered from a measure.

While the SD3 measures three Dark Triad traits, whether it measures all aspects of those traits is contentious. Narcissism is often seen as the most

'positive' trait of the Dark Triad, where the charming nature of narcissists is viewed as more appealing than the callous and exploitative nature of Machiavellians and psychopaths (Rauthmann & Kolar, 2012). There are concerns about whether the SD3 measures narcissism holistically, or solely measures grandiose narcissism. Grandiose narcissism is characterised by arrogance, entitlement and exaggerated self-esteem, whereas vulnerable narcissism is concerned with emotional instability, selfishness and need for attention (Siddiqqui et al., 2019). Grandiose narcissism is also the most commonly reported in relation to the Dark Triad as this is the type that is measured by the NPI (Vize et al., 2017). However, there are those that argue vulnerable narcissism would be more in keeping with the Dark Triad traits (Persson et al., 2019). Just as there are multiple types of narcissism, there are different types of psychopathy – primary and secondary. It is argued that primary psychopathy is more similar to narcissism and Machiavellianism than secondary psychopathy (Glenn & Sellbom, 2015). While the authors of the SD3 sought to address this in developing their measure, it is clear that researchers remain unconvinced.

Cross-cultural validity

Cross-cultural validity is concerned with whether translated items of the SD3 are an appropriate reflection of the items on the original version of the SD3 (Mokkink et al., 2010). The SD3 has been translated into a number of other languages and is well established in Western contexts. The Serbian

version of the SD3 displayed Cronbach's alpha of .70 or above in each of their studies and reported strong similarities with the English version (Dinić, Petrović & Jonason, 2018). This is also the case for the Chinese version (Zhang, Ziegler & Paulhus, 2019); Portugese (Pechorro, Caramelo, Oliveira, Nunes, Curtis & Jones, 2017); German (Malesza et al., 2019); and Polish (Rogoza & Cieciuch, 2017). The Turkish adaptation of the SD3 found internal reliabilities of .70 or above for each of the SD3 subscales, although highlighted issues with the construct and discriminant validity of Machiavellianism (Özsoy, Rauthmann, Jonason & Ardiç, 2017). The Spanish version of the SD3 showed lower internal reliabilities of .61 for narcissism, .68 for psychopathy and .73 for Machiavellianism (Pineda, Sandín & Muris, 2018). It has also been translated into Farsi although seven items were removed, resulting in an SD3 of only 20 items (Atari & Chegeni, 2016). Authors of the translated SD3's argue that they have inherited the issues associated with the English version, such as distinguishing Machiavellianism from psychopathy. However, the fact that the SD3 has been translated into a number of different languages with similar reliability and validity outcomes reported, highlight that it does appear to possess cross-cultural validity.

Normative sample

The norms provided in Jones and Paulhus' (2014) original SD3 study are based on a sample of 387 undergraduate students. As is the case with

many research studies, this is a Western, educated, industrialised, rich and democratic sample (WEIRD; Henrich, Heine & Norenzayan, 2010) which clearly limits its generalisability and external validity. This is not exclusive to the original version of the SD3 as many of its translated versions use similar samples. In fact, most studies investigating the Dark Triad consist of university students and samples gathered online (see Vize et al., 2018).

It is of note that the norms do not separate male and female participants. This is of concern as it has been evidenced that men consistently score higher than females across all subscales of the SD3 (Furnham et al., 2013). There has also been limited examination of whether age differences affect SD3 scores, despite the DD demonstrating different results for student and non-student samples (Carter, Campbell, Muncer & Carter, 2015). Providing norms for groups outside of undergraduate students may encourage researchers to assess older samples. Alarmingly, the SD3 has also been used in a sample of adolescents in high school (mean age = 16.06; Somma, Paulhus, Borroni & Fossati, 2019); in a study of Portugese at-risk youth (mean age = 13.19; Pechorro et al., 2018); and 10 to 18-year-olds gathered from rehabilitation centres and private school in Jordan (Ali, 2020). Not only are there no norms for this kind of sample but serious ethical consideration must be given to assessing levels of (albeit subclinical) psychopathy, narcissism and Machiavellianism in young people, especially if one has suggested that the SD3 has good predictive validity.

Finally, it is important to consider that the SD3 was designed to measure sub-clinical levels of all three traits. It has not purported to be a diagnostic tool nor a tool to be used for forensic populations, and therefore this needs to be made explicitly clear if used in formal settings such as the Courts. To date it appears only one study has used the SD3 in a sample of offenders (Helm, de Roos & Jones, 2017) although the results of this do not seem to have been published. Given that the Dark Triad traits are associated with a number of antisocial outcomes, it is surprising that very few studies have investigated the performance of the SD3 in forensic samples.

Short Dark Tetrad Scale (SD4)

Since this psychometric critique was undertaken, a 28-item Short Dark Tetrad scale (SD4; Paulhus, Buckels, Trapnell & Jones, 2020) has been developed. Items are rated on a five-point Likert scale with seven items per Dark Tetrad trait. Given the Dark Tetrad is central to this thesis, it would be remiss of the author not to briefly address the SD4. While it is beyond the scope of this chapter to provide an in-depth critique of this measure, a brief overview of its reliability and validity is presented.

Reliability

The original SD4 reported Cronbach's alpha of .83 for narcissism, .78 for Machiavellianism, .82 for psychopathy and .82 for sadism (Paulhus et al., 2020). Given its recent publication, there are a limited number of studies

which have used the SD4 although reliabilities are consistently reported to be above .7. Similar to the SD3, there is only one study which has explored the test-retest reliability of the SD4. Researchers used the Chinese version of the SD4 to test a sample of 214 participants over a four-week interval and reported the test-retest coefficients to be .74 for Machiavellianism, .79 for narcissism, .80 for psychopathy and .78 for sadism (Liu, Zhou, Ouyang, Yang & Xie, 2023).

Validity

With regards to cross-cultural validity, despite its recent publication, the SD4 has already been translated into other languages including reporting similar internal reliabilies as the original SD4 paper, including: Portuguse (Pechorro, Karandikar, Carvalho, DeLisi & Jones, 2023); German (Blötner, Ziegler, Wehner, Back & Grosz, 2021); and Chinese (Meng, Li, Liu & Xu, 2022). Blötner and colleagues (2021) completed a nomological network analysis which they indicate is in favourt of the SD4's construct validity. However, they also note that sadism is not psychometrically delineated from psychopathy as these subscales were strongly correlated (r = .54; Blötner et al., 2021). Furthermore, there are currently no studies which are able to indicate the predictive validity of the SD4. Similarly, there is no evidence of concurrent validity as there has not been a comparison between the sadism subscale of the SD4 and measures of subclinical sadism (e.g. the Short Sadistic Impulse Scale; O'Meara, Davies & Hammond, 2011).

Conclusion

The SD3 was designed as a brief and practical measure of subclinical psychopathy, narcissism, and Machiavellianism to establish an overall Dark Triad score. It is important to establish whether the criticism it has encountered is as a result of it being a brief measure, or because it is a 'bad' measure. The content and construct validity of the SD3 highlights that there are still fundamental disagreements about the underlying theory of the Dark Triad which clearly impacts the response to the SD3. The convergent and discriminant validity of the SD3 has been demonstrated as a result of its correlations with the HEXACO and Five Factor Models of personality. Similarly, the predictive validity of the SD3 has been clearly established. It is also noted to possess cross-cultural validity due to the numerous translated versions which report similar reliability and validity outcomes. Both internal reliability and test-retest reliability of the SD3 are positive. This critique provides evidence that the SD3 is considered an acceptable brief measure of the Dark Triad, especially compared to the DD, although it is not without criticism.

It is clear that the normative sample needs to be both updated and expanded upon to account for age and gender differences, which have been clearly established in the literature. The SD3 has been available for almost 10 years yet the only norms provided are based on a sample of 387 university undergraduate students. It is also of concern that the SD3 has

been used in samples of young people and raises ethical questions about its use in this population.

While the SD3 can be considered an efficient measure for assessing the Dark Triad, it is noted that many researchers continue to use the individual measures (e.g. NPI, MACH-IV, SRP-III) alongside the SD3, which is exactly what the SD3 was designed to address. When addressing the concurrent validity of the SD3, it is clear that there are correlations between the subscales of the SD3 and each of the individual measures. This affords individuals options when conducting research. For example, if researchers are able to commit to the lengthier versions for each individual trait, then this may provide more detailed information, but they can also use the more time efficient SD3.

Finally, a brief overview of the psychometric properties of the SD4 were provided. While the internal reliability of the SD4 appears to be encouraging, there is currently limited evidence of its validity. Particularly of concern is the strong correlation between the sadism and psychopathy subscale of the SD4. Given that the validity and reliability of the SD3 has been established and appears promising, it would be prudent to continue use the SD3 and an alternative sadism measure in studies exploring the Dark Tetrad.

Rationale for Chapter Four

The systematic review (Chapter Two) highlighted issues in the study of the Dark Triad and moral decision-making, in that it has predominantly involved the use of moral dilemmas and the limited reporting of reliabilities for moral decision-making outcome measures. The primary research study presented in Chapter Four sought to address both limitations. Furthermore, the Introductory Chapter of this thesis and Chapter Two have indicated the value of including sadism (Dark Tetrad) when investigating moral decision-making. Finally, the psychometric critique (Chapter Three) highlighted that the Short Dark Triad scale is an appropriate measure of Dark Triad traits despite the publication of a Short Dark Tetrad scale (which currently has limited psychometric validity results). As such, Chapter Four presents a primary research study investigating the relationship between the Dark Tetrad traits and moral judgements using real-world moral scenarios. It further considers the impact of 'normal' personality traits, disgust and moral disengagement.

Chapter Four

Moral judgements: A study of the effects of personality, disgust and moral disengagement

Abstract

Research regarding the implication of Dark Tetrad traits and moral judgement is limited. Furthermore, studies investigating moral judgements are overly reliant on moral dilemmas which have been criticized for not being reflective of everyday moral situations. The current study aimed to investigate individual differences in morally wrong and negative judgements between three levels of moral offences. 518 participants (F:M = 267:227, M_{age} = 26.90, SD = 10.86) completed an online questionnaire comprising of the HEXACO, Short Dark Triad Scale, Short Sadistic Impulse Scale, Disgust Scale-Revised, Moral Disengagement Scale, and 12 real-world moral scenarios. Spearman's correlation and hierarchical multiple regression analyses were completed. Multiple regressions indicated no significant models or predictors for non-offences. For moderate and severe offences, adding all variables into the model predicted a maximum variance of 27.2% in scores. Moral judgements were best predicted by an amalgamation of 'dark' (sadism and narcissism) and 'light' (emotionality, honesty-humility and conscientiousness) traits and moral disengagement. Sadism was the strongest predictor of moral judgements for severe offences and possible reasons for this are suggested. Complexities in the

relationship with narcissism and moral judgments are discussed, including adaptive and maladaptive facets of narcissism and considerations of whether this may be context dependent. This study raises questions about the importance of disgust in predicting moral judgements but highlights the importance of moral disengagement. Opportunities for future research are discussed throughout.

Introduction

Moral judgements are described as the way "people define one or another course of action in a situation as morally right" (Schlaefli, Rest & Thoma, 1985, p. 319). Traditionally, research into moral judgements proposed that individuals were able to make these judgements through conscious reasoning and deliberation (e.g. Kohlberg, 1969). More recently this notion has been challenged, and it has been suggested that moral judgements are initially driven by an automatic, unintentional, and emotionally driven process, illustrated by Haidt's (2001) social intuitionist model of moral judgement and built upon by Moral Foundations Theory (Haidt & Joseph, 2004). However, when necessary, these initial judgements are followed by slower, conscious moral reasoning.

The study of moral judgements often focusses on moral dilemmas (e.g. Trolley Dilemma), where individuals are asked to choose between utilitarian or deontological outcomes. However, the sacrificial dilemmas which most studies have relied upon have been facing criticism as they are considered not to be reflective of the moral situation's individuals are faced with in the real world (Bauman, McGraw, Bartels & Warren, 2014). Moral dilemmas focus on extreme situations where one has to decide whether to kill one person in order to save six people, or kill six people in order to save one person (see Bartels & Pizarro, 2011).

Factors affecting moral judgements have been well researched, yet their impact remains uncertain. Greene, Nystrom, Engell, Darley and Cohen (2004) argue that the way in which moral judgements are made differ depending on whether they are personal or impersonal. Personal moral judgements are suggested to be driven by social and emotional responses while impersonal moral judgements are driven by cognitive processes (Greene et al,, 2004). Others suggest that the emotionally driven moral judgement can be superseded by a reappraisal process which reduces the emotional experience and results in more considered moral reasoning (Feinberg, Willer, Antonenko & John, 2012). There is limited research concerning factors affecting moral judgements of less severe situations or situations that are reflective of everyday life.

Dark Tetrad

The current thesis will consider the effects of the Dark Tetrad on moral judgements. The Dark Tetrad consists of four disagreeable personality traits: Machiavellianism, psychopathy, narcissism and sadism. Narcissists have a grandiose sense of self, and they constantly crave attention; Machiavellians are masters at manipulating; and psychopaths are callous, impulsive and engage in antisocial behaviour (Paulhus, 2014). Research has now suggested that non-sexual 'everyday' sadism, typified by the enjoyment of cruelty, has been significantly correlated with the Dark Triad

traits and has therefore supported the formation of the Dark Tetrad (Meere & Egan, 2017; Book et al., 2016).

With regards to 'Dark' personality and its impact on moral judgements, research has predominantly focused on psychopathy and morality. There is an extensive evidence base that individuals high in psychopathy, both clinically and sub-clinically, are more willing to commit moral transgressions (Marshall, Watts & Lilienfeld, 2018). A meta-analysis of research conducted on psychopathy and various morality-based variables indicated a small but significant relation between psychopathy and moral judgements (Marshall et al., 2018). Research has previously suggested that psychopaths lack morality, but it appears that rather than a deficit in moral understanding, psychopathic individuals may choose not to act in accordance with such principles (Marshall et al., 2018).

In terms of Machiavellianism, Carre and Jones (2017) suggest that Machiavellians are not fundamentally immoral but that they may disregard the morality of their decisions in order to achieve the necessary outcome. One study investigating the characteristics of moral individuals suggested that they are low in Machiavellianism, high in honesty humility and high in conscientiousness (Cohen, Panter, Turan, Morse & Kim, 2014).

The research on narcissism and its implications in moral decision-making has been divisive. An investigation of the Dark Triad and fraud suggested

that higher levels of narcissism motivate an individual to act immorally for their own benefit (Harrison, Summers & Mennecke, 2018). However, others suggest that in order to gain admiration from others, narcissists will make attempts to please others around them and tend to act in a moral manner (Liu, Chiang, Fehr, Xu & Wang, 2017). Given the intense need to promote a positive self-image to others, narcissists may be more motivated to act in a moral manner, and therefore immoral or unethical behaviour is more likely to be due to an impairment in moral reasoning rather than an absence of morality (Zuo, Wang, Xu, Wang & Zhao, 2016).

Sadism is different to the other Dark Tetrad traits in that sadistic individuals are considered to derive pleasure from seeing others suffer or inflicting suffering on others (Trémolière & Djeriouat, 2016). Trémolière and Djeriouat (2016) found that individuals who scored high on levels of sub-clinical sadism were more likely to minimise a perpetrators intention when making a moral judgment and suggested that this evidenced dysfunctional moral reasoning. Additionally, when including honesty-humility and moral foundations as mediating variables, Dark Triad traits were noted to have a significant positive association with utilitarianism, whereby moral judgements are made in a rational and calculated way and focuses on the outcome that has the most benefits and minimises harm to others (Djeriouat & Trémolière, 2014).

Finally, there is also extensive evidence which relates the Dark Tetrad to 'normal' personality characteristics, particularly based on the HEXACO, a psychometric measure that assesses six dimensions of personality (see Book, Visser & Volk, 2015). Honesty-humility, one of the dimensions measured by the HEXACO, is considered similar to the core of the Dark Triad traits, in that it is defined by qualities such as greed, deceit and superiority (Lee & Ashton, 2014). It is therefore considered another important aspect of moral decision-making and will be investigated further in this thesis.

Disgust and disgust sensitivity: Moral implications

Haidt (2001) and Greene's (2007) models of moral judgement and MFT, highlight emotions are an important aspect of deciding what is morally right and wrong. Disgust is one such emotion – an evolutionary response that originated as a feeling of revulsion in response to aversive stimuli, motivating an individual to withdraw from that stimulus (Rozin, Haidt & McCauley, 2000). However, people can also experience disgust towards moral transgressions and exhibit the associated physical symptoms of disgust, such as a loss of appetite and nausea (Luo et al., 2013). Wagemans, Brandt and Zeelenberg (2017) argue that this moral disgust then cues an individual that a transgression has occurred and motivates them to do something about it.

Another aspect of disgust is disgust sensitivity, meaning an individual's proneness to experience disgust intensely or easily in response to aversive stimuli (Haidt, McCauley & Rozin, 1994). This is similarly the case for morality: evidence has shown that individuals sensitive to moral disgust tend to be morally hypervigilant which is further evidenced by the moral-hypervigilance theory of disgust (Jones & Fitness, 2008). For instance, offences of an immoral nature such as child sexual abuse (as well as such offenders) can elicit disgust in individuals (Jones & Fitness, 2008). Individuals who find another person "disgusting" seek to distance themselves from these individuals and offences. In this context, disgust functions as an emotional response that makes an individual feel superior to others who they view with repulsion and disapproval. In summary, it is suggested that moral disgust has a significant influence on moral judgements (Feinberg et al., 2012).

With regards to disgust and its relationship to the Dark Tetrad and moral decision-making, Trémolière and Djeriouat (2016) argue that because Dark Tetrad traits all have callousness in common, harmful outcomes in moral situations should not evoke an emotional response and perhaps this is why they may show lower levels of an emotional response such as disgust.

Moral disengagement

The final predictor considered in this People typically do not engage in morally wrong or reprehensible behaviour. Moral disengagement theory

(MDT; Bandura, 1986; Bandura, 1999) explains the process by which an individual can satisfy themselves that ethical principles do not apply to them when transgressing. MDT has predominantly been used to understand unethical behaviour in the workplace (Newman, Le, North-Samardzic & Cohen, 2019), but is becoming more prominent in trying to understand criminal behaviour and aggression (Moore, 2015).

Moral disengagement has also been related to Honesty-Humility using the HEXACO (Ogunfowora & Bourdage, 2014) and Dark Tetrad traits (Gajda, Moroń, Królik, Małuch & Mraczek, 2022). It is suggested that there are eight different mechanisms which may be used to override ones principles (see Detert, Treviño & Sweitzer, 2008; Martin, Kish-Gephart & Detert, 2014). Bhattacharyya and Ray (2017) presented participants with two moral dilemmas based on recent historical events, who were given seven different responses to choose from - moral disengagement found to be a significant predictor of the most severe moral judgement (to kill those responsible for the acts). Most research focusses on moral disengagement and engagement in a specific behaviour, such as unethical work behaviour (Moore, Detert, Treviño, Baker & Mayer, 2012) or bullying (Killer, Bussey, Hawes & Hunt, 2019), but the previous study indicates there is preliminary evidence of the importance of moral disengagement in moral judgement.

The present study: Personality, disgust, moral disengagement and moral judgements

The present study sought to investigate whether individual differences in HEXACO and Dark Tetrad traits, levels of disgust and moral disengagement predicted moral judgements. Research regarding the implication of Dark Tetrad traits and moral judgement is still in its infancy. Similarly, moral disengagement has been studied in organisational contexts and with reference to specific behaviours, but its relationship to moral judgements has not been well researched. Finally, most studies investigating moral judgements use moral dilemmas which have been criticized for not being reflective of everyday life, something which the current study seeks to address.

Given the callous and malevolent tendencies central to the Dark Tetrad traits, it was hypothesized that higher levels of Dark Tetrad traits would result in lower morally wrong and negative judgements for everyday moral scenarios (hypothesis 1; Trémolière & Djeriouat, 2016). Effects were primarily expected in the moderate and severe offence categories. Additionally, in line with previous research, it was predicted that the honesty-humility and agreeableness facets of the HEXACO would be negatively related to morally wrong and negative judgements (hypothesis 2; Cohen, Panter, Turan, Morse & Kim, 2014). Furthermore, it was hypothesized that higher levels of disgust would indicate more severe morally wrong and negative judgements in the context of the moral-

hypervigilance theory of disgust (hypothesis 3; Feinberg et al., 2012; Jones & Fitness, 2008). As an additional predictor, moral disengagement was used to shed more light on its relationships with moral decision-making in the context of the Dark Tetrad (hypothesis 4; Bhattacharyya & Ray, 2017).

Method

Sample size

Green's (1991) calculation of sample size for studies posits the following: $N > 50 + 8$ k (where k is the number of independent variables). There are 17 independent variables in this study, therefore the minimum sample size should be 186 participants. Furthermore, Van Voorhis and Morgan (2007) identify that for studies with six or more predictors, the minimum number of participants per predictor is 10 but the power of the study would increase if there were up to 30 participants per predictor, therefore any participants over 510 would increase the power.

535 participants took part in this study; however 17 participants did not provide responses to all 12 scenarios and were therefore excluded from further analysis. A final sample of 518 participants (F:M = 267:227, M_{age} = 26.90, SD = 10.86) were recruited predominantly via social media sites, such as Facebook and Reddit.com. Participants were given a brief description of the study and then directed to Online Surveys

(https://www.onlinesurveys.ac.uk) where a confidential questionnaire was hosted. Participants filled out a consent form prior to taking part in the study (see Appendix E) and were presented with a debrief sheet upon conclusion of the study (see Appendix F). The study was quantitative and cross-sectional in nature, and the key outcome was moral judgements. This study was granted ethical approval by the University of Nottingham Faculty of Medicine and Health Sciences Research Ethics Committee (see Appendix G).

Measures

It is important to note that while this research study investigates the Dark Tetrad, the Short Dark Tetrad (SD4) measure was not used. As discussed in Chapter Three, there is currently limited evidence of its validity and the psychopathy and sadism subscales are highly correlated (Blötner, Ziegler, Wehner, Back & Grosz, 2022). This empirical study is interested in exploring the contributions of each Dark trait and as such the Short Dark Triad Scale (SD3) and a separate measure of sadism, the Short Sadistic Impulse Scale (SSIS), were used.

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

The Short DT (SD3) consists of 27 items measuring Machiavellianism, narcissism and psychopathy. Each subscale comprises of 9 items, rated on a 5-point Likert scale where '1' is strongly disagree and '5' is strongly agree.

The SD3 scales are reliable: Machiavellianism α = 0.75, psychopathy α = 0.72 and narcissism α = 0.73 (Jones & Paulhus, 2014).

Short Sadistic Impulse Scale (SSIS; O'Meara, Davies & Hammond, 2011; see Appendix J)

The Short Sadistic Impulse Scale (SSIS) measures non-sexual sadism and consists of 10 items, rated on a 4-point Likert scale, where '1' is strongly agree and '4' is strongly disagree (sample item: "I have hurt people for my own enjoyment"). The SSIS is a reliable measure of sadistic impulses and has an internal consistency of 0.86 (O'Meara et al., 2011).

HEXACO-60 (Ashton & Lee, 2009; see Appendix H)

The HEXACO-60 consists of 60 items which measures personality across six dimensions: honesty-humility, emotionality, extraversion, agreeableness, conscientiousness, and openness to experience. Each subscale is comprised of 10 items, which are rated on a 5-point Likert scale, indicating how much individuals agreed with the statement, where '1' is strongly disagree and '5' is strongly agree. Community and university samples indicate reliabilities for the HEXACO-60 subscales to be .7 (Ashton & Lee, 2009).

Disgust Scale – Revised (DS-R; Haidt, McCauley & Rozin, 1994; modified by Olatunji et al., 2007; see Appendix K)

The DS-R consists of 25 items divided into two sections. It measures individuals on three dimensions of disgust: core disgust (sample item: "It would bother me to see a rat run across my path in a park"), animal reminder disgust (sample item: "It would bother me to be in a science class, and see a human hand preserved in a jar"), and contamination-based disgust (sample item: "Your friend's pet cat dies and you have to pick up the dead body with your bare hands"). In part 1, participants were asked to respond to statements with 'True' or 'False'. In part 2, participants were asked to rate these statements as "not", "slightly", or "very" disgusting. The DS-R has an overall internal consistency of 0.84; the reliabilities for the subscales are: core disgust α = .74, animal reminder disgust α = .78 and contamination-based disgust α = .61 (Olatunji et al., 2007).

Moral Disengagement scale (Detert, Trevino & Sweitzer, 2008; see Appendix L)

The moral disengagement scale was adapted from Bandura's (1999) measure of moral disengagement predominantly used in samples of young people. The current scale was adapted for use in adult samples and consists of a total of 24 items rated on a 5-point Likert scale, where 1 is 'strongly disagree' and 5 is 'strongly agree'. Questions cover a variety of aspects of moral disengagement, including: moral justification, euphemistic labelling, advantageous comparison, displacement of responsibility, diffusion of responsibility, distortion of consequences, attribution of blame and

dehumanisation. The current study found low reliability of subscales with alpha coefficients between .37 and .76, however overall reliability of the scale was .83. As such, the current study used the total score of the Moral Disengagement scale to measure participants moral disengagement, a method which has also been employed by previous studies using this scale (Egan, Hughes & Palmer, 2014; Erzi, 2020). Higher scores on this scale indicated higher propensity for moral disengagement.

Moral scenarios (Olatunji, Puncochar & Cox, 2016; see Appendix M)

Twelve descriptions of moral scenarios were used from Olatunji, Puncochar and Cox's (2016) research, based on scenarios from Olatunji, David and Ciesielski (2012). The descriptions were presented in a random order and consisted of three different levels of transgressions: non-offences, moderate offences and severe offences. Non-offences (N=4) portrayed behaviour that was not morally wrong (e.g. "A.T. took a friend to the movies"). Moderate offences (N=4) described conduct that was morally questionable but not immoral (e.g. "T.R. neglected an elderly relative"). Finally, severe offenses (N=4) described behaviour considered extremely immoral (e.g. "L.T. tortured someone with needles"). Participants were asked to rate how morally wrong and how negative they found each transgression on an 8-point scale, where 0 is 'not morally wrong at all/not negative at all' and 7 is 'extremely morally wrong/extremely negative'.

Results

Preliminary analysis and reliabilities

Data from the online questionnaire was exported into SPSS. Normality checks were completed, highlighting that the data was skewed and not normally distributed. Means, standard deviations and reliabilities for all subscales are provided in Table 4. Kline (2013) suggests that the Cronbach's alpha of a measure should be .70 or above. As such, core and contamination-based disgust subscales of the DS-R were not considered reliable and were not used for further analyses.

Table 4

Means, standard deviations and reliabilities of measured variables

Variable	M	SD	α
HEXACO			
Honesty-Humility	3.42	.74	.79
Emotionality	3.21	.77	.82
Extraversion	2.69	.77	.84
Agreeableness	3.12	.68	.78
Conscientiousness	3.44	.65	.78
Openness to Experience	3.88	.57	.72
SD3			
Machiavellianism	3.11	.71	.81
Narcissism	2.40	.68	.76
Psychopathy	2.10	.61	.72
SSIS			
Sadism	1.74	.76	.89
DS-R			
Core Disgust	6.51	2.26	.66
Contamination Based Disgust	1.21	1.01	.43
Animal Reminder Disgust	3.42	2.05	.74

Moral Disengagement			
Moral Disengagement	2.22	.46	.83
Moral Transgressions			
Non-Offence (Morally Wrong)	1.05	.27	.58
Non-Offence (Negative)	1.07	.31	.58
Moderate Offence (Morally Wrong)	5.34	1.23	.73
Moderate Offence (Negative)	5.29	1.27	.72
Severe Offence (Morally Wrong)	7.67	.77	.85
Severe Offence (Negative)	7.70	.66	.79

Correlations between measures

Subsequently, intercorrelations between all factors were examined for each of the study variables, which are detailed in Table 5. Due to the non-parametric nature of the data, Spearman's correlation was used. When examining non-offences, the correlations showed that only psychopathy was positively and significantly related to morally wrong judgements (r=.10, p=.03), whereas psychopathy (r=.09, p=.04) and moral disengagement (r=.10, p=.02) were positively and significantly related to negative judgements.

When examining moderate offences, the correlations showed that conscientiousness, emotionality, honesty-humility, animal reminder disgust were positively and significantly related to morally wrong and negative judgements, with r values between .14 and .26. Machiavellianism, psychopathy, sadism and moral disengagement were all negatively and significantly related to morally wrong and negative judgements, with r values between .23 and .37.

Finally, when examining severe offences, the correlations showed that conscientiousness, agreeableness, extraversion, emotionality, honesty-humility and animal reminder disgust were all positively and significantly related to morally wrong judgements, with *r* values between .14 and .25. This was similar for negative judgements with the exception of conscientiousness and agreeableness. The Dark Tetrad traits and moral disengagement were all negatively and significantly associated with both morally wrong and negative judgements for severe offences

Table 5

Intercorrelations of study variables

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1.	Openness to Experience	-																	
2.	Conscientiousness	-.03	-																
3.	Agreeableness	.01	.01	-															
4.	Extraversion	.15***	.14**	.04	-														
5.	Emotionality	-.02	-.07	-.15**	-.17***	-													
6.	Honesty-Humility	-.01	.12**	.31***	-.05	-.01	-												
7.	Machiavellianism	-.04	-.08	-.28***	-.11*	-.13**	-.60***	-											
8.	Narcissism	.19***	.04	-.20***	.53***	-.18***	-.33***	.28***	-										
9.	Psychopathy	.09*	-.24***	-.40***	.00	-.16***	-.50***	.51***	.35***	-									
10.	Sadism	.03	-.15**	-.32***	-.14**	-.09*	-.40***	.53***	.23***	.55***	-								
11.	Animal Reminder Disgust	-.22***	-.02	-.07	-.05	.37***	.05	-.09*	-.10*	-.15**	-.17***	-							
12.	Moral Disengagement	-.03	-.28***	-.18***	-.14**	-.08	-.46***	.49***	.16***	.55***	.48***	-.05	-						
13.	Non-Offence Morally Wrong	.01	.03	-.02	.04	.01	.00	-.02	.06	.10*	.02	.06	.08	-					
14.	Non-Offence Negative	.08	.07	-.02	.02	-.07	-.02	.03	.04	.09*	.07	-.04	.10*	.65***	-				
15.	Moderate Offence Morally Wrong	-.03	.18***	.08	.08	.15**	.26***	-.25***	-.03	-.25***	-.30***	.14**	-.37***	.06	-.00	-			
16.	Moderate Offence Negative	.00	.17***	.02	.08	.16***	.22***	-.25***	.01	-.23***	-.26***	.11*	-.32***	.02	.00	.86***	-		
17.	Severe Offence Morally Wrong	.03	.10*	.09*	.12**	.15**	.14**	-.19***	-.02	-.25***	-.32***	.15**	-.32***	-.04	-.03	.41***	.35***	-	
18.	Severe Offence Negative	.04	.07	.03	.10***	.18***	.10*	-.18***	-.01	-.21***	-.29***	.18***	-.29***	-.05	-.07	.38***	.40***	.85***	-

Note. N = 518, *p<.05, **p<.01, ***p<.001

Multiple linear regression

Multiple linear regressions were used to determine whether 'dark' and 'normal' personality, disgust and moral disengagement predicted participants' moral judgement ratings. Six multiple regressions were completed with the following outcomes: non-offence morally wrong/negative, moderate offence morally wrong/negative, severe offence morally wrong/negative. All multiple regressions consisted of five stages. Age, gender and educational attainment were entered at stage one. Three dummy variables were created for both age and educational attainment. The reference category for gender was 'male' – female and 'other' were entered into the regression. The reference category for education was undergraduate attainment – A Levels or below and postgraduate attainment were entered into the regression. The HEXACO traits were added at stage two, followed by Dark Tetrad traits at stage three. Stage four included animal reminder disgust and finally stage five included moral disengagement.

Non offences

The first hierarchical regression model looked at the morally wrong ratings of the non-offences. The results of the model revealed that the variables in Model 1 (age, gender, educational attainment) explained 1% of the variance in participants' judgements (R^2=.00) but this model was not significant (F(5, 504)=.97, p=.44). In Model 2, HEXACO variables explained

2.4% of the variance in ratings (R^2=.02) but this model was not significant (F(11,498)=1.13, p=.34). Model 3 included Dark Tetrad traits and explained 3.3% of the variance (R^2=.03). This model was not significant (F(15,494)=1.14, p=.32). Model 4, which included animal reminder disgust explained 3.4% of the variance in (R^2=.03) and this model was not significant (F(16,493)=1.07, p=.38). Finally, Model 5 explained 3.5% of the variance (R^2=.04) and was again not significant (F(17,492)=1.05, p=.40). None of the changes in R^2 were significant with p values between .28 and .94.

The second hierarchical regression model looked at negative ratings of non-offences. The results of the model revealed that the variables in Model 1 explained 2.6% of the variance in ratings (R^2=.03) and this model was significant (F(5, 504)=2.74, p=.02). The only significant predictor in this model was 'DummyOther' ($\boldsymbol{\beta}$ = .13, p = .004), suggesting that participants who reported their gender as 'other' scored higher than males on negative ratings. Model 2, which included HEXACO variables explained 4.4% of the variance in negative ratings (R^2=.04) and this model was significant (F(11,498)=2.07, p=.02). However, Model 3 explained 4.8% of the variance (R^2=.05). This model was not significant (F(15,494)=1.68, p=.05). Model 4 explained 4.9% of the variance in (R^2=.05) and this model was not significant (F(16,493)=1.57, p=.07). Finally, Model 5 explained 5.0% of the variance (R^2=.05) and was also not significant

(F(17,492)=1.51, p=.09). R^2 change for Model 1 was significant (p=.02) but not significant for any of the other models (p values between .18 and .93).

Moderate offences

The third hierarchical regression model looked at 'morally wrong' ratings of the moderate offences. The results of the model revealed that the variables in Model 1 explained 6.2% of the variance in judgements (R^2=.06) and this model was significant (F(5, 504)=6.69, p<.001). Model 2 explained 20.0% of the variance in ratings (R^2=.20) and this model was significant (F(11,498)=11.31, p<.001). Model 3 explained 23.7% of the variance (R^2=.24). This model was significant (F(15,494)=10.23, p<.001). Model 4 explained 23.9% of the variance in (R^2=.24) and this model was significant (F(16,493)=9.70, p<.001). Finally, Model 5 explained 27.2% of the variance (R^2=.27) and was significant (F(17,492)=10.82, p<.001). The changes in R square for Model 1, 2, 3 and 5 were significant at p<.001, but not significant for Model 4 (p=.22). Significant predictors in Model 5 were postgraduate attainment compared undergraduate attainment ($\boldsymbol{\beta}$ = -.20, p<.001), age ($\boldsymbol{\beta}$ =.11, p=.01), conscientiousness ($\boldsymbol{\beta}$ =.13, p=.003), emotionality ($\boldsymbol{\beta}$ =.13, p=.006), honesty-humility ($\boldsymbol{\beta}$ =.19, p=.001), narcissism ($\boldsymbol{\beta}$ =.12, p=.03), sadism ($\boldsymbol{\beta}$ =-.17, p=.002) and moral disengagement ($\boldsymbol{\beta}$=-.25, p<.001).

The fourth hierarchical regression model looked at 'negative' ratings of the moderate offences. The results of the model revealed that the variables in Model 1 explained 8.2% of the variance in judgements (R^2=.08) and this model was significant (F(5, 504)=8.97, p<.001). Model 2 explained 18.9% of the variance in judgements (R^2=.19) and this model was significant (F(11,498)=10.54, p<.001. Model 3 explained 23.3% of the variance (R^2=.23). This model was significant (F(15.494)=10.02, p<.001). Model 4, which included disgust variables, explained 23.4% of the variance in (R^2=.23) and this model was significant (F(16,493)=9.40, p<.001). The changes in R square for Model 1, 2, 3 and 5 were significant at p<.001, but not significant for Model 4 (p=.53). Finally, Model 5 explained 26.0% of the variance (R^2=.26) and was significant (F(17,492)=10.18, p<.001). Significant predictors in Model 5 were postgraduate attainment compared undergraduate attainment ($\boldsymbol{\beta}$ = -.22, p<.001), age ($\boldsymbol{\beta}$=.11, p=.001), conscientiousness ($\boldsymbol{\beta}$ =.14, p=.002), emotionality ($\boldsymbol{\beta}$ =.13, p=.007), honesty-humility ($\boldsymbol{\beta}$=.12, p=.04), narcissism ($\boldsymbol{\beta}$=.15, p=.006), sadism ($\boldsymbol{\beta}$=-.17, p=.001) and moral disengagement ($\boldsymbol{\beta}$=-.23, p<.001).

Severe offences

The fifth hierarchical regression model looked at 'morally wrong' ratings of severe offences. The results of the model revealed that the variables in Model 1 explained 4.0% of the variance in morally wrong judgements (R^2=.04) and this model was significant (F(5, 504)=4.25, p=.001). Model

2 variables explained 12.3% of the variance in ratings (R^2=.12) and this model was significant (F(11,498)=6.34, p<.001). Model 3 explained 19.0% of the variance (R^2=.19). This model was significant (F(15,494)=7.73, p<.001). Model 4, which included disgust variables, explained 19.0% of the variance in (R^2=.19) and this model was significant (F(16,493)=7.24, p<.001). Finally, Model 5 explained 20.0% of the variance (R^2=.20) and was significant (F(17,492)=7.23, p<.001). The changes in R square for Model 1 were significant (p=.001), significant for Model 2 and 3 at p<.001, not significant for Model 4 (p=.85) and significant for Model 5 (p=.02). Significant predictors in Model 5 were gender (DummyOther, $\boldsymbol{\beta}$ = .10, p = .02), emotionality ($\boldsymbol{\beta}$=.11, p=.03), sadism ($\boldsymbol{\beta}$=-.27, p<.001) and moral disengagement ($\boldsymbol{\beta}$=-.14, p=.02).

The sixth hierarchical regression model looked at negative ratings of the severe offences as the outcome. The results of the model revealed that the variables in Model 1 explained 5.2% of the variance in negative judgements (R^2=.05) and this model was significant (F(5, 504)=5.50, p<.001). Model 2 explained 13.2% of the variance in ratings (R^2=.13) and this model was significant (F(11,498)=6.89, p<.001). Model 3 explained 24.3% of the variance (R^2=.24) and was significant (F(15,494)=10.55, p<.001). Model 4 explained 24.3% of the variance in negative ratings (R^2=.23) and this model was significant (F(16,493)=9.88, p<.001). Finally Model 5 explained 26.2% of the variance and was also significant, F(17,492)=10.25, p<.001).

The changes in *R* square for Model 1, 2, 3 and 5 were significant at $p<.001$, but not significant for Model 4 ($p=.80$). Significant predictors in Model 5 were emotionality ($\boldsymbol{\beta}=.14$, $p=.005$), sadism ($\boldsymbol{\beta}=-.35$, $p<.001$) and moral disengagement ($\boldsymbol{\beta}=-.19$, $p<.001$).

Discussion

This study aimed to investigate whether individual differences in personality, animal reminder disgust and moral disengagement significantly predicted moral judgements. Multiple regressions indicated that there were no significant models or predictors for non-offences when considering all of the previous variables. However, for moderate and severe offences, adding all variables into the model predicted morally wrong and negative judgements most significantly. Ultimately, they only predicted a maximum variance of 27.2% in scores. Significant predictors for negative and morally wrong judgements for moderate offences were undergraduate attainment compared to postgraduate attainment, age, conscientiousness, emotionality, honesty-humility, narcissism, sadism and moral disengagement. Significant predictors for both negative and morally wrong judgements of severe offences were emotionality, sadism and moral disengagement. For morally wrong judgements only, participants who indicated their gender as 'other' scored higher than men.

Dark Tetrad and moral judgements

Most Dark Triad studies investigate sacrificial moral dilemmas with a focus on utilitarian and deontological judgements. The current study is novel in that it not only includes scenarios that individuals may encounter in everyday life, but these scenarios also vary in terms of severity. Hypothesis one was partially supported – only two Dark Tetrad traits were significant predictors of moral judgements. In multiple regressions for severe offences sadism was associated with the highest standardized beta, indicating that it was the strongest predictor of moral judgements. Sadism is a unique trait in the Dark Tetrad as it is typified by the enjoyment of hurting others (Paulhus, Buckels, Trapnell & Jones, 2021). This is of note as scenarios in the severe category were characterised by physical harm and suffering, including murder, torture, rape and assault. The finding that lower levels of sadism predicted more severe moral judgements is therefore not surprising, as individuals scoring low on these traits are more likely to be affected by the suffering of others.

The relationship between narcissism and moral judgements is more complex. Previous studies suggest that narcissism is negatively related to moral judgements (e.g. Trémolière & Djeriouat, 2016), but the current study found a relationship in the opposite direction for moderate offences. Scenarios included in the moderate offence group described morally 'grey' situations, where the actions of the individual may have been permissible

in some situations but not others. Studies which find a negative relationship between narcissism and moral judgement use moral dilemmas which have extreme outcomes – for example, killing one person to save six people. This begs the question – could narcissism's relationship to moral judgements be context dependent? Some consider narcissism to have two facets: Leadership/Authority, an adaptive aspect, and Exhibitionism/Entitlement, a maladaptive aspect (Ackerman, Witt, Donnellan, Trzesniewski, Robins & Kashy, 2011). Maladaptive narcissism is reported as being associated with low empathy, aggression and problematic behaviours whereas adaptive narcissism is not (Cai & Luo, 2018). Perhaps moderate scenarios elicit different aspects of narcissism. Contrary to previous research, the current study did not find psychopathy and Machiavellianism to be significant predictors. Future studies may wish to consider including scenarios that may be more related to these traits such as fraud, extortion or forgery for Machiavellianism may reveal interesting relationships.

HEXACO and moral judgements

In the current study, conscientiousness, honesty-humility and emotionality were positively correlated with morally wrong and negative judgements. Hence, hypothesis two was also partially supported – agreeableness was not a significant predictor of moral judgements but honesty-humility was. The relationship of moral judgements with conscientiousness and honesty-

humility is in line with current research, although the current study illustrates that this relationship also applies to moral judgements of moderate offences, not only severe moral dilemmas. Conscientiousness is associated with self-control, an aspect of personality also suggestive of moral behaviour (Kim & Cohen, 2015). Individuals scoring low in honesty-humility are more likely to engage in immoral behaviour (Hilbig, Moshagen & Zettler, 2015), whereas those scoring higher are less likely to manipulate or take advantage of others (Lee & Ashton, 2004). However, the finding that higher levels of emotionality predicted more severe moral judgements for both moderate and severe offences is less established in the research. Individuals scoring high on the emotionality subscale tend to avoid physical harm, become preoccupied because of minor problems, share their difficulties with others who may provide comfort, and feel empathy (Ashton, Lee & de Vries, 2014). When considering the various facets associated with emotionality, the relationship between emotionality and moral judgements for both moderate and severe offences becomes plausible.

Disgust and moral judgements

It is of note that the current study did not find disgust to be a significant predictor of either morally wrong or negative judgements for non, moderate and severe offences and as such hypothesis three was not supported. Disgust has been associated with a tendency to make more severe moral

judgments (Olatunji et al., 2012), and individuals are more likely to view something as immoral if they tend to be easily disgusted or feel disgust in response to immoral acts (Pizarro, Inbar & Helion, 2011). However, there has been criticism of the DS-R suggesting that the three types of disgust measured are highly correlated, and the internal reliability of the contamination-based disgust scale is low (Tybur, Lieberman & Griskevicius, 2009). They further argue that the DS-R is more a measure of pathogen disgust, which is different to sensitivity to sexual and moral disgust (Tybur, Lieberman & Griskevicius, 2009). Additionally, there is some suggestion that the relationship between disgust and moral judgement is more reflective of a relationship between affect and judgement, rather than specifically disgust (Landy & Piazza, 2019). It is possible that there is a relationship between disgust and moral judgements, but this was not established in the current study as a result of the measure used. If a more appropriate measure of disgust is used, future research may wish to consider including disgust as a mediator of moral judgements. Alternatively, it may be that the emotion that the current study measured – disgust – was not relevant for moral judgements, and alternative variables such as empathy or sadness may be of more importance (Pizarro, 2000).

Moral disengagement and moral judgement

Moral disengagement was a negative predictor of moral judgements for morally wrong and negative judgements for both moderate and severe offences, suggesting that lower propensity for moral disengagement was associated with higher morally wrong and negative ratings and provided evidence for hypothesis five. Although research specific to moral disengagement and moral judgements is limited, this is in line with the previously published study (e.g Bhattacharyya & Ray, 2017). However due to low levels of reliability for subscales, this is based on participants total moral disengagement score. It would be of interest for future studies to establish which mechanism, or mechanisms, of moral disengagement are most prominent when making moral judgements and if this differs for non, moderate and severe offences. Furthermore, the current study investigated the direct effect of moral disengagement on moral judgements, but it may also explain the process by which Dark Tetrad traits are related to moral judgements. This is supported by Spearman's correlations which highlighted significant positive relationships between Dark Tetrad traits and moral disengagement. Future studies may seek to explore the mediating effects of moral disengagement on moral judgements.

Limitations

The current study indicates that moral judgements are best predicted by an amalgamation of 'dark' and 'light' traits and moral disengagement, but

it is not without its limitations. The fact that most studies have relied on sacrificial moral dilemmas and have not used real world situations limits the generalisability of the current results. Further replication of the current study must be completed. Furthermore, results are based on only one subscale of the DS-R and no subscales of the Moral Disengagement Scale. Given that previous studies have reported similar issues with the DS-R and Moral Disengagement scale, a review of the scale and subscales is necessary.

Rationale for Chapter Five

Similar to the primary research study (Chapter Four), the secondary research study sought to address the issues addressed in the systematic review (Chapter Two) by using real-world moral scenarios. It approached this in a novel manner by utilising linguistic analysis to explore participants' moral judgements. This addresses a significant limitation identified in previous Dark Tetrad studies in that it does not rely on self-report questionnaire data, nor dichotomous deontological/utilitarian response options. Furthermore, evidence from Chapter Four indicated that contrary to previous research, disgust was not a significant predictor for moral judgements. As such, Chapter Five studied linguistic analysis using the Moral Foundations Theory framework. Finally, evidence from Chapter Four indicated that non-offences had limited statistical value or internal reliability, and as such only moderate and severe offences are considered in this study.

Chapter Five

An exploration of Dark Tetrad traits and use of Moral Foundations language

Abstract

The current study aimed to investigate significant differences in percentage of words associated with moral foundations for moderate and severe moral offences, and observe any significant relationships between Dark Tetrad traits and words related to moral foundations. This was explored using the Moral Foundations Dictionary 2.0 (MFD2.0) compatible with LIWC2015. A total of 290 participants (F:M = 126:150, age = 26.93, SD = 10.46) recruited via social media completed an online questionnaire comprising of the Short Dark Triad Scale, Short Sadistic Impulse Scale and 12 moral scenarios. Spearman's correlation and multiple regressions were completed, ultimately indicating only two significant models. Narcissism and age were significant predictors of fairness vice scores, psychopathy was a significant predictor of sanctity virtue scores, and postgraduate attainment was a significant predictor of care vice scores although they only explained between 7.4 to 8.8% of the variance. Results of the current study indicate that there is a need for further development of the MFD2.0. Given the very limited sample from which these words were generated, it is unlikely the words contained in the MFD2.0 are representative of the general population. Limitations of the current study, including its high

attrition rate and issues with study design are discussed. Opportunities for future research are discussed throughout.

Introduction

The study of morality is concerned with an individual's view of what is the right and wrong way to behave. It has been a considerable area of interest for researchers with an average of 4,000 publications per year since 2014 (Ellemers, van der Toorn, Paunov & van Leeuwen, 2019). One of the current leading theories of morality is the Moral Foundations Theory (MFT; Haidt & Joseph, 2004). MFT suggests that humans are born with a basic level of morality, which is expanded upon by environmental factors such as culture, parenting and education (Graham et al., 2013). Certain moral foundations therefore become suppressed or more developed. It is further suggested that moral judgements are initially made rapidly using moral intuition, followed by slower, conscious moral reasoning where necessary. Finally, as humans have had to overcome many social challenges throughout history, there are also many moral foundations that have developed as a result. MFT argues that morality is based on five foundations: *harm/care*, namely protecting others from harm; *fairness/reciprocity*, concerns relating to adherence to societal rules, inequality and unfair treatment; *ingroup/loyalty*, concerns about self-sacrifice and loyalty to the group; *authority/respect*, concerns about social hierarchy, respect and obedience; and *purity/sanctity*, related to disgust, purity and contamination[1].

[1] Labels for the five moral foundations vary across studies. For the purposes of the current study and to correlate with variables used in MFD2.0, moral foundations will now be referred to as: ***Care*** (instead of Harm/Care), ***Fairness*** (instead of Fairness/Reciprocity), ***Loyalty*** (instead of Ingroup/Loyalty), ***Authority*** (instead of Authority/Respect) and ***Sanctity*** (instead of Purity/Sanctity).

Some researchers argue that there are only two categories of moral foundations: individualising and binding foundations. Care and fairness are considered *individualising* foundations, as they are concerned with protecting the individual (Haidt & Graham, 2007). Loyalty, authority and sanctity are considered *binding* foundations as they are focussed on cohesion and unity of the group and promoting those who sacrifice for the greater good (Napier & Luguri, 2013). However, evidence from both Western, educated, industrialised, democratic and rich (WEIRD) and non-WEIRD samples suggests that the five-factor model of MFT is most appropriate (Doğruyol, Alper & Yilmaz, 2019) and will therefore be used in the current study.

MFT has predominantly been used to understand individuals' political attitudes, particularly focussing on the 'culture war' between liberals and conservatives in the United States. For example, the care foundation has been associated with disapproval of the death penalty, use of torture, medical testing on animals and gun control (Koleva, Graham, Iyer, Ditto & Haidt, 2012). MFT has also been used to explore how liberals and conservatives make moral judgements about others. Sanctity, care and fairness are the most important foundations in judging influential figures such as Margaret Thatcher and Mother Teresa, regardless of political orientation (Frimer, Biesanz, Walker & MacKinlay, 2013). A recent meta-analysis indicated that liberals and conservatives do rely on different sets of moral foundations – care and fairness are negatively related to

conservativism, whereas authority, loyalty and sanctity are positively correlated to conservatism (Kivikangas, Fernández-Castilla, Järvelä, Ravaja & Lönnqvist, 2021).

Dark Tetrad and Moral Foundations Theory

Given the antisocial and immoral behaviours associated with the Dark Tetrad, it is not surprising that this is also an area of interest to the study of MFT. The Dark Tetrad consists of three disagreeable personality traits: Machiavellianism, psychopathy, narcissism and sadism. Narcissists present as grandiose, entitled and have a need for admiration; Machiavellians are masters at manipulating, with a tendency to exploit others for their own gain; and psychopaths are callous, impulsive and engage in antisocial behaviour (Paulhus, 2014). Non-sexual subclinical sadism is typified by the enjoyment of cruelty (Meere & Egan, 2017; Book et al., 2016). Dark Tetrad traits are negatively correlated with morality and associated with a variety of maladaptive outcomes in the workplace, educational settings, antisocial behaviour and interpersonal situations (Furnham, Richards & Paulhus, 2013; Bonfá-Araujo, Lima-Costa, Hauck-Filho & Jonason, 2022).

Moral Foundations Theory has noted significant relationships with the Dark Tetrad traits. For example, individuals high on Dark Tetrad traits show lower endorsements of both individualising and binding foundations (Karandikar, Kapoor, Fernandes & Jonason, 2019). Narcissism has been positively correlated with fairness, loyalty, authority and sanctity

foundations, whereas psychopathy was negatively correlated with the same (Jonason, Strosser, Kroll, Duineveld & Baruffi, 2015). Dark Tetrad traits were negatively correlated with the foundations of care, fairness and sanctity, and individuals with high scores on these foundations were found to have low levels of psychopathy. However, loyalty was positively related to psychopathy and Machiavellianism, and authority only with Machiavellianism (Mededovic & Petrovic, 2016).

Linguistic analysis

Research investigating individual differences in morality has been dominated by self-report questionnaires (Ellemers et al., 2019), and almost exclusively with the use of the MFQ in studies exploring MFT (Kivikangas et al., 2021). Moral foundations are most often assessed by using the Moral Foundations Questionnaire (MFQ; Graham et al., 2011). However, recent analyses have identified concerns about the internal reliability of the MFQ with four out of five subscales producing a Cronbach's alpha of below .7 (Tamul et al., 2020), as well as its cross-cultural generalisability (Iurino & Saucier, 2019).

Given the reported limitations of the MFQ, it is pertinent to find other ways of exploring individual differences in MFT. Language is the most prominent way of communicating one's inner thoughts and emotions to others (Tausczik & Pennebaker, 2010). It has been correlated with personality characteristics, and there is evidence that language analysis is correlated

with self- and informant reports of personality (Park et al., 2015). Furthermore, the significant increase in the presence and use of social media such as Twitter and Facebook have produced a rich amount of publicly available written information ready for analysis (Hirschberg & Manning, 2015).

Linguistic analysis focussing on moral foundations would provide further evidence of the presence moral foundations, highlighting that they are not solely an outcome of self-report questionnaires. One study investigated 12 years of news articles considering the divisive issue of stem cell research. Proponents of stem cell research used more care words (e.g. "save", "compassion") than opponents, whereas opponents used more sanctity words than proponents both of which were statistically significant (Clifford & Jerit, 2013). Linguistic analysis has also been applied to liberal and conservative religious leaders' sermons – Unitarian Universalists spoke more about issues concerning fairness and care than Southern Baptist preachers, whereas Baptists spoke more about authority and sanctity (Graham, Haidt & Nosek, 2008). Furthermore, a meta-analysis indicated that conservatives used more authority and sanctity words, fewer loyalty words but that there was no difference in use of care or fairness words (Frimer, 2020). Linguistic analysis has also been used to assess changes in morality over time. When analysing English language books from 1900 to 2007, words associated with sanctity and care were noted to increase from

1980, whereas words associated with authority and loyalty increased steadily over the 20th century (Wheeler, McGrath & Haslam, 2019).

Research regarding differences or similarities in language used by members of the Dark Tetrad appears to be in its infancy. Subclinical narcissism was significantly correlated with an increase in use of sexual language and swear words, but a decrease in the use of tentative words (e.g "maybe") and words about anxiety and fear (e.g. "afraid"; Holtzman et al., 2019). The authors suggest that the linguistic profile of narcissism is one of confidence and certainty, but low in vulnerability (Holtzman et al., 2019). When comparing Dark Triad traits and Twitter users' language, Machiavellianism was positively correlated with the use of swear words, and words relating to anger and negative emotions, but negatively correlated with positive emotion and use of 'we' (Sumner, Byers, Boochever & Park, 2012). Psychopathy was positively correlated with swear words, and words relating to anger, death and negative emotions, and positively correlated with filler words (e.g. 'youknow', 'blah'; Sumner et al., 2012). There currently does not appear to be any available evidence indicating the type of relationship between sadism, and similarities or differences in the kind of language used.

The present study: Moral Foundations Theory, linguistic analysis and the Dark Tetrad

The focal objective of the current study was to explore relationships between Dark Tetrad traits and the moral foundations using linguistic analysis. Given that this study is the first to employ this study design considering the Dark Tetrad and moral decision-making, it was largely exploratory in nature. While individuals with higher levels of Dark Tetrad traits showed lower endorsements of all five moral foundations (Karandikar, Kapoor, Fernandes & Jonason, 2019), it was also noted that individuals with higher levels of Dark Triad traits used more words relating to anger and negative emotions (Sumner et al., 2012) and low in vulnerability (Holtzman et al., 2019). It was therefore hypothesized that higher levels of Dark Tetrad traits would be associated with a higher percentage of negative ('vice') words associated with each foundation.

Method

Sample size

A power calculation was completed to determine the minimum sample size required. Green's (1991) power calculation for studies using multiple regression posits the following: $N > 50 + 8$ k (where k is the number of independent variables). There are nine predictors used in the current study, therefore the minimum sample size should be 122 participants. Van Voorhis and Morgan (2007) further suggest that for studies with six or more predictors, the minimum number of participants per predictor is 10 but the power of the study would increase if there were up to 30 participants per

predictor. Therefore, a sample of 270 participants or above would further increase the power.

In total 535 online participants took part in this study, however 245 participants did not provide responses to all 12 scenarios and were therefore excluded from further analysis. This resulted in a final sample of 290 participants (F:M = 126:150, age = 26.93, SD = 10.46), recruited predominantly via social media sites, such as Facebook and Reddit.com. Participants were given a brief description of the study and then directed to Online Surveys (https://www.onlinesurveys.ac.uk) where a confidential questionnaire was hosted. Participants filled out a consent form prior to taking part in the study (see Appendix E) and were presented with a debrief sheet upon conclusion of the questionnaire (see Appendix F). The study was quantitative and cross-sectional in nature, and the key outcome was moral judgements. This study was granted ethical approval by the University of Nottingham Faculty of Medicine and Health Sciences Research Ethics Committee (see Appendix G).

Measures

It is of note that the current study was part of another study in which participants were presented with the HEXACO-60 (Ashton & Lee, 2009), Short Dark Triad Scale (Jones & Paulhus, 2014), Short Sadistic Impulse Scale (O'Meara, Davies & Hammond, 2011), Disgust Scale-Revised (Olatunji et al., 2007), Moral Disengagement scale (Detert, Trevine &

Sweitzer, 2008) and moral scenarios (Olatunji, Puncochar & Cox, 2016). Only responses to the SD3, SSIS and moral scenarios are considered in the current study. As such, this sample of participants is a subset of the sample utilised in the previous chapter and not a different sample of participants. With regards to demographic information collected – participants were asked to provide their age, gender, nationality and highest level of education achieved.

Furthermore, while this research study investigates the Dark Tetrad, the Short Dark Tetrad (SD4) measure was not used. As discussed in Chapter Three, there is currently limited evidence of its validity and the psychopathy and sadism subscales are highly correlated (Blötner, Ziegler, Wehner, Back & Grosz, 2022). This empirical study is interested in exploring the contributions of each Dark trait and as such the Short Dark Triad Scale (SD3) and a separate measure of sadism, the Short Sadistic Impulse Scale (SSIS), were used.

Short Dark Triad Scale (SD3; Jones & Paulhus, 2014; see Appendix I)

The Short Dark Triad Scale (SD3) consists of 27 items measuring Machiavellianism, narcissism and psychopathy. Each subscale comprises of 9 items, rated on a 5-point Likert scale where '1' is strongly disagree and '5' is strongly agree. The SD3 scales are considered reliable: Machiavellianism α = 0.75, psychopathy α = 0.72 and narcissism α = 0.73 (Jones & Paulhus, 2014).

Short Sadistic Impulse Scale (SSIS; O'Meara, Davies & Hammond, 2011; see Appendix J)

The Short Sadistic Impulse Scale (SSIS) measures non-sexual sadism and consists of 10 items, rated on a 4-point Likert scale, where '1' is strongly agree and '4' is strongly disagree (sample item: "I have hurt people for my own enjoyment"). The SSIS is a reliable measure of sadistic impulses and has an internal consistency of 0.86 (O'Meara et al., 2011).

Moral scenarios

Twelve descriptions of moral scenarios were used from Olatunji, Puncochar and Cox's (2016) research, based on scenarios from Olatunji, David and Ciesielski (2012). The descriptions were presented in a random order and consisted of three different levels of transgressions: non-offences, moderate offences, and severe offences (see Appendix M for list of scenarios). However, only moderate offences (N=4) desribing conduct that is morally questionable (e.g. "T.R. neglected an elderly relative") were considered in this study. Participants were presented with a free-text response option and asked to explain why they made the morally wrong and negative judgements they did.

Text analysis

Text was analysed using the Moral Foundations Dictionary 2.0 (MFD2.0; Frimer, Boghrati, Haidt, Graham & Dehgani, 2019) which is compatible with

the Linguistic Inquiry and Word Count (LIWC2015; Pennebaker, Boyd, Jordan & Blackburn, 2015) programme. LIWC2015 is one of the most used text analysis programmes, and its internal reliability and external validity have been well documented (Tauscik & Pennebaker, 2010; Pennebaker et al., 2015). LIWC2015 uses the MFD2.0 to establish the percentage of key words associated with each of the five moral foundations present in the text. It provides 'virtue' (positive words) and 'vice' (negative words) categories for each of the moral foundations, resulting in 10 outcome variables. While the MFD2.0 does not have better (or worse) construct validity than the original MFD, it consists of an average of 210 words per moral foundation compared to 32 in the original and is therefore more likely to provide a comprehensive assessment of the text being analysed (see Appendix N for full list of words included in MFD2.0).). To analyse the data, statements pertaining to moderate offences and severe offences were collated. As such, an overall score for each of the 10 outcome variables was created for moderate and severe offences resulting in a total of 20 outcome variables.

Results

Preliminary analysis and reliabilities

Data from LIWC2015 and the online questionnaire were exported into SPSS (version 26) and screened for missing data. There was no missing data in the final sample of 290 participants when considering LIWC2015 output, but there was one missing data point for age and three missing data points

for education. Normality checks were also completed, highlighting that the data was skewed and not normally distributed. Means, standard deviations and reliabilities for measured variables are presented in Table 6.

Table 6

Means, standard deviations and reliabilities of measured variables

	M	SD	α
SD3			
Machiavellianism	3.11	0.70	.79
Narcissism	2.41	0.67	.75
Psychopathy	2.10	0.62	.74
SSIS			
Sadism	1.77	0.79	.90
Moral Foundations Dictionary 2.0			
Moderate offences			
Care Virtue	1.20	1.34	-
Care Vice	1.13	2.49	-
Fairness Virtue	0.50	0.88	-
Fairness Vice	2.18	2.35	-
Loyalty Virtue	0.26	0.64	-
Loyalty Vice	0.04	0.21	-
Authority Virtue	0.85	1.19	-
Authority Vice	0.09	0.57	-
Sanctity Virtue	0.81	1.05	-
Sanctity Vice	0.17	0.61	-
Severe offences			
Care Virtue	0.28	0.74	-
Care Vice	9.33	7.51	-
Fairness Virtue	0.37	1.05	-
Fairness Vice	0.17	0.76	-
Loyalty Virtue	0.11	0.52	-

Loyalty Vice	0.01	0.09	-
Authority Virtue	0.17	0.67	-
Authority Vice	0.11	0.86	-
Sanctity Virtue	0.12	0.59	-
Sanctity Vice	0.66	2.15	-

Average word count for responses to moderate offences were 90.0 words (min = 7, max = 600) and 62.4 words (min = 4, max = 629) for severe offences. It is of note that there were many instances where participant responses included zero matched words with the MFD2.0. 65.4% of scores for moderate offence were zero and 81.4% for severe offences. This was not considered missing data as participants completed the task, but rather a reflection of the limitations of the MFD2.0.

Correlations

Bivariate correlations between Dark Tetrad traits and the 10 MFD2.0 scores were examined for moderate offences. Due to the non-parametric nature of the data, Spearman's correlations were used.

Table 7 shows correlations (Spearman's rho) between Dark Tetrad traits and MFD2.0 scores for moderate offences. Machiavellianism was negatively correlated with Fairness Vice (r=-.15, p=.01), but positively correlated to Loyalty Virtue (r=.15, p=.01) and Sanctity Virtue (r=.15, p=.01). Psychopathy was also negatively correlated with Fairness Vice (r=-.15, p=.009) and positively correlated with Sanctity Virtue (r=.20, p<.001).

Finally, sadism was negatively correlated with Fairness Vice (r=-.12, p=.04).

Table 8 shows correlations (Spearman's rho) between Dark Tetrad traits and MFD2.0 scores for severe offences. There was only one significant correlation: Machiavellianism was positively correlated with Fairness Virtue (r=.17, p=.005).

Table 7

Correlations between Dark Tetrad and MFD2.0 scores for moderate offences

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Machiavellianism	-													
2. Narcissism	.30***	-												
3. Psychopathy	.52***	.33***	-											
4. Sadism	.46***	.23***	.55***	-										
5. Care Virtue	-.03	-.03	.07	.06	-									
6. Care Vice	-.06	-.09	-.09	-.08	-.15*	-								
7. Fairness Virtue	.06	.06	.03	-.00	-.08	.02	-							
8. Fairness Vice	-.15*	.08	-.15**	-.12*	-.03	-.08	-.09	-						
9. Loyalty Virtue	.15*	.03	.07	.05	.08	.04	.08	-.07	-					
10. Loyalty Vice	.06	-.03	.03	.03	-.02	.08	.26***	-.06	.06	-				
11. Authority Virtue	.01	.02	-.04	.02	.01	.00	-.05	-.07	.05	-.03	-			
12. Authority Vice	.02	.00	-.03	-.01	-.08	-.04	.10	-.00	-.02	-.04	.02	-		
13. Sanctity Virtue	.15*	-.05	.20***	.11	-.01	.03	.04	-.06	-.05	.01	.07	-.03	-	
14. Sanctity Vice	.01	.08	.03	-.07	-.03	.05	.01	-.11	.05	.10	.03	-.02	-.01	-

Note. *N* = 290, *p<.05 **p<.01, ***p<.001

Table 8

Correlations between Dark Tetrad and MFD2.0 scores for severe offences

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Machiavellianism	-													
2. Narcissism	.30***	-												
3. Psychopathy	.52***	.33***	-											
4. Sadism	.46***	.23***	.55***	-										
5. Care Virtue	-.05	-.01	-.01	-.06	-									
6. Care Vice	.01	-.01	-.04	-.04	-.20***	-								
7. Fairness Virtue	.17**	-.01	.10	.11	.02	-.14*	-							
8. Fairness Vice	.04	.10	.09	-.03	.239***	-.08	-.03	-						
9. Loyalty Virtue	.10	.07	.08	-.06	.08	-.20**	.10	.14*	-					
10. Loyalty Vice	.10	-.06	.08	.04	-.03	.02	.12*	-.02	-.02	-				
11. Authority Virtue	.07	-.00	.09	.00	.12*	-.20**	.18**	.04	.15**	-.02	-			
12. Authority Vice	.02	.00	.03	-.02	.01	-.01	-.00	.01	.01	-.01	-.01	-		
13. Sanctity Virtue	.01	.05	-.03	.01	.16**	-.16**	.04	.25***	.07	-.02	.08	.03	-	
14. Sanctity Vice	.05	-.01	.01	-.02	.05	-.04	.01	-.06	.04	-.03	-.02	-.05	.10	-

Note. *N* = 290, *p<.05 **p<.01, ***p<.001

Multiple regression

Correlations highlighted significant relationships between Dark Tetrad traits and MFD2.0 variables across non, moderate and severe offences. To establish if there were any significant predictors contributing to the models, 30 multiple regressions were completed. Predictors were Dark Tetrad traits (Machiavellianism, narcissism, psychopathy and sadism), with age, gender and education included as control variables. Gender and education were dummy coded – male was the reference category for gender, and undergraduate attainment was used as the reference category for education.

Moderate offences

Only two of the 10 multiple regressions completed in the moderate offences grouping were significant. Predictors explained 8.8% of the variance in fairness vice scores ($F(9, 276)=2.95$, $p=.002$), but only two predictors contributed significantly to the model: narcissism ($\beta=.21$, $p=.001$) and age ($\beta=.14$, $p=.03$). A multiple regression investigating whether Dark Tetrad traits and demographics could significantly predict sanctity virtue scores. The results of the regression indicated that the predictors explained 7.4% of the variance ($F(9, 276)=2.46$, $p=.01$), although psychopathy was the only significant predictor to the model ($\beta=.24$, $p=.004$). For the eight non-significant multiple regressions completed, the R^2 ranged from .02 to .06 with p values between .07 and .84.

Severe offences

Only one of the 10 multiple regressions completed was significant. A multiple regression investigating whether Dark Tetrad traits and demographics could significantly predict Care Vice scores indicated that the predictors explained 8.5% of the variance ($F(9, 276)=2.84$, $p=.003$). Postgraduate attainment was the only significant predictor of the model (dummy reference category was undergraduate attainment, $\boldsymbol{\beta} = .26$, $p<.001$). For the nine non-significant multiple regressions completed, the R^2 ranged from .01 to .04 with p values between .08 and .82.

Discussion

Interpretation of results

This study aimed to investigate significant differences in percentage of MFD2.0 words used in morally grey scenarios, and to explore relationships between Dark Tetrad traits and words related to moral foundations. Correlations indicated that Machiavellianism, sadism and psychopathy were negatively correlated with fairness vice scores for moderate offences. Machiavellianism was positively correlated with loyalty virtue, and psychopathy was positively correlated with sanctity virtue. Multiple regressions indicated only three significant models. Narcissism and age were significant predictors of fairness vice scores, and psychopathy was a significant predictor of sanctity virtue scores for moderate offences.

Postgraduate attainment was the only significant predictor of care vice scores for severe offences.

The results of the current study partially support the hypothesis that the Dark Tetrad traits would be associated with an increase in 'vice' words used. In the current study, narcissism was positively correlated with fairness vice scores. There is often a negative relationship between narcissism and foundations of fairness and care (Karandikar, Kapoor, Fernandes & Jonason, 2019). One possible explanation is that narcissism is associated with the need for social approval and acceptance (Jonason, Foster, Kavanagh, Gouveia & Birkas, 2018). It is possible that participants with higher levels of narcissism used more negative words when justifying their opinion, as they felt it would earn them the approval of others. While participants were informed they would remain anonymous, this may not have been sufficient to allay any impression management concerns. Future studies may wish to consider include a scale which assesses any socially desirable responding. Similarly, most research has noted a negative correlation between psychopathy and moral foundations, and there is limited evidence supporting the relationship between psychopathy and the moral foundation of sanctity (Aharoni, Antonenko & Kiehl, 2011).

In the current study, as levels of psychopathy increased, so did the percentage of sanctity virtue words used, which was not in line with the hypothesis presented in the introduction. However, religious values tend to

be associated with the sanctity foundation (Wendell & Tatalovich, 2021), and it is possible that this finding is a reflection of the type of scenarios included in the moderate offences, one of which asked participants' opinion on an individual stealing from a collection plate at church.

While demographics were used as control variables in the multiple regressions performed, age and education proved to be significant predictors for certain moral foundations. This is partially in line with current research. With regards to age being a significant predictor of fairness vice scores, a recent meta-analysis indicated that the relationship between age and moral foundations is weak, although significant (Castilla-Estévez & Blázquez-Rincón, 2021). However, the finding that postgraduate attainment predicts variance in care vice scores may be a result of the way the original MFD and MFD2.0 were developed. Words for the original MFD were generated by six experts in MFT, and subsequently refined by two (Graham, Haidt & Nosek, 2009). The MFD2.0 words were again generated by a select few experts and reviewed by two researchers involved in the development of MFT (Frimer et al., 2019). Word2vec was used to establish which words were representative of each foundation, and to validate whether the categories could be used successfully when analysing text, 656 participants were asked to write an essay about one of the 10 foundations. While participants used in the development of the MFD2.0 were from a variety of nationalities, age and gender, researchers did not use their essays to generate more words for the MFD2.0. Educational attainment of

the individuals involved in development of word lists for MFD and MFD2.0 is not reflective of the general population. It is beyond the scope of the current study to discuss language development, but there is substantial evidence of several factors that play an integral role in language development, particularly socioeconomic status (Hoff, 2006). The list of words included in MFD2.0 needs to be expanded considering the above, and the population from which these words are gathered needs to be more inclusive and diverse.

Limitations

There was a high attrition rate (45.8%) in the current study which affects its internal and external validity. By the time participants reached the point in the online questionnaire which is the focus of the current study, they had already answered 170 questions. The MFD2.0 includes complex vocabulary, and it is possible that due to fatigue, participants were not using the required vocabulary present in the dictionary. There is evidence that fatigue affects moral reasoning: individuals who have completed a cognitively tiring task made different moral judgements compared to those who were not fatigued (Timmons & Byrne, 2018). Timmons and Byrne (2018) argue that this may be due to less motivation to consider moral dilemmas, or because participants construct a simpler version of what happened which may not accurately consider the actions or outcome of the situation. As such, it may be that the current results would have been different if this had been the only aspect of the questionnaire.

Total word count for each participant varied from 4 words to 629 words across moderate and severe offence types, and preliminary analyses highlighted a high percentage of zero matched words with the MFD2.0. There may have been an effect between Dark Tetrad traits and outcome variables, but the words used by participants were not present in the dictionary. Furthermore, LIWC2015 did not provide the number of words that have been written per category. For example, one participant matched 66.66% of words with Care Vice, but there was no indication of how many words that meant. If this information was provided, it would have been possible to control for the number of words in the multiple regressions. Alternatively, future studies may wish to ensure there is a word limit for each study to ensure consistency among responses and participants. Furthermore, the total number of words in the dictionary varied for each category – loyalty vice consisted of a total of 54 words whereas sanctity vice consisted of 388 words. It is possible that one is more likely to find a significant effect for categories with a higher word count, as they are more likely to have matched words in the text.

Future directions

Silver and Silver (2021) have highlighted the relevance of MFT in forensic populations, and deficits in moral reasoning have been implicated in offending behaviour for both adolescents and adults (Romeral, Fernandez & Fraguela, 2018; Palmer, 2003). Although comparable to the norms

reported in both the original SSIS (*M*=1-1.07) and SD3 (*M*=2.4), participant scores on the sadism and psychopathy scales in this study were low. It may be of interest to replicate this study with individuals who score higher on these traits and assess whether this would generate more significant interactions with MFD2.0 output. If sufficient amendments are made to the MFD2.0, it may also provide another way of measuring changes in moral reasoning over time, in addition to self-report pre and post measures commonly used for interventions.

Chapter Six

Discussion

Summary of findings

The aims of this thesis were to synthesise and build upon previous research of the Dark Tetrad and moral decision-making. Each chapter contributed new knowledge to the study of these topics.

The systematic review (Chapter Two) sought to establish whether there is consistent evidence that higher levels of Dark Triad traits affect moral decision-making. The evidence indicated that Machiavellianism and psychopathy were most consistently implicated as a significant correlate of moral judgements in moral dilemmas, whereas narcissism was least often reported to be correlated. Conversely, all Dark Triad traits were implicated in studies of everyday/real-world moral judgements, although specific traits were more relevant to certain moral issues. It was noted that despite issues with the validity of moral dilemmas, these were most often used in research considering Dark Triad traits and their impact on moral decision-making.

Prior to addressing the issues arising from the systematic review in the primary and secondary research studies, it was felt necessary to critically evaluate the validity and reliability of the Short Dark Triad scale (SD3; Jones & Paulhus, 2014) – the psychometric used to measure Dark Triad traits most often (Chapter Three). This critique provided evidence that the SD3 should be considered an acceptable brief measure of the Dark Triad and as such was used in the primary and secondary research studies.

The systematic review highlighted that most studies used moral dilemmas to examine this relationship, however these dilemmas have received criticism for their lack of external validity. The primary research study (Chapter Four) sought to address limitations mentioned in the systematic review by investigating the relationship between Dark Tetrad traits and everyday/real-world moral scenarios. Significant predictors for negative and morally wrong judgements for moderate offences were a mixture of demographic variables, conscientiousness, emotionality, honesty-humility, narcissism, sadism and moral disengagement. Significant predictors for both negative and morally wrong judgements of severe offences were emotionality, sadism and moral disengagement. This study highlighted more effects for moderate scenarios and suggested that these 'morally grey' areas may be of significant interest for future studies.

Finally, the secondary research study (Chapter Five) approached the study of the Dark Tetrad and moral decision-making in a novel manner. It utilised

linguistic analysis software to establish if there were significant differences in Moral Foundations words used in justifications of moral offences by Dark Tetrad traits. Similar to the primary research study, it noted that there were more significant effects found in the moderate offence grouping across all analyses, suggesting that these 'morally grey' scenarios present an interesting avenue for future research.

Strengths, limitations and future directions

A brief review of the limitations discussed in individual chapters and overall strengths of this thesis are provided here. A major limitation of the systematic review (Chapter Two) was its reliance on cross-sectional studies, within subjects designs and self-report measures. Additionally, most studies in the review used moral dilemmas which have been shown to lack external validity (Kahane, 2015) significantly affecting the generalisability of results. A major strength of this thesis is that it has addressed the main limitation permeating moral decision-making research by considering 'everyday' moral scenarios that are indicative of situations an individual may witness or experience in the real world. It also considered varying severities of moral scenarios and found noteworthy effects for 'morally grey' offences compared to severe and non-offences – a distinction which has not previously been identified in moral decision-making research. However, it also highlighted that there are issues with priming, spill over and social desirability effects which were not addressed in the current thesis and should be examined further in future research.

The psychometric critique of the Short Dark Triad scale (Chapter Three) highlighted that there is a need to update and expand the normative sample to account for age and gender differences, although overall it was considered an appropriate measure of Dark Triad traits. Both Chapter Three and Chapter Four are entirely novel contributions to the Dark Triad and moral decision-making arena and have addressed an important gap in the current literature.

Chapter Four had a commendably large sample size, although further information about participants may have been of importance. Dark Tetrad traits are meant to be studied in the general population, but the general population consists of many subgroups that could be studied beyond university students and social media samples. For example, further information about an individual's occupation or previous experience of being a victim or perpetrator of a crime would have been of benefit, as it may have been a factor affecting moral judgements. Future studies may wish to consider and control for this in their analysis. Additionally, many individuals in clinical and forensic populations will not meet clinical thresholds of these traits suggesting that this is also a population worthy of further investigation.

A major limitation of the secondary research study (Chapter Five) was its high attrition rate, which was likely due to the length of the online

questionnaire. The impact of this on the results of the secondary research study were discussed. Furthermore, issues with the Moral Foundations Dictionary 2.0 were addressed, and suggestions for further development of this method were made. One of the recurring limitations of Dark Triad/Tetrad studies is its overreliance on self-report and cross-sectional data (Miller, Vize, Crowe & Lynam, 2019). Chapter Five of this thesis demonstrated an alternative method of analysis by utilising a novel linguistic analysis technique not often applied by researchers in the Dark Tetrad field. A strength of both Chapter Four and Chapter Five is that they moved beyond the dichotomous deontological/utilitarian response styles which have customarily been used in moral decision-making research. Instead, Chapter Four applied Likert scales to reflect the continuum of morally wrong and negative judgements, while Chapter Five allowed participants to give 'free-text' responses to justify their moral decision-making.

Finally, one question that remains unanswered is whether the variation in moral judgements displayed by members of the Dark Tetrad translates into moral behaviour. However, due to the ethical implications associated with studying moral decision-making outside of questionnaire methodologies, it is essential that a robust evidence base has been established to justify this.

Theoretical implications

When considering the clinical correlates of Dark Tetrad traits, one would expect instances of immoral behaviour. However, in everyday life there are people who commit transgressions, behave in an immoral manner, and violate social norms. The Dark Tetrad has provided one framework for exploring these issues in the domain of moral decision-making. The current thesis has highlighted that not all Dark Tetrad traits are implicated equally in moral decision-making, suggesting that it depends on the scenario studied and the progressing severity of offences. Furthermore, this thesis provided further support of previous research which suggests that out of all of the Dark Tetrad traits, narcissism is the least 'dark'. However, the overall results of this thesis continue to lend their support to the Dark Tetrad framework.

The primary research study (Chapter Four) highlighted that the implication of disgust on moral judgements may not be as relevant as previous research has first suggested, although this may have been as a result of the poor psychometric properties of the measure used. Instead, Moral Foundations Theory appears to be of more significance and provides an interesting avenue for future moral decision-making and Dark Tetrad research. Finally, moral disengagement was noted to be a significant predictor of moral judgements in Chapter Four, however it only investigated the direct effect of moral disengagement on moral judgements. It was suggested that this may also explain the process by which Dark Tetrad traits are related to moral judgements. Future research may wish to

consider moral disengagement as a mediator in analyses of everyday moral scenarios.

Practical implications

An understanding of the interactions between Dark Tetrad traits and moral decision-making can help further our understanding of why seemingly 'ordinary' people do bad things. Moreover, there will be offenders who do not meet the clinically equivalent threshold of Dark Tetrad traits. Between September 2021 and September 2022, there were 1.6 million theft offences in England and Wales (ONS, 2023), a 'morally grey' scenario in the current thesis. There are clearly significant financial, psychological, emotional implications for victims of this type of crime. Understanding the moral values and mechanisms that may cause desistance or engagement in specific types of offending behaviour are vital for preventing future offences and victims of crime. Furthermore, this could also be of significant assistance in interventions addressing the development of moral reasoning, such as probation interventions intended to reduce reoffending.

To further emphasize this point, there is evidence of MFT utility in a variety of forensic situations. Silver and Silver (2021) used the two-factor model of MFT to investigate whether moral foundations predicted involvement in different types of offending. Individualizing moral foundations were found to inhibit offences which harmed or threatened others, whereas binding foundations inhibited marijuana use (Silver & Silver, 2021). Higher sanctity

foundation scores have also been linked to a reduction in men buying sex (Silver, Pickett, Barnes, Bontrager & Roe-Sepowitz, 2021). Furthermore, Harper and Harris (2016) explored how MFT can be applied to the public's view of sexual offending and offenders, and how that may inform public policy around promoting intervention and rehabilitation. Finally, individualizing moral foundations were found to promote leniency in sentencing decisions (life without parole or death), whereas binding foundations had a more punitive effect (Vaughan, Holleran & Silver, 2018). These studies suggest that further consideration must be given to morality as an inhibitor or motivator of offending, and that MFT is a novel way of investigating this further as it provides information about how different types of moral foundations may affect offending.

Conclusion

This thesis has built upon research on the Dark Tetrad traits and the impact of these traits on moral decision-making, as well as contributed novel insights to this topic. It has highlighted that 'morally grey' scenarios may be a significant area of interest for future research, a distinction which has not been made previously. Furthermore, this thesis has provided evidence that all Dark Tetrad traits are associated with moral judgements, but that their importance varies when considering scenarios at differing levels of severity. Limitations of the current evidence and overall thesis have been discussed, and numerous avenues for future research have been suggested.

References

Ackerman, R. A., Witt, E. A., Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., & Kashy, D. A. (2011). What does the narcissistic personality inventory really measure?. *Assessment*, *18*, 67-87. doi: 10.1177/1073191110382845

Aharoni, E., Antonenko, O., & Kiehl, K. A. (2011). Disparities in the moral intuitions of criminal offenders: The role of psychopathy. *Journal of Research in Personality*, *45*(3), 322-327. doi: 10.1016/j.jrp.2011.02.005

Ali, A. S. A. (2020). Delinquency as predicted by dark triad factors and demographic variables. *International Journal of Adolescence and Youth*, *25*, 661-675. doi: 10.1080/02673843.2020.1711784

Ames, D. R., Rose, P., & Anderson, C. P. (2006). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality*, *40*(4), 440-450. doi: 10.1016/j.jrp.2005.03.002

Amiri, S., & Behnezhad, S. (2017). Emotion recognition and moral utilitarianism in the dark triad of personality. *Neuropsychiatria i Neuropsychologia*, *12*(4), 135-142. doi: 10.5114/nan.2017.74142

Arvan, M. (2013a). Bad news for conservatives? Moral judgments and the Dark Triad personality traits: A correlational study. *Neuroethics*, *6*(2), 307-318. doi: 10.1007/s12152-011-9140-6

Arvan, M. (2013b). A lot more bad news for conservatives, and a little bit of bad news for liberals? Moral judgments and the dark triad personality traits: A follow-up study. *Neuroethics*, *6*(1), 51-64. doi: 10.1007/s12152-012-9155-7

Ashton, M. C., & Lee, K. (2009). The HEXACO–60: A short measure of the major dimensions of personality. *Journal of Personality Assessment*, *91*(4), 340-345. doi: 10.1080/00223890902935878

Ashton, M. C., Lee, K., & De Vries, R. E. (2014). The HEXACO Honesty-Humility, Agreeableness, and Emotionality factors: A review of research and theory. *Personality and Social Psychology Review*, *18*(2), 139-152. doi: 10.1177/1088868314523838

Ashton-James, C. E., & Levordashka, A. (2013). When the wolf wears sheep's clothing: Individual differences in the desire to be liked influence nonconscious behavioral mimicry. *Social Psychological and Personality Science*, *4*(6), 643-648. doi: 10.1177/1948550613476097

Atari, M., & Chegeni, R. (2016). Assessment of dark personalities in Iran: Psychometric evaluation of the Farsi translation of the Short Dark Triad (SD3-F). *Personality and Individual Differences*, *102*, 111-117. doi: 10.1016/j.paid.2016.06.070

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1999). A social cognitive theory of personality. In L. Pervin, & O. John (Eds.). *Handbook of personality* (pp. 154–196). (2nd ed.). New York: Guilford Publications.

Bartels, D.M., & Pizarro, D.A. (2011). The mismeasure of morals: Antisocial personality traits predict utilitarian responses to moral dilemmas. *Cognition*, *121*, 154-161. doi:10.1016/j.cognition.2011.05.010

Baughman, H. M., Dearing, S., Giammarco, E., & Vernon, P. A. (2012). Relationships between bullying behaviours and the Dark Triad: A study with adults. *Personality and Individual Differences*, *52*(5), 571-575. doi: 10.1016/j.paid.2011.11.020

Bauman, C. W., McGraw, A. P., Bartels, D. M., & Warren, C. (2014). Revisiting external validity: Concerns about trolley problems and other sacrificial dilemmas in moral psychology. *Social and Personality Psychology Compass*, *8*(9), 536-554. doi: 10.1111/spc3.12131

Bhattacharyya, J., & Ray, D. (2017). Exploring the moral factor: The influence of locus of control and moral disengagement on moral judgement. *Indian Journal of Positive Psychology*, *8*(3), 291-296.

Blötner, C., Ziegler, M., Wehner, C., Back, M. D., & Grosz, M. P. (2021). The nomological network of the Short Dark Tetrad scale (SD4). *European Journal of Psychological Assessment,* 38(*2*), 187-197. doi: 10.1027/1015-5759/a000655

Bonfá-Araujo, B., Lima-Costa, A. R., Hauck-Filho, N., & Jonason, P. K. (2022). Considering sadism in the shadow of the Dark Triad traits: A meta-analytic review of the Dark Tetrad. *Personality and Individual Differences*, *197*, Article 111767. doi: 10.1016/j.paid.2022.111767

Book, A., Visser, B. A., & Volk, A. A. (2015). Unpacking "evil": Claiming the core of the Dark Triad. *Personality and Individual Differences*, *73*, 29-38. doi: 10.1016/j.paid.2014.09.016

Book, A., Visser, B. A., Blais, J., Hosker-Field, A., Methot-Jones, T., Gauthier, N. Y., Volk, A., Holden, R.R., & D'Agata, M. T. (2016). Unpacking more "evil": What is at the core of the dark tetrad?. *Personality and Individual Differences*, *90*, 269-272. doi: 10.1016/j.paid.2015.11.009

Bostyn, D. H., Sevenhant, S., & Roets, A. (2018). Of mice, men, and trolleys: Hypothetical judgment versus real-life behavior in trolley-style moral dilemmas. *Psychological Science*, *29*(7), 1084-1093. doi: 10.1177/0956797617752640

Bramer, W. M., Rethlefsen, M. L., Kleijnen, J., & Franco, O. H. (2017). Optimal database combinations for literature searches in systematic reviews: a

prospective exploratory study. *Systematic Reviews*, *6*, 1-12. doi: 10.1186/s13643-017-0644-y

Buckels, E. E. (2022). Multifaceted assessment of sadistic tendencies. In P. K. Jonason (Ed.), *Shining light on the dark side of personality: Measurement properties and theoretical advances.* Hogrefe.

Buckels, E., Jones, D. & Paulhus, D. (2013). Behavioral confirmation of everyday sadism. *Psychological Science*, *24*(11), 2201-2209. doi: 10.1177/0956797613490749

Buckels, E. E., Trapnell, P. D., Andjelovic, T., & Paulhus, D. L. (2019). Internet trolling and everyday sadism: Parallel effects on pain perception and moral judgment. *Journal of Personality*, *87*, 328-340. doi:10.1111/jopy.12393

Burtăverde, V., Chraif, M., Aniţei, M., & Mihăilă, T. (2016). The incremental validity of the dark triad in predicting driving aggression. *Accident Analysis & Prevention*, *96*, 1-11. Doi: 10.1016/j.aap.2016.07.027

Cai, H., & Luo, Y. L. (2018). Distinguishing between adaptive and maladaptive narcissism. In *Handbook of trait narcissism* (pp. 97-104). Springer Cham. doi: 10.1007/978-3-319-92171-6

Carre, J. R., & Jones, D. N. (2017). Decision making, morality, and Machiavellianism: The role of dispositional traits in gist extraction. *Review of General Psychology, 21*(1), 23-29. doi: 10.1037/gpr0000093

Castilla-Estévez, D., & Blázquez-Rincón, D. (2021). Age and moral foundations: A meta-analytic approach. *The Spanish Journal of Psychology*, *24,* e41. doi: 10.1017/SJP.2021.35

Carter, G. L., Campbell, A. C., Muncer, S., & Carter, K. A. (2015). A Mokken analysis of the Dark Triad 'Dirty Dozen': Sex and age differences in

scale structures, and issues with individual items. *Personality and Individual Differences*, *83*, 185-191. Doi: 10.1016/j.paid.2015.04.012

Christensen, J. F., & Gomila, A. (2012). Moral dilemmas in cognitive neuroscience of moral decision-making: A principled review. *Neuroscience & Biobehavioral Reviews*, *36*(4), 1249-1264. doi: 10.1016/j.neubiorev.2012.02.008

Christie, R., & Geis, F. (1970). *Studies in Machiavellianism*. New York: Academic.

Clifford, S., & Jerit, J. (2013). How words do the work of politics: Moral foundations theory and the debate over stem cell research. *The Journal of Politics*, *75*(3), 659-671. doi: 10.1017/S0022381613000492

Cohen, T. R., Panter, A. T., Turan, N., Morse, L., & Kim, Y. (2014). Moral character in the workplace. *Journal of Personality and Social Psychology*, *107*(5), 943-963. doi: 10.1037/gpr0000093

Crysel, L. C., Crosier, B. S., & Webster, G. D. (2013). The Dark Triad and risk behavior. *Personality and Individual Differences*, *54*, 35-40. doi: 10.1016/j.paid.2012.07.029

Cushman, F. (2008). Crime and punishment: Distinguishing the roles of causal and intentional analyses in moral judgment. *Cognition*, *108*(2), 353-380. doi: 10.1016/j.cognition.2008.03.006

Czarna, A. Z., Jonason, P. K., Dufner, M., & Kossowska, M. (2016). The Dirty Dozen Scale: Validation of a Polish version and extension of the nomological net. *Frontiers in Psychology*, *7*, 445. doi: 10.3389/fpsyg.2016.00445

Dahling, J. J., Whitaker, B. G., & Levy, P. E. (2009). The development and validation of a new Machiavellianism scale. *Journal of Management*, *35*(2), 219-257. doi: 10.1177/0149206308318618

Dalton, D., & Radtke, R. R. (2013). The joint effects of Machiavellianism and ethical environment on whistle-blowing. *Journal of Business Ethics*, *117*(1), 153-172. doi: 10.1007/s10551-012-1517-x

Detert, J. R., Treviño, L. K., & Sweitzer, V. L. (2008). Moral disengagement in ethical decision making: a study of antecedents and outcomes. *Journal of Applied Psychology*, *93*(2), 374-391. Doi: 10.1037/0021-9010.93.2.374

Dinić, B. M., Milosavljević, M., & Mandarić, J. (2021). Effects of Dark Tetrad traits on utilitarian moral judgement: The role of personal involvement and familiarity with the victim. *Asian Journal of Social Psychology*, *24*(1), 48-58. doi: 10.1111/ajsp.12422

Dinić, B. M., Petrović, B., & Jonason, P. K. (2018). Serbian adaptations of the Dark Triad Dirty Dozen (DTDD) and Short Dark Triad (SD3). *Personality and Individual Differences*, *134*, 321-328. Doi: 10.1016/j.paid.2018.06.018

Djeriouat, H., & Trémolière, B. (2014). The Dark Triad of personality and utilitarian moral judgment: The mediating role of Honesty/Humility and Harm/Care. *Personality and Individual Differences*, *67*, 11-16. Doi: 10.1016/j.paid.2013.12.026

Doğruyol, B., Alper, S., & Yilmaz, O. (2019). The five-factor model of the moral foundations theory is stable across WEIRD and non-WEIRD cultures. *Personality and Individual Differences*, *151*, Article 109547. Doi: 10.1016/j.paid.2019.109547

Downes, M. J., Brennan, M. L., Williams, H. C., & Dean, R. S. (2016). Development of a critical appraisal tool to assess the quality of cross-sectional studies (AXIS). *BMJ open*, *6*(12), e011458. doi: 10.1136/bmjopen-2016-011458

Dragostinov, Y. & Mõttus, R. (2021). *Test-retest reliability and construct validity of the brief Dark Triad measurements.* Unpublished manuscript,

Department of Psychology, University of Edinburgh, Edinburgh, United Kingdom.

Egan, V., Chan, S., & Shorter, G. W. (2014). The Dark Triad, happiness and subjective well-being. *Personality and Individual Differences*, *67*, 17-22. Doi: 10.1016/j.paid.2014.01.004

Egan, V., Hughes, N., & Palmer, E. J. (2015). Moral disengagement, the dark triad, and unethical consumer attitudes. *Personality and Individual Differences*, *76*, 123-128. Doi: 10.1016/j.paid.2014.11.054

Ellemers, N., Van Der Toorn, J., Paunov, Y., & Van Leeuwen, T. (2019). The psychology of morality: A review and analysis of empirical studies published from 1940 through 2017. *Personality and Social Psychology Review*, *23*(4), 332-366. Doi: 10.1177/1088868318811759

Erzi, S. (2020). Dark Triad and schadenfreude: Mediating role of moral disengagement and relational aggression. *Personality and Individual Differences*, *157*, 109827. Doi: 10.1016/j.paid.2020.109827

Everett, J. A., & Kahane, G. (2020). Switching tracks? Towards a multidimensional model of utilitarian psychology. *Trends in Cognitive Sciences*, *24*(2), 124-134. doi: 10.1016/j.tics.2019.11.012

Feinberg, M., Willer, R., Antonenko, O., & John, O. P. (2012). Liberating reason from the passions: Overriding intuitionist moral judgments through emotion reappraisal. *Psychological Science*, *23*(7), 788- 795. Doi: 10.1177/0956797611434747

Frimer, J. A. (2020). Do liberals and conservatives use different moral languages? Two replications and six extensions of Graham, Haidt, and Nosek's (2009) moral text analysis. *Journal of Research in Personality*, *84*, Article 103906. Doi: 10.1016/j.jrp.2019.103906

Frimer, J. A., Biesanz, J. C., Walker, L. J., & MacKinlay, C. W. (2013). Liberals and conservatives rely on common moral foundations when making moral judgments about influential people. *Journal of Personality and Social Psychology*, *104*(6), 1040-1059. Doi: 10.1037/a0032277

Frimer, J. A., Boghrati, R., Haidt, J., Graham, J., & Dehgani, M. (2019). Moral Foundations Dictionary for Linguistic Analyses 2.0. Unpublished manuscript.

Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The Dark Triad of personality: A 10 year review. *Social and Personality Psychology Compass*, *7*(3), 199-216. Doi: 10.1111/spc3.12018

Gajda, A., Moroń, M., Królik, M., Małuch, M., & Mraczek, M. (2022). The Dark Tetrad, cybervictimization, and cyberbullying: The role of moral disengagement. *Current Psychology*, 1-9. Doi: 10.1007/s12144-022-03456-6

Garcia, D., & Rosenberg, P. (2016). The dark cube: dark and light character profiles. *PeerJ*, 4, e1675. Doi: 10.7717/peerj.1675

Garrigan, B., Adlam, A. L., & Langdon, P. E. (2018). Moral decision-making and moral development: Toward an integrative framework. *Developmental Review*, 49, 80-100. doi: 10.1016/j.dr.2018.06.001

Gawronski, B., & Beer, J. S. (2017). What makes moral dilemma judgments "utilitarian" or "deontological"?. *Social Neuroscience*, *12*(6), 626-632. doi: 10.1080/17470919.2016.1248787

Glenn, A. L., Iyer, R., Graham, J., Koleva, S., & Haidt, J. (2009). Are all types of morality compromised in psychopathy?. *Journal of Personality Disorders*, *23*(4), 384–398. Doi: 10.1521/pedi.2009.23.4.384

Glenn, A. L., & Sellbom, M. (2015). Theoretical and empirical concerns regarding the dark triad as a construct. *Journal of Personality Disorders*, *29*(3), 360-377. Doi: 10.1521/pedi_2014_28_162

Gibb, Z. G., & Devereux, P. G. (2014). Who does that anyway? Predictors and personality correlates of cyberbullying in college. *Computers in Human Behavior*, *38*, 8-16. Doi: 10.1016/j.chb.2014.05.009

Graham, J., Haidt, J., Koleva, S., Motyl, M., Iyer, R., Wojcik, S. P., & Ditto, P. H. (2013). Moral foundations theory: The pragmatic validity of moral pluralism. In *Advances in Experimental Social Psychology* (Vol. 47, pp. 55-130). Academic Press.

Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, *96*(5), 1029-1046. Doi: 10.1037/a0015141

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, *101*(2), 366-385. Doi: 10.1037/a0021847

Green, S. B. (1991). How many subjects does it take to do a regression analysis. *Multivariate Behavioral Research*, *26*(3), 499-510. doi: 10.1207/s15327906mbr2603_7

Greene, J., & Haidt, J. (2002). How (and where) does moral judgment work?. *Trends in Cognitive Sciences*, *6*(12), 517-523. doi:10.1016/S1364-6613(02)02011-9

Greene, J. D., Nystrom, L. E., Engell, A. D., Darley, J. M., & Cohen, J. D. (2004). The neural bases of cognitive conflict and control in moral judgment. *Neuron*, *44*(2), 389-400. doi: 10.1016/j.neuron.2004.09.027

Greene, J. D., Sommerville, R. B., Nystrom, L. E., Darley, J. M., & Cohen, J. D. (2001). An fMRI investigation of emotional engagement in moral judgment. *Science*, *293*(5537), 2105-2108. doi: 10.1126/science.106287

Haidt, J. (2001). The emotional dog and its rational tail: a social intuitionist approach to moral judgment. *Psychological Review*, *108*(4), 814-834. doi: 10.1037/0033-295X.108.4.814

Haidt, J., & Graham, J. (2007). When morality opposes justice: Conservatives have moral intuitions that liberals may not recognize. *Social Justice Research*, *20*(1), 98-116. doi: 10.1007/s11211-007-0034-z

Haidt, J., & Joseph, C. (2004). Intuitive ethics: How innately prepared intuitions generate culturally variable virtues. *Daedalus*, *133*(4), 55-66. doi: 10.1162/0011526042365555

Haidt, J., McCauley, C., & Rozin, P. (1994). Individual differences in sensitivity to disgust: A scale sampling seven domains of disgust elicitors. *Personality and Individual Differences*, *16*(5), 701-713. doi: 10.1016/0191-8869(94)90212-7

Halm, P., & Möhring, J. (2019). The Dark Triad and moral Decision-Making at the workplace. [Unpublished Master's Thesis]. Linnaeus University.

Ham, J., & van den Bos, K. (2010). On unconscious morality: The effects of unconscious thinking on moral decision making. *Social Cognition*, *28*, 74-83. doi: 10.1521/soco.2010.28.1.74

Hare, R. (2003). *Hare psychopathy checklist — Revised* (2nd Ed.). Toronto: Multi-Health Systems.

Harper, C. A., & Harris, A. J. (2016). Applying moral foundations theory to understanding public views of sexual offending. *Journal of Sexual Aggression*, *23*(2), 111-123. doi:10.1080/13552600.2016.1217086

Harrison, A., Summers, J., & Mennecke, B. (2016). The effects of the dark triad on unethical behavior. *Journal of Business Ethics*, *153,* 53-77. doi: 10.1007/s10551-016-3368-3

Helm, F., de Roos, M.S. & Jones, D.N. (2017). *Differential Offending as Predicted by the Dark Triad in an Iranian Sample.* Unpublished manuscript.

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weird-est people in the world? *Behavioral & Brain Sciences*, *33*(2-3), 61–83. doi: 10.1017/S0140525X0999152X

Hepper, E. G., Hart, C. M., & Sedikides, C. (2014). Moving Narcissus: Can narcissists be empathic?. *Personality and Social Psychology Bulletin*, *40*(9), 1079-1091. doi: 10.1177/0146167214535812

Heym, N., Firth, J., Kibowski, F., Sumich, A., Egan, V., & Bloxsom, C. A. (2019). Empathy at the heart of darkness: Empathy deficits that bind the dark triad and those that mediate indirect relational aggression. *Frontiers In Psychiatry*, *10*, 95. doi: 10.3389/fpsyt.2019.00095

Hilbig, B. E., Moshagen, M., & Zettler, I. (2015). Truth will out: Linking personality, morality, and honesty through indirect questioning. *Social Psychological and Personality Science*, *6*(2), 140-147. doi: 10.1177/1948550614553640

Hirschberg, J., & Manning, C. D. (2015). Advances in natural language processing. *Science*, *349*(6245), 261-266. doi: 10.1126/science.aaa8685

Hoff, E. (2006). How social contexts support and shape language development. *Developmental Review*, *26*, 55-88. doi: 10.1016/j.dr.2005.11.002

Holtzman, N. S., Tackman, A. M., Carey, A. L., Brucks, M. S., Küfner, A. C., Deters, F. G., Back, M.D. Donnellan, M.B., Pennebaker, J.W., Sherman, R.A. & Mehl, M. R. (2019). Linguistic markers of grandiose narcissism: A

LIWC analysis of 15 samples. *Journal of Language and Social Psychology*, *38*(5-6), 773-786. doi: 10.1177/0261927x19871084

Howard, M. C., & Van Zandt, E. C. (2020). The discriminant validity of honesty-humility: A meta-analysis of the HEXACO, Big Five, and Dark Triad. *Journal of Research in Personality*, *87*, 103982. doi: 10.1016/j.jrp.2020.103982

Iurino, K., & Saucier, G. (2020). Testing measurement invariance of the Moral Foundations Questionnaire across 27 countries. *Assessment*, *27*(2), 365-372. doi:10.1177/1073191118817916

Jacobwitz, S., & Egan, V. (2006). The dark triad and normal personality traits. *Personality and Individual Differences*, *40*, 331–339. doi: 10.1016/j.paid.2005.07.006

Jonason, P. K., & Webster, G. D. (2010). The dirty dozen: a concise measure of the dark triad. *Psychological Assessment*, *22*(2), 420-432. doi: 10.1037/a0019265

Jonason, P. K., Foster, J. D., Kavanagh, P. S., Gouveia, V. V., & Birkás, B. (2018). Basic values and the dark triad traits. *Journal of Individual Differences*, *39*, 220-228. doi: 10.1027/1614-0001/a000267

Jonason, P. K., Li, N. P., Webster, G. D., & Schmitt, D. P. (2009). The dark triad: Facilitating a short-term mating strategy in men. *European Journal of Personality*, *23*, 5-18. doi: 10.1002/per.698

Jones, D. N., & Figueredo, A. J. (2013). The core of darkness: Uncovering the heart of the Dark Triad. *European Journal of Personality*, *27*(6), 521-531. doi: 10.1002/per.1893

Jones, A., & Fitness, J. (2008). Moral hypervigilance: the influence of disgust sensitivity in the moral domain. *Emotion*, *8*(5), 613-627. doi: 10.1037/a0013435

Jones, D. N., & Paulhus, D. L. (2009). Machiavellianism. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior* (pp. 93–108). The Guilford Press.

Jones, D. N., & Paulhus, D. L. (2011). The role of impulsivity in the Dark Triad of personality. *Personality and Individual Differences*, *51*(5), 679-682. doi: 10.1016/j.paid.2011.04.011

Jones, D. N., & Paulhus, D. L. (2014). Introducing the short dark triad (SD3): A brief measure of dark personality traits. *Assessment*, *21*, 28-41. doi: 10.1177/1073191113514105

Jones, D. N., & Paulhus, D. L. (2017). Duplicity among the dark triad: Three faces of deceit. *Journal of Personality and Social Psychology*, *113*(2), 329-342. doi: 10.1037/pspp0000139

Kahane, G. (2015). Sidetracked by trolleys: Why sacrificial moral dilemmas tell us little (or nothing) about utilitarian judgment. *Social Neuroscience*, *10*(5), 551-560. doi: 10.1080/17470919.2015.1023400

Karandikar, S., Kapoor, H., Fernandes, S., & Jonason, P. K. (2019). Predicting moral decision-making with dark personalities and moral values. *Personality and Individual Differences*, *140*, 70-75. doi: 10.1016/j.paid.2018.03.048

Killer, B., Bussey, K., Hawes, D. J., & Hunt, C. (2019). A meta-analysis of the relationship between moral disengagement and bullying roles in youth. *Aggressive Behavior*, *45*(4), 450-462. doi: 10.1002/ab.21833

Kircaburun, K., Jonason, P. K., & Griffiths, M. D. (2018). The Dark Tetrad traits and problematic social media use: The mediating role of cyberbullying and cyberstalking. *Personality and Individual Differences*, *135*, 264–269. doi: 10.1016/j.paid.2018.07.034

Kivikangas, J. M., Fernández-Castilla, B., Järvelä, S., Ravaja, N., & Lönnqvist, J. E. (2021). Moral foundations and political orientation: Systematic review and meta-analysis. *Psychological Bulletin*, *147*(1), 55-94. doi: 10.1037/bul0000308

Kline, P. (2013). *Handbook of Psychological Testing.* Taylor and Francis.

Koenigs, M., Kruepke, M., Zeier, J., & Newman, J. P. (2012). Utilitarian moral judgment in psychopathy. *Social Cognitive and Affective Neuroscience*, *7*(6), 708-714. doi: 10.1093/scan/nsr048

Kohlberg, L. (1969). Stage and sequence: The cognitive-developmental approach to socialization. In D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 151-235). New York: Academic Press.

Koleva, S. P., Graham, J., Iyer, R., Ditto, P. H., & Haidt, J. (2012). Tracing the threads: How five moral concerns (especially Purity) help explain culture war attitudes. *Journal of Research in Personality*, *46*(2), 184-194. doi: 10.1016/j.jrp.2012.01.006

Kowalski, C. M., Rogoza, R., Saklofske, D. H., & Schermer, J. A. (2021). Dark triads, tetrads, tents, and cores: Why navigate (research) the jungle of dark personality models without a compass (criterion)?. *Acta Psychologica*, *221*, 103455. doi: 10.1016/j.actpsy.2021.103455

Landy, J. F., & Piazza, J. (2019). Reevaluating moral disgust: sensitivity to many affective states predicts extremity in many evaluative judgments. *Social Psychological and Personality Science*, *10*(2), 211-219. doi: 10.1177/1948550617736110

Lee, K., & Ashton, M. C. (2004). Psychometric properties of the HEXACO personality inventory. *Multivariate Behavioral Research*, *39*(2), 329-358. doi: 10.1207/s15327906mbr3902_8

Lee, K., & Ashton, M. C. (2014). The dark triad, the big five, and the HEXACO model. *Personality and Individual Differences*, *67*, 2-5. doi: 10.1016/j.paid.2014.01.048

Liu, H., Chiang, J. T. J., Fehr, R., Xu, M., & Wang, S. (2017). How do leaders react when treated unfairly? Leader narcissism and self-interested behavior in response to unfair treatment. *Journal of Applied Psychology*, *102*(11), 1590-1599. doi: 10.1037/apl0000237

Liu, Y., Zhou, B., Ouyang, Y., Yang, B., & Xie, Q. (2023). Development and validation of Chinese form Short Dark Tetrad (C-SD4). *Heliyon*, e12929. doi: 10.1016/j.heliyon.2023.e12929

Lovett, B. J., Jordan, A. H., & Wiltermuth, S. S. (2012). Individual differences in the moralization of everyday life. *Ethics & Behavior*, *22*(4), 248-257. doi: 10.1080/10508422.2012.659132

Luo, Y., Shen, W., Zhang, Y., Feng, T. Y., Huang, H., & Li, H. (2013). Core disgust and moral disgust are related to distinct spatiotemporal patterns of neural processing: An event-related potential study. *Biological Psychology*, *94*(2), 242-248. doi: 10.1016/j.biopsycho.2013.06.005

Malesza, M., Ostaszewski, P., Büchner, S., & Kaczmarek, M. C. (2019). The adaptation of the Short Dark Triad personality measure–psychometric properties of a German sample. *Current Psychology*, *38*(3), 855-864. doi: 10.1007/s12144-017-9662-0

Maples, J. L., Lamkin, J., & Miller, J. D. (2014). A test of two brief measures of the dark triad: The dirty dozen and short dark triad. *Psychological Assessment*, *26*, 326-331. doi: 10.1037/a0035084

March, E., Grieve, R., Marrington, J., & Jonason, P. K. (2017). Trolling on Tinder®(and other dating apps): Examining the role of the Dark Tetrad and impulsivity. *Personality and Individual Differences*, *110*, 139-143. doi: 10.1016/j.paid.2017.01.025

Marshall, J., Watts, A. L., & Lilienfeld, S. O. (2018). Do psychopathic individuals possess a misaligned moral compass? A meta-analytic examination of psychopathy's relations with moral judgment. *Personality Disorders: Theory, Research, and Treatment*, *9*, 40-50. doi: 10.1037/per0000226

Martin, S. R., Kish-Gephart, J. J., & Detert, J. R. (2014). Blind forces: Ethical infrastructures and moral disengagement in organizations. *Organizational Psychology Review*, *4*(4), 295-325. doi: 10.1177/2041386613518576

McCrae, R. R., & Costa, P. T. Jr, (1997). Personality trait structure as a human universal. *American Psychologist*, *52*(5), 509–516. doi:10.1037/0003-066X.52.5.509.

McGuire, J., Langdon, R., Coltheart, M., & Mackenzie, C. (2009). A reanalysis of the personal/impersonal distinction in moral psychology research. *Journal of Experimental Social Psychology*, *45*(3), 577-580. doi: 10.1016/j.jesp.2009.01.002

Međedović, J., & Petrović, B. (2016). Can there be an immoral morality?: Dark personality traits as predictors of Moral foundations. *Psihologija*, *49*(2), 185-197. doi: 10.2298/PSI1602185M

Meng, X., Li, C., Liu, D., & Xu, Y. (2022). The super-short Dark Tetrad: Development and validation within the Chinese context. *Personality and Individual Differences*, *188*, 111459. doi: 10.1016/j.paid.2021.111459

Meere, M., & Egan, V. (2017). Everyday sadism, the dark triad, personality, and disgust sensitivity. *Personality and Individual Differences*, *112*, 157-161. doi: 10.1016/j.paid.2017.02.056

Miller, J. D., Few, L. R., Seibert, L. A., Watts, A., Zeichner, A., & Lynam, D. R. (2012). An examination of the Dirty Dozen measure of psychopathy: A

cautionary tale about the costs of brief measures. *Psychological Assessment*, *24*(4), 1048-1053. doi: 10.1037/a0028583

Mokkink, L. B., Terwee, C. B., Patrick, D. L., Alonso, J., Stratford, P. W., Knol, D. L., Bouter, L. M., & de Vet, H. C. W. (2010). The COSMIN study reached international consensus on taxonomy, terminology, and definitions of measurement properties for health-related patient-reported outcomes. *Journal of Clinical Epidemiology*, *63*(7), 737-745. doi: 10.1016/j.jclinepi.2010.02.006

Moor, L., & Anderson, J. R. (2019). A systematic literature review of the relationship between dark personality traits and antisocial online behaviours. *Personality and Individual Differences*, 144, 40-55. doi: 10.1016/j.paid.2019.02.027

Moore, C. (2015). Moral disengagement. *Current Opinion in Psychology*, *6*, 199-204. doi: 10.1016/j.copsyc.2015.07.018

Moore, C., Detert, J. R., Klebe Treviño, L., Baker, V. L., & Mayer, D. M. (2012). Why employees do bad things: Moral disengagement and unethical organizational behavior. *Personnel psychology*, *65*, 1-48. doi: 10.1111/j.1744-6570.2011.01237.x

Moore, K. E., Ross, S. R., & Brosius, E. C. (2020). The role of gender in the relations among dark triad and psychopathy, sociosexuality, and moral judgments. *Personality and Individual Differences*, *152*, 109577. doi: 10.1016/j.paid.2019.109577

Moshagen, M., Zettler, I., Horsten, L. K., & Hilbig, B. E. (2020). Agreeableness and the common core of dark traits are functionally different constructs. *Journal of Research in Personality*, *87*, 103986. doi: 10.1016/j.jrp.2020.103986

Muris, P., Merckelbach, H., Otgaar, H., & Meijer, E. (2017). The malevolent side of human nature: A meta-analysis and critical review of the literature on

the dark triad (narcissism, Machiavellianism, and psychopathy). *Perspectives on Psychological Science*, *12*(2), 183-204. doi: 10.1177/1745691616666070

Napier, J. L., & Luguri, J. B. (2013). Moral mind-sets: Abstract thinking increases a preference for "individualizing" over "binding" moral foundations. *Social Psychological and Personality Science*, *4*(6), 754-759. doi: 10.1177/1948550612473783

Newman, A., Le, H., North-Samardzic, A., & Cohen, M. (2020). Moral disengagement at work: A review and research agenda. *Journal of Business Ethics*, *167*(3), 535-570. doi: 10.1007/s10551-019-04173-0

O'Boyle, E.H., Forsyth, D. R., Banks, G. C., & McDaniel, M. A. (2012). A meta-analysis of the Dark Triad and work behavior: A social exchange perspective. *Journal of Applied Psychology*, *97*(3), 557-579. doi: 10.1037/a0025679

O'Fallon, M. J., & Butterfield, K. D. (2005). A review of the empirical ethical decision-making literature: 1996–2003. *Journal of Business Ethics*, *59*(4), 375-413. doi: 10.1007/978-94-007-4126-3_11

Office for National Statistics (2023). *Crime in England and Wales: year ending September 2022*. https://www.ons.gov.uk/peoplepopulationandcommunity/crimeandjustice/bulletins/crimeinenglandandwales/yearendingseptember2022#homicide

Ogunfowora, B. and Bourdage, J. S. (2014). Does honesty–humility influence evaluations of leadership emergence? The mediating role of moral disengagement. *Personality and Individual Differences*, *56*, 95–99. doi: 10.1016/j.paid.2013.08.026

O'Meara, A., Davies, J., & Hammond, S. (2011). The psychometric properties and utility of the Short Sadistic Impulse Scale (SSIS). Psychological Assessment, 23(2), 523-531. doi: 10.1037/a0022400

Olatunji, B. O., Puncochar, B., & Cox, R. (2016). Effects of experienced disgust on morally-relevant judgments. *PloS one*, *11*(8), e0160357. doi: 10.1371/journal.pone.0160357

Olatunji, B. O., David, B., & Ciesielski, B. G. (2012). Who am I to judge? Self-disgust predicts less punishment of severe transgressions. *Emotion, 12,* 169-173. doi: 10.1037/a0024074

Olatunji, B. O., Williams, N. L., Tolin, D. F., Abramowitz, J. S., Sawchuk, C. N., Lohr, J. M., & Elwood, L. S. (2007). The Disgust Scale: item analysis, factor structure, and suggestions for refinement. *Psychological Assessment*, *19*(3), 281-297. doi: 10.1037/1040-3590.19.3.281

O'Meara, A., Davies, J., & Hammond, S. (2011). The psychometric properties and utility of the Short Sadistic Impulse Scale (SSIS). *Psychological Assessment*, *23*(2), 523-531. doi: 10.1037/a0022400

Özsoy, E., Rauthmann, J. F., Jonason, P. K., & Ardıç, K. (2017). Reliability and validity of the Turkish versions of dark triad dirty dozen (DTDD-T), short dark triad (SD3-T), and single item narcissism scale (SINS-T). *Personality and Individual Differences*, *117*, 11-14. doi: 10.1016/j.paid.2017.05.019

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J., Akl, E., Brennan, S., Chou, R., Glanville, J., Grimshaw, J., Hróbjartsson, A., Lalu, M., Li, T., Loder, E., Mayo-Wilson, E., McDonald, S., McGuinness, L., Stewart, L., Thomas, J., Tricco, A., Welch, V., Whiting, P. & Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *Systematic Reviews*, *10*, 1-11. doi: 10.1186/s13643-021-01626-4

Palmer, E. J. (2003). An overview of the relationship between moral reasoning and offending. *Australian Psychologist*, *38*(3), 165-174. doi: 10.1080/00050060310001707177

Park, G., Schwartz, H. A., Eichstaedt, J. C., Kern, M. L., Kosinski, M., Stillwell, D. J., Ungar, L. & Seligman, M. E. (2015). Automatic personality assessment through social media language. *Journal of Personality and Social Psychology*, *108*(6), 934-952. doi: 10.1037/pspp0000020

Patrick, C.J. (2010). *Operationalising the Triarchic Conceptualisation of Psychopathy: Preliminary Description of Brief Scales for Assessment of Boldness, Meanness and Disinhibition.* Unpublished Manual.

Paulhus, D. L. (1998). *Paulhus Deception Scales: Manual of the Balanced Inventory of Desirable Responding (BIDR-7)*. Toronto, Canada: Multi-Health Systems.

Paulhus, D. L. (2014). Toward a taxonomy of dark personalities. *Current Directions in Psychological Science*, *23*(6), 421-426. doi: 10.1177/0963721414547737

Paulhus, D. L., Buckels, E. E., Trapnell, P. D., & Jones, D. N. (2021). Screening for dark personalities: The Short Dark Tetrad (SD4). *European Journal of Psychological Assessment*, *37*(3), 208-222. doi: 10.1027/1015-5759/a000602

Paulhus, D. L., Neumann, C. S., & Hare, R. D. (2009). *Manual for the Hare Self-Report Psychopathy Scale*. Toronto, Ontario, Canada: Multi-Health Systems.

Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of Research in Personality*, *36*(6), 556-563. doi: 10.1016/S0092-6566(02)00505-6

Pechorro, P., Caramelo, V., Oliveira, J. P., Nunes, C., Curtis, S. R., & Jones, D. N. (2019). The Short Dark Triad (SD3): Adaptation and psychometrics among at-risk male and female youths. *Deviant Behavior*, *40*(3), 273-286. doi: 10.1080/01639625.2017.1421120

Pechorro, P., Karandikar, S., Carvalho, B., DeLisi, M., & Jones, D. N. (2023). Screening for dark personalities in Portugal: Intra-and interpersonal correlates, reliability and invariance of the Short Dark Tetrad Portuguese version. *Deviant Behavior, 44*(4), 551-566. doi: 10.1080/01639625.2022.2071655

Pennebaker, J.W., Boyd, R.L., Jordan, K., & Blackburn, K. (2015). *The development and psychometric properties of LIWC2015*. Austin, TX: University of Texas at Austin.

Persson, B. N., Kajonius, P. J., & Garcia, D. (2019). Revisiting the structure of the Short Dark Triad. *Assessment*, *26*, 3-16. doi: 10.1177/1073191117701192

Pina, A., Holland, J., & James, M. (2017). The malevolent side of revenge porn proclivity: Dark personality traits and sexist ideology. *International Journal of Technoethics*, *8*, 30-43. doi: 10.4018/IJT.2017010103

Pineda, D., Sandín, B., & Muris, P. (2020). Psychometrics properties of the Spanish version of two dark triad scales: the dirty dozen and the short dark triad. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, *39*(5), 1873-1881. doi: 10.1007/s12144-018-9888-5

Raskin, R. N., & Hall, C. S. (1979). A narcissistic personality inventory. *Psychological Reports*, *45*(2), 590. doi: 10.2466/pr0.1979.45.2.590

Raskin, R., & Terry, H. (1988). A principal components analysis of the Narcissistic Personality Inventory and further evidence of its construct validity. *Journal of Personality and Social Psychology*, *54*, 890–902. doi: 10.1037/0022-3514.54.5.890

Rauthmann, J. F., & Kolar, G. P. (2012). How "dark" are the Dark Triad traits? Examining the perceived darkness of narcissism, Machiavellianism, and

psychopathy. *Personality and Individual Differences*, *53*(7), 884-889. doi: 10.1016/j.paid.2012.06.020

Rauthmann, J. F., & Will, T. (2011). Proposing a multidimensional Machiavellianism conceptualization. *Social Behavior and Personality*: *An International Journal*, *39*(3), 391-403. doi: 10.2224/sbp.2011.39.3.391

Rhodewalt, F., & Peterson, B. (2009). Narcissism. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior* (pp. 547–560). The Guilford Press.

Rogoza, R., & Cieciuch, J. (2019). Structural investigation of the Short Dark Triad Questionnaire in Polish population. *Current Psychology: A Journal for Diverse Perspectives on Diverse Psychological Issues*, *38*(3), 756–763. doi: 10.1007/s12144-017-9653-1

Romeral, L., Fernández, J., & Fraguela, J. A. (2018). Moral reasoning in adolescent offenders: a meta-analytic review. *Psicothema, 30*(3), 289-294. doi: 10.7334/psicothema2017.378

Rožić, A., Švegar, D., & Kardum, I. (2018). The effects of Dark Triad personality traits and emotional empathy on moral judgment. *Psychological Topics*, *27*(3), 561-583. doi: 10.31820/pt.27.3.11

Rozin, P., Haidt, J., & McCauley, C.R. (2000). Disgust. In M. Lewis & J.M. Haviland-Jones Eds.), *Handbook of emotions* (2nd ed., pp. 637- 653). New York: Guilford Press.

Schlaefli, A., Rest, J. R., & Thoma, S. J. (1985). Does moral education improve moral judgment? A meta-analysis of intervention studies using the Defining Issues Test. *Review of Educational Research*, *55*(3), 319-352. doi: 10.3102/00346543055003319

Sherman, E. D., Miller, J. D., Few, L. R., Campbell, W. K., Widiger, T. A., Crego, C., & Lynam, D. R. (2015). Development of a short form of the five-factor

narcissism inventory: the FFNI-SF. *Psychological Assessment*, *27*(3), 1110-1116. doi: 10.1037/pas0000100

Siddiqi, N., Shahnawaz, M. G., & Nasir, S. (2020). Reexamining construct validity of the Short Dark Triad (SD3) scale. *Current Issues in Personality Psychology*, *8*, 18-30. doi: 10.5114/cipp.2020.94055

Silver, J. R., Pickett, J. T., Barnes, J. C., Bontrager, S. R., & Roe-Sepowitz, D. E. (2022). Why Men (Don't) Buy Sex: Purity moralization and perceived harm as constraints on prostitution offending. *Sexual Abuse*, *34*(2), 180-206. doi: 10.1177/10790632211002859

Silver, J. R., & Silver, E. (2021). The nature and role of morality in offending: A moral foundations approach. *Journal of Research in Crime and Delinquency*, *58*(3), 343-380. doi: 10.1177/0022427820960201

Smoker, M., & March, E. (2017). Predicting perpetration of intimate partner cyberstalking: Gender and the Dark Tetrad. *Computers in Human Behavior*, *72*, 390-396. doi: 10.1016/j.chb.2017.03.012

Somma, A., Paulhus, D. L., Borroni, S., & Fossati, A. (2019). Evaluating the psychometric properties of the Short Dark Triad (SD3) in Italian adults and adolescents. *European Journal of Psychological Assessment, 36*, 185–195. doi: 10.1027/1015-5759/a000499

Stead, R., & Fekken, G. C. (2014). Agreeableness at the Core of the Dark Triad of Personality. *Individual Differences Research*, *12*(4), 131-141.

Sumner, C., Byers, A., Boochever, R., & Park, G. J. (2012). Predicting dark triad personality traits from twitter usage and a linguistic analysis of tweets. *Proceedings of the 2012 11th international conference on machine learning and applications, 2,* 386-393. doi: 10.1109/ICMLA.2012.218

Tamul, D., Elson, M., Ivory, J. D., Hotter, J. C., Lanier, M., Wolf, J., & Martinez-Carrillo, N. I. (2020). Moral foundations' methodological foundations: A systematic analysis of reliability in research using the moral foundations questionnaire. *PsyArXiv Preprints.* doi: 10.31234/osf.io/shcgv

Tausczik, Y. R., & Pennebaker, J. W. (2010). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology*, *29*(1), 24-54. doi: 10.1177/0261927X09351676

Timmons, S., & Byrne, R. M. (2019). Moral fatigue: The effects of cognitive fatigue on moral reasoning. *Quarterly Journal of Experimental Psychology*, *72*(4), 943-954. doi: 10.1177/1747021818772045

Trahair, C., Baran, L., Flakus, M., Kowalski, C. M., & Rogoza, R. (2020). The structure of the Dark Triad traits: A network analysis. *Personality and Individual Differences*, *167*, 110265. doi: 10.1016/j.paid.2020.110265

Trémolière, B., & Djeriouat, H. (2016). The sadistic trait predicts minimization of intention and causal responsibility in moral judgment. *Cognition*, *146*, 158-171. doi: 10.1016/j.cognition.2015.09.014

Tybur, J. M., Lieberman, D., & Griskevicius, V. (2009). Microbes, mating, and morality: individual differences in three functional domains of disgust. *Journal of Personality and Social Psychology*, *97*(1), 103-122. doi: 10.1037/a0015474

Tybur, J. M., & de Vries, R. E. (2013). Disgust sensitivity and the HEXACO model of personality. *Personality and Individual Differences*, *55*(6), 660-665. doi: 10.1016/j.paid.2013.05.008

Van Geel, M., Goemans, A., Toprak, F., & Vedder, P. (2017). Which personality traits are related to traditional bullying and cyberbullying? A study with the Big Five, Dark Triad and sadism. *Personality and Individual Differences*, *106*, 231-235. doi: 10.1016/j.paid.2016.10.063

Van Leeuwen, F., Dukes, A., Tybur, J. M., & Park, J. H. (2017). Disgust sensitivity relates to moral foundations independent of political ideology. *Evolutionary Behavioral Sciences*, *11*(1), 92-98. doi: 10.1037/ebs0000075

Van Voorhis, C. W., & Morgan, B. L. (2007). Understanding power and rules of thumb for determining sample sizes. *Tutorials in Quantitative Methods for Psychology*, *3*(2), 43-50. doi: 10.20982/tqmp.03.2.p043

Vaughan, T. J., Bell Holleran, L., & Silver, J. R. (2019). Applying moral foundations theory to the explanation of capital jurors' sentencing decisions. *Justice Quarterly*, *36*(7), 1176-1205. doi: 10.1080/07418825.2018.1537400

Vaughan, R., Madigan, D. J., Carter, G. L., & Nicholls, A. R. (2019). The Dark Triad in male and female athletes and non-athletes: Group differences and psychometric properties of the Short Dark Triad (SD3). *Psychology of Sport and Exercise*, *43*, 64-72. doi: 10.1016/j.psychsport.2019.01.002

Vedel, A., & Thomsen, D. K. (2017). The Dark Triad across academic majors. *Personality and Individual Differences*, *116*, 86-91. doi:10.1016/j.paid.2017.04.030

Vize, C. E., Lynam, D. R., Collison, K. L., & Miller, J. D. (2018). Differences among dark triad components: A meta-analytic investigation. *Personality Disorders: Theory, Research, and Treatment, 9*(2), 101–111. doi: 10.1037/per0000222

Wagemans, F. M. A., Brandt, M. J., & Zeelenberg, M. (2017). Disgust sensitivity is primarily associated with purity-based moral judgments. *Emotion, 18*(2), 277-289. doi: 10.1037/emo0000359

Wendell, D. G., & Tatalovich, R. (2021). Classifying public policies with moral foundations theory. *Policy Sciences*, *54*(1), 155-182. doi: 10.1007/s11077-020-09399-8

Wheeler, M. A., McGrath, M. J., & Haslam, N. (2019). Twentieth century morality: The rise and fall of moral concepts from 1900 to 2007. *PloS one*, *14*(2), e0212267. doi: 10.1371/journal.pone.0212267

Williams, K. M., Paulhus, D. L., & Hare, R. D. (2007). Capturing the four-factor structure of psychopathy in college students via self- report. *Journal of Personality Assessment*, *88*, 205-219. doi: 10.1080/00223890701268074

Wrenn, K. H. (2020). *Dark Tetrad Responses to Moral Dilemmas*. [Unpublished Doctoral dissertation]. University of Nevada.

Zamora, J., Ungson, N. D., & Seidman, G. (2022). The end justifies the me: Self-interest moderates the relationship between Dark Triad traits and utilitarian moral decisions. *Personality and Individual Differences*, *184*, 111134. doi: 10.1016/j.paid.2021.111134

Zhang, J., Ziegler, M., & Paulhus, D. L. (2020). Development and evaluation of the short Dark Triad–Chinese version (SD3-C). *Current Psychology*, *39*(4), 1161-1171. doi: 10.1007/s12144-019-00272-3

Zuo, S., Wang, F., Xu, Y., Wang, F., & Zhao, X. (2016). The fragile but bright facet in the Dark Gem: Narcissism positively predicts personal morality when individual's self-esteem is at low level. *Personality and Individual Differences*, *97*, 272-276. doi: 10.1016/j.paid.2016.03.076

Appendices

Appendix A – Systematic review search syntax

Search strategy PsycArticles

1.	(dark triad or short dark triad or dirty dozen).af.	471
2.	(psychopath or psychopathy or psychopathic).af.	3991
3.	machiavellian*.af.	917
4.	(narcissist* or narcissism).af.	4878
5.	2 and 3 and 4	363
6.	1 or 5	582
7.	(moral* or moral judgement or moral evaluation or moral task or moral decision* or moral dilemma or moral choice or moral stimuli).af.	19041
8.	6 and 7	237

Search strategy Ovid PsycInfo

1.	(dark triad or short dark triad or dirty dozen).af.	4849
2.	(psychopath or psychopathic or psychopathy).af.	39093
3.	(narcissism or narcissist*).af.	41844
4.	machiavellian*.af.	8719
5.	2 and 3 and 4	2631
6.	1 or 5	5306
7.	(moral* or moral judgement or moral evaluation or moral task or moral decision* or moral dilemma or moral choice or moral stimuli).af.	222123
8.	6 and 7	1703

Search strategy Web of Science

1.	ALL=(dark triad OR short dark triad OR dirty dozen)	2,518

2.	ALL=(psychopath OR psychopathy OR psychopathic)	12,661
3.	ALL=(narcissist* OR narcissism)	10,790
4.	ALL=(machiavellian*)	2,839
5.	#4 AND #3 AND #2	1,001
6.	#1 OR #5	2,564
7.	ALL=(moral* OR moral judgement OR moral evaluation OR moral task OR moral decision* OR moral dilemma OR moral choice OR moral stimuli)	270,894
8.	#7 AND #6	183

Search strategy Ovid Medline

1.	(dark triad or short dark triad or dirty dozen).af.	312
2.	(psychopathy or psychopathic or psychopath).af.	5305
3.	(Machiavellianism or machiavellian).af.	772
4.	(narcissistic or narcissism).af.	5164
5.	2 and 3 and 4	231
6.	1 or 5	357
7.	(moral* or moral judgement or moral evaluation or moral task or moral decision* or moral dilemma or moral choice or moral stimuli).af.	94012
8.	6 and 7	25

Search strategy for ASSIAS and eTheses

AB(("Dark Triad" OR Dirty Dozen OR Short Dark Triad) OR ((psychopath OR psychopathy OR psychopathic) AND machiavellian* AND (narcissist* OR narcissism)) AND (moral* OR moral judgement OR moral evaluation OR moral task OR moral decision* OR moral dilemma OR moral choice OR moral stimuli))

Appendix B – Excluded studies

Study	Reason for exclusion
Bartels & Pizarro (2011)	Exposure
Campbell, Scheemer, Villani, Nguyen, Vickers & Vernon (2008)	Outcome
Chowdhury & Gupta (2018)	Outcome
Chowdhury & Gupta (2019)	Outcome
Clowney-Johnson (2021)	Outcome
Deutchman & Sullivan (2018)	Outcome
Giammarco & Vernon (2014)	Outcome
Gojković, Dostanić & Đurić (2019)	Population/Outcome
Jambresïć, Humer & Cïkesˇ (2020)	Outcome
Jonason, Strosser, Kroll, Duineveld & Baruffi (2014)	Outcome
Jonason, Zeigler-Hill & Okan (2017)	Outcome
Kapoor & Kaufman (2021)	Outcome
Kay & Saucier (2020)	Outcome
Krick, Tresp, Vatter, Ludwig, Wihlenda & Rettenberger (2016)	Outcome
Malesza (2018)	Outcome
Mededovic & Petrovic (2016)	Outcome
Ok, Qian, Strejcek & Aquino (2021)	Outcome
Owen (2019)	Unable to access full text – thesis embargoed until 02/12/2022
Schiffer, Hohn & Saucier (2021)	Outcome
Schiffer, O'Dea & Saucier (2021)	Exposure
Schönegger (2022)	Outcome
Roeser, McGregor, Stegmaier, Mathew, Kübler & Meule (2016)	Outcome

Appendix C – Data extraction form

General information Study title: Author: Type of publication: Country of origin:	
Study characteristics Aims of study: Study design:	
Participant characteristics Participant recruitment procedures used: Age: Gender: Ethnicity: Total participants included (and information about those not included): Descriptor of sample (e.g. undergraduate students):	
Results Definition of outcome used in study: Measurement tool: Relationships with DT traits: Any other findings:	

Appendix D – Quality assessment form

Question	Decision	Comments
Validity		
Was the research question or objective clearly stated?	**Yes** Partial Unclear/No	
Selection bias		
Was the study design appropriate for the study objective/research questions?	**Yes** Partial Unclear/No	
Was a sample size justification or power description provided?	Yes Partial Unclear/No	
Was the selection process likely to select participants that were representative of the population?	**Yes** Partial Unclear/No	
Was the study population clearly specified?	Yes Partial Unclear/No	
Measurement bias		
Was the Dark Triad measure(s) clearly defined, valid and reliable (e.g. SD3, DD, SRP, MACH-IV, etc.)?	**Yes** Partial Unclear/No	
Were the outcome measures clearly defined, valid and reliable (e.g. moral task, moral dilemma, moral judgement, moral evaluation)?	Yes Partial Unclear/No	
Were methods sufficiently described to enable them to be repeated?	**Yes** Partial Unclear/No	
Results		
Is it clear what was used to determine statistical significance? (e.g. p-values)	**Yes** Partial Unclear/No	
Were results presented for all the analyses described in the methods?	**Yes** Partial Unclear/No	
Was the method of data analysis appropriate?	**Yes** Partial	

	Unclear/No	
Implications		
What are the implications of the study and are they supported by evidence?	**Yes** Partial Unclear/No	
Were limitations of the study discussed?	Yes Partial Unclear/**No**	
Total score: **/26**		

Appendix E – Participant consent form

General Information

Thank you for your interest in taking part in this questionnaire/online survey. You have been invited to participate as you are over 18 years old. Please read through this information before agreeing to participate by ticking the 'yes' box below.

This study is being completed by Dr Vincent Egan and Myrthe Meere as part of the Doctorate of Forensic Psychology from the University of Nottingham. The purpose of this research study isto investigate whether certain personality characteristics and levels of disgust influence an individual's moral judgements and how individual's make such judgements.

You will be given some questions and scenarios to read, and then answer questions on personality, disgust and morality. It should take you about 45 minutes to 1 hour to complete with a total of 177 questions. No background knowledge is required.

How will your data be used?

Your answers will be completely anonymous and we will use all reasonable endeavours to keep them confidential. Your participation in this study is entirely voluntary. You can withdraw at any point during the questionnaire for any reason, before submitting your answers by clicking the Exit button/closing the browser. The data will only be uploaded on completion of the questionnaire by clicking the SUBMIT button. You are free to omit any question.

Your data will be stored in a password-protected file and may be used in academic publications. Your IP address **will not** be stored. All questions are optional.

Who will have access to your data?

The University of Nottingham is the data controller for the purposes of the Data Protection.

We believe there are no known risks associated with this research study, however as with any online related activity the risk of a breach is always possible. We will do everything possible to ensure your answers in this study will remain anonymous. We will minimize any risks by ensuring that the information remains confidential and is stored on a password protected database. All raw data will be destroyed after seven years.

The results of the study may be published in scientific journals and presented at scientific conferences. The data will be reported anonymously, with any identifying information removed.

If you have any questions about this project, you may contact the Lead Researcher Myrthe Meere (anne.meere@nottingham.ac.uk) or if you have any concerns about any aspect of this study please contact the Research Supervisor: Vincent Egan (Vincent.Egan@nottingham.ac.uk). If you remain unhappy and wish to complain formally, you should then contact the FMHS Research Ethics Committee Administrator, c/o The University of Nottingham, Faculty PVC Office, B Floor, Medical School, Queen's Medical Centre Campus, Nottingham University Hospitals, Nottingham, NG7 2UH. E-mail: FMHS-ResearchEthics@nottingham.ac.uk

This study has been reviewed and given a favourable opinion by the University of Nottingham, Faculty of Medicine & Health Sciences Research Ethics Committee (7-1804).

I have read and understood the above information and consent form, I confirm that I am 18 years old or older and by clicking the NEXT button to begin the online questionnaire, I indicate my willingness to voluntarily take part in the study.

- ○ NEXT - I consent to take part
- ○ EXIT - I do not give consent

Thank you for participating!

Please, tick each box to continue:

Please select exactly 5 answer(s).

- ☐ I confirm that I have read and understood the information on the previous page.
- ☐ I am 18 years old or older.
- ☐ I understand that my participation is voluntary and I can end the study at any time and withdraw my data by clicking the EXIT button .
- ☐ I understand that my answers will be anonymous.
- ☐ I understand the overall anonymized data from this study may be used in the future for research (with research ethics approval) and teaching purposes.

Appendix F – Participant debrief form

Thank you for participating in this study.

Jump

The purpose of this study was to understand whether there are individual differences in how someone decides whether something is morally right or wrong and how individuals make decisions about those situations.

If you would like a copy of the published results when they are available, please see contact details of the researchers listed below.

Your information will remain confidential and you will not be identified in any report or publication.

Chief Investigator: Dr Vincent Egan

Email: Vincent.Egan@nottingham.ac.uk

Co-investigators: Myrthe Meere

Email: anne.meere@nottingham.ac.uk

Appendix G – Ethical approval

University of Nottingham
UK | CHINA | MALAYSIA

Email: FMHS-ResearchEthics@nottingham.ac.uk

Faculty of Medicine & Health Sciences
Research Ethics Committee
c/o Faculty PVC Office
School of Medicine Education Centre
B Floor, Medical School
Queen's Medical Centre Campus
Nottingham University Hospitals
Nottingham, NG7 2UH

27 June 2018

Myrthe Meere
Doctorate of Forensic Psychology Student
c/o Dr Vincent Egan
Associate Professor, Director Forensic Psychology Programme
Room B23 Yang Fujia
Division of Psychiatry and Applied Psychology
Jubilee Campus, Wollaton Road
Nottingham, NG8 1BB

Dear Ms Meere

Ethics Reference No: 7-1804 **– please always quote**	
Study Title: Personality, disgust and moral judgement	
Chief Investigator/Supervisor: Dr Vincent Egan, Associate Professor, Forensic Psychology, Division of Psychiatry and Applied Psychology, School of Medicine	
Lead Investigators/student: Myrthe Anne Meere, Doctorate of Forensic Psychology Student	
Type of Study: online survey – personality traits	
Proposed Start Date: 06.2018	**Proposed End Date:** 31.10..2018 4 mths
No of Subjects: 186+	**Age:** 18+years

Thank you for submitting the above application which has been reviewed and the following documents were received:

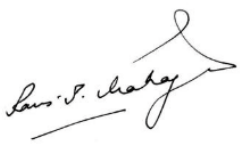
- FMHS REC Application form and supporting documents version 1.0: 08.05.2018

These have been reviewed and are satisfactory and the study has been given a favourable opinion.

A favourable opinion has been given on the understanding that:

1. The protocol agreed is followed and the Committee is informed of any changes using a notice of amendment form (please request a form).
2. The Chair is informed of any serious or unexpected event.
3. An End of Project Progress Report is completed and returned when the study has finished (Please request a form).

Yours sincerely



Professor Ravi Mahajan
Chair, Faculty of Medicine & Health Sciences Research Ethics Committee

Appendix H – HEXACO-60

HEXACO-PI-R

(SELF REPORT FORM)

© Kibeom Lee, Ph.D., & Michael C. Ashton, Ph.D.

DIRECTIONS

On the following pages you will find a series of statements about you. Please read each statement and decide how much you agree or disagree with that statement. Then write your response in the space next to the statement using the following scale:

5 = strongly agree

4 = agree

3 = neutral (neither agree nor disagree)

2 = disagree

1 = strongly disagree

Please answer every statement, even if you are not completely sure of your response.

Please provide the following information about yourself.

Sex (circle): Female Male

Age: _____ years

1 = strongly disagree 2 = disagree 3 = neutral 4 = agree 5 = strongly agree

1 _____ I would be quite bored by a visit to an art gallery.
2 _____ I plan ahead and organize things, to avoid scrambling at the last minute.
3 _____ I rarely hold a grudge, even against people who have badly wronged me.
4 _____ I feel reasonably satisfied with myself overall.
5 _____ I would feel afraid if I had to travel in bad weather conditions.
6 _____ I wouldn't use flattery to get a raise or promotion at work, even if I thought it would succeed.
7 _____ I'm interested in learning about the history and politics of other countries.
8 _____ I often push myself very hard when trying to achieve a goal.
9 _____ People sometimes tell me that I am too critical of others.
10 _____ I rarely express my opinions in group meetings.
11 _____ I sometimes can't help worrying about little things.
12 _____ If I knew that I could never get caught, I would be willing to steal a million dollars.
13 _____ I would enjoy creating a work of art, such as a novel, a song, or a painting.
14 _____ When working on something, I don't pay much attention to small details.
15 _____ People sometimes tell me that I'm too stubborn.
16 _____ I prefer jobs that involve active social interaction to those that involve working alone.
17 _____ When I suffer from a painful experience, I need someone to make me feel comfortable.
18 _____ Having a lot of money is not especially important to me.
19 _____ I think that paying attention to radical ideas is a waste of time.
20 _____ I make decisions based on the feeling of the moment rather than on careful thought.
21 _____ People think of me as someone who has a quick temper.
22 _____ On most days, I feel cheerful and optimistic.
23 _____ I feel like crying when I see other people crying.
24 _____ I think that I am entitled to more respect than the average person is.
25 _____ If I had the opportunity, I would like to attend a classical music concert.
26 _____ When working, I sometimes have difficulties due to being disorganized.
27 _____ My attitude toward people who have treated me badly is “forgive and forget”.
28 _____ I feel that I am an unpopular person.
29 _____ When it comes to physical danger, I am very fearful.
30 _____ If I want something from someone, I will laugh at that person's worst jokes.

Continued…

31 _____ I've never really enjoyed looking through an encyclopedia.
32 _____ I do only the minimum amount of work needed to get by.
33 _____ I tend to be lenient in judging other people.
34 _____ In social situations, I'm usually the one who makes the first move.
35 _____ I worry a lot less than most people do.
36 _____ I would never accept a bribe, even if it were very large.
37 _____ People have often told me that I have a good imagination.
38 _____ I always try to be accurate in my work, even at the expense of time.
39 _____ I am usually quite flexible in my opinions when people disagree with me.
40 _____ The first thing that I always do in a new place is to make friends.
41 _____ I can handle difficult situations without needing emotional support from anyone else.
42 _____ I would get a lot of pleasure from owning expensive luxury goods.
43 _____ I like people who have unconventional views.
44 _____ I make a lot of mistakes because I don't think before I act.
45 _____ Most people tend to get angry more quickly than I do.
46 _____ Most people are more upbeat and dynamic than I generally am.
47 _____ I feel strong emotions when someone close to me is going away for a long time.
48 _____ I want people to know that I am an important person of high status.
49 _____ I don't think of myself as the artistic or creative type.
50 _____ People often call me a perfectionist.
51 _____ Even when people make a lot of mistakes, I rarely say anything negative.
52 _____ I sometimes feel that I am a worthless person.
53 _____ Even in an emergency I wouldn't feel like panicking.
54 _____ I wouldn't pretend to like someone just to get that person to do favors for me.
55 _____ I find it boring to discuss philosophy.
56 _____ I prefer to do whatever comes to mind, rather than stick to a plan.
57 _____ When people tell me that I'm wrong, my first reaction is to argue with them.
58 _____ When I'm in a group of people, I'm often the one who speaks on behalf of the group.
59 _____ I remain unemotional even in situations where most people get very sentimental.
60 _____ I'd be tempted to use counterfeit money, if I were sure I could get away with it.

Appendix I – SD3

The Short Dark Triad (SD3)

Instructions: *Please indicate how much you agree with each of the following statements*

Disagree strongly	*Disagree*	*Neither agree nor disagree*	*Agree*	*Agree strongly*
1	***2***	***3***	***4***	***5***

Machiavellianism

1. It's not wise to tell your secrets.
2. I like to use clever manipulation to get my way.
3. Whatever it takes, you must get the important people on your side.
4. Avoid direct conflict with others because they may be useful in the future.
5. It's wise to keep track of information that you can use against people later.
6. You should wait for the right time to get back at people.
7. There are things you should hide from other people to preserve your reputation.
8. Make sure your plans benefit yourself, not others.
9. Most people can be manipulated.

Narcissism

1. People see me as a natural leader.
2. I hate being the center of attention. (R)
3. Many group activities tend to be dull without me.
4. I know that I am special because everyone keeps telling me so.
5. I like to get acquainted with important people.
6. I feel embarrassed if someone compliments me. (R)
7. I have been compared to famous people.
8. I am an average person. (R)
9. I insist on getting the respect I deserve.

Psychopathy

1. I like to get revenge on authorities.
2. I avoid dangerous situations. (R)
3. Payback needs to be quick and nasty.
4. People often say I'm out of control.
5. It's true that I can be mean to others.
6. People who mess with me always regret it.
7. I have never gotten into trouble with the law. (R)
8. I enjoy having sex with people I hardly know
9. I'll say anything to get what I want.

Note. The subscale headings should be removed before the SD3 is administered. Items should be kept in the same order. Reversals are indicated with (R).

Appendix J – SSIS

Items
8. I enjoy seeing people hurt.
7. I would enjoy hurting someone physically, sexually, or emotionally.
2. Hurting people would be exciting.
5. I have hurt people for my own enjoyment.
1. People would enjoy hurting others if they gave it a go.
9. I have fantasies which involve hurting people.
3. I have hurt people because I could.
4. I wouldn't intentionally hurt anyone.[a]
6. I have humiliated others to keep them in line.
10. Sometimes I get so angry I want to hurt people.

[a] Reverse scored.

Appendix K – DS-R

Disgust Scale—Revised (DS–R): Items, Scaling, and Scoring

DS–R Part I: Please circle true or false	Scaling	
1. I might be willing to try eating monkey meat, under some circumstances. (R)	False	True
2. It would bother me to see a rat run across my path in a park.	False	True
3. Seeing a cockroach in someone else's house doesn't bother me. (R)	False	True
4. It bothers me to hear someone clear a throat full of mucus.	False	True
5. If I see someone vomit, it makes me sick to my stomach.	False	True
6. It would bother me to be in a science class, and see a human hand preserved in a jar.	False	True
7. It would not upset me at all to watch a person with a glass eye take the eye out of the socket. (R)	False	True
8. It would bother me tremendously to touch a dead body.	False	True
9. I would go out of my way to avoid walking through a graveyard.	False	True
10. I never let any part of my body touch the toilet seat in a public washroom.	False	True
11. I probably would not go to my favorite restaurant if I found out that the cook had a cold.	False	True
12. Even if I was hungry, I would not drink a bowl of my favorite soup it if had been stirred with a used but thoroughly washed flyswatter.	False	True
13. It would bother me to sleep in a nice hotel room if I knew that a man had died of a heart attack in that room the night before.	False	True

DS–R Part II: Please rate how disgusting you would find the following experiences.			
14. If you see someone put ketchup on vanilla ice cream and eat it.	Not	Slightly	Very
15. You are about to drink a glass of milk when you smell that it is spoiled.	Not	Slightly	Very
16. You see maggots on a piece of meat in an outdoor garbage pail.	Not	Slightly	Very
17. You are walking barefoot on concrete and step on an earthworm.	Not	Slightly	Very
18. While you are walking through a tunnel under a railroad track, you smell urine.	Not	Slightly	Very
19. You see a man with his intestines exposed after an accident.	Not	Slightly	Very
20. Your friend's pet cat dies and you have to pick up the dead body with your bare hands.	Not	Slightly	Very
21. You accidentally touch the ashes of a person who has been cremated.	Not	Slightly	Very
22. You take a sip of soda and realize that you drank from the glass that an acquaintance of yours had been drinking from.	Not	Slightly	Very
23. You discover that a friend of yours changes underwear only once a week.	Not	Slightly	Very
24. A friend offers you a piece of chocolate shaped like dog-doo.	Not	Slightly	Very
25. As part of a sex education class, you are required to inflate a new lubricated condom, using your mouth.	Not	Slightly	Very

Note. *Scoring:* Items with (R) are reverse scored; *True* = 1, *False* = 0; *Not disgusting* = 0, *Slightly disgusting* = 0.5, *Very disgusting* = 1. A total disgust sensitivity score can be calculated by summing responses to the 25 items (0–25). Scores for each of three subscales are calculated as follows. Core Disgust: sum of items 1, 2, 3, 4, 5, 12, 14, 15, 16, 17, 18, and 23; Animal Reminder Disgust: sum of items 6, 7, 8, 9, 13, 19, 20, and 21; Contamination-Based Disgust: sum of items 10, 11, 22, 24, and 25. Items are from "Individual Differences in Sensitivity to Disgust: A Scale Sampling Seven Domains of Disgust Elicitors," by J. Haidt, C. McCauley, and P. Rozin, 1994, *Personality and Individual Differences, 16,* 700–713. Copyright 1994 by Elsevier.

Appendix L – Moral Disengagement scale

Items Used to Assess Moral Disengagement

1. **It is alright to fight to protect your friends.** [MJ]
2. **It's ok to steal to take care of your family's needs.** [MJ]
3. **It's ok to attack someone who threatens your family's honor.** [MJ]
4. It is alright to lie to keep your friends out of trouble. [MJ]
5. **Sharing test questions is just a way of helping your friends.** [EL]
6. **Talking about people behind their backs is just part of the game.** [EL]
7. **Looking at a friend's homework without permission is just "borrowing it."** [EL]
8. It is not bad to "get high" once in a while. [EL]
9. **Damaging some property is no big deal when you consider that others are beating up people.** [AC]
10. **Stealing some money is not too serious compared to those who steal a lot of money.** [AC]
11. Not working very hard in school is really no big deal when you consider that other people are probably cheating. [AC]
12. **Compared to other illegal things people do, taking some things from a store without paying for them is not very serious.** [AC]
13. **If people are living under bad conditions, they cannot be blamed for behaving aggressively.** [DISR]
14. If the professor doesn't discipline cheaters, students should not be blamed for cheating. [DISR]
15. **If someone is pressured into doing something, they shouldn't be blamed for it.** [DISR]
16. **People cannot be blamed for misbehaving if their friends pressured them to do it.** [DISR]
17. **A member of a group or team should not be blamed for the trouble the team caused.** [DIFR]
18. A student who only suggests breaking the rules should not be blamed if other students go ahead and do it. [DIFR]
19. **If a group decides together to do something harmful, it is unfair to blame any one member of the group for it.** [DIFR]
20. **You can't blame a person who plays only a small part in the harm caused by a group.** [DIFR]
21. It is ok to tell small lies because they don't really do any harm. [DC]
22. **People don't mind being teased because it shows interest in them.** [DC]
23. **Teasing someone does not really hurt them.** [DC]
24. **Insults don't really hurt anyone.** [DC]
25. If students misbehave in class, it's their teacher's fault. [AB]
26. **If someone leaves something lying around, it's their own fault if it gets stolen.** [AB]
27. **People who are mistreated have usually done things to deserve it.** [AB]
28. **People are not at fault for misbehaving at work if their managers mistreat them.** [AB]
29. **Some people deserve to be treated like animals.** [DEH]
30. **It is ok to treat badly someone who behaved like a "worm."** [DEH]
31. **Someone who is obnoxious does not deserve to be treated like a human being.** [DEH]
32. Some people have to be treated roughly because they lack feelings that can be hurt. [DEH]

Notes. Items in bold compose the 24-item scale used in the study. Items not in bold represent items dropped based on factor analysis. MJ = moral justification; EL = euphemistic labeling; AC = advantageous comparison; DISR = displacement of responsibility; DIFR = diffusion of responsibility; DC = distortion of consequences; AB = attribution of blame; DEH = dehumanization.

Appendix M – Moral transgressions

NON-OFFENCES

D.H. went to lunch with an acquaintance

A.T. took a friend to the movies

L.E. bought a new lawnmower

F.W. went for a walk in the park

MODERATE OFFENCES

K.D. lied to a good friend

N.D. parked in a disabled space but he is not disabled

T.R. neglected an elderly relative

Q.P. stole out of the collection plate at church

SEVERE OFFENCES

J.Q. raped a social worker

L.T. tortured someone with needles

R.Y. beat a homeless person unconscious

G.W. murdered 2 people in their own home

Appendix N – Moral Foundations Dictionary 2.0

Note. Words in **BOLD** are present in more than one column.

Care Virtue	*Care Vice*	*Fairness Virtue*	*Fairness Vice*	*Loyalty Virtue*	*Loyalty Vice*	*Authority Virtue*	*Authority Vice*	*Sanctity Virtue*	*Sanctity Vice*
Compassion	Harm	Equality	Cheat	Team player	**Traitor**	Respect	Disrespect	Sanctity	Impurity
Empathy	Suffer	Fairness	Unfair	Player	Disloyal	Obey	Disobey	Sacred	Degradation
Kindness	Hurt	Justice	Cheating	Patriot	**Treason**	Authority	Disobedience	Sacredness	Depravity
Caring	Harmed	Rights	Unfairness	Loyal	**Traitors**	Obeyed	Anarchy	Purity	Desecrate
Generosity	Hurting	Equitable	Injustice	Loyalty	**Betray**	Deference	Chaos	Wholesome	Desecration
Benevolence	Hurts	Civil rights	Fraud	Patriots	**Betraying**	Reverence	Subversion	Pureness	Repulsiveness
Altruism	Cruel	Fairplay	Dishonest	Follower	**Betrayer**	Respecting	Subvert	Wholesomeness	Degrading
Compassionate	Endanger	Impartiality	Unjust	Fidelity	**Betrayers**	Obeying	Lawlessness	Holiness	Decay
Nurture	Harming	Equal	Cheated	**Allegiance**	Unpatriotic	Tradition	Subverting	Dignity	Filth
Gentleness	Harms	Fairminded	Fraudulent	Ally	**Betrayed**	Adhere	Disrespecting	Godly	Depravities
Nurturance	Suffering	Proportionality	Cheats	Comrade	**Treachery**	Obeys	Sedition	Piety	Defile
Sympathy	Threaten	Equalities	Frauds	Loyalties	Enemies	Revere	**Treason**	Sanctify	Sin
Nurturing	Inflict	Fair	Dishonesty	Death do us	Backstabber	Govern	Overthrow	Chastity	Fornication
Motherly	Suffered	Integrity	Cheaters	part	Backstabbed	Comply	Insurrection	Undefiled	Repulsive
Love	Harmful	Impartial	Deception	Faction	**Heretic**	Respectful	**Rebellion**	Holy	Depraved
Beneficence	Inflicted	Reciprocity	Injustices	Comrades	Enemy	Honor	Transgress	Sacrosanct	Impiety
Empathize	Mistreat	Honesty	Swindle	**Allegiances**	**Betrays**	Adhered	**Treachery**	Pious	Degrade
Helpfulness	Endangers	Egalitarian	Inequity	Sacrifice	Deserter	**Allegiance**	Dissent	Righteousness	Repugnance
Loving	Damaging	Civil right	Hypocrisy	Allies	Infidels	Dictates	Dishonor	Dignities	Impure
Pity	Injurious	Law	Discrimination	Organization	Infidel	**Nobility**	Dissension	Sanctified	Degraded
Mercy	Victimize	Justness	Unequal	Followers	Backstab	Forbid	Disrespects	Godliness	Desecrations
Nurturer	Inflicts	Unbias	Cheater	Us against them	Deserting	Dominion	Bedlam	Spirituality	Sinfulness
Compassionately	Hurtful	Egalitarians	Inequities	Sacrifices	**Apostate**	Governed	Rebelling	Chaste	Impurities
Nurturers	Suffers	Party	Defraud	All for one	**Heresy**	Obedient	Misrule	Sanctifies	Indecencies
Caringly	Inflicting	Objectiveness	Racism	Camaraderie	Backstabbers	Reveres	Transgression	Righteous	Defiled
Empathising	Injures	Reparations	Scam	Comradery	**Heretics**	Adhering	Insurrectional	Divine	Defiles
Merciful	**Vulnerable**	Unprejudiced	Liar	One for all	Unfaithful	Governs	Pandemonium	Religious	Uncleanliness
Empathizing	Unkind	Justices	Defrauds	Fellow	**Rebellion**	Governing	Mutiny	Biblical	Damnation
Nurtures	Damage	Laws	Betrayal	Family	Desertion	**Oppress**	Mutinies	Spiritual	Debauchery
Warmhearted	Kill	Tribunals	Deceit	**Allegiant**	Deserters	Respected	Misruling	Deity	Impious
Empathizers	Die	Retribution	Defrauded	Corps	**Apostates**	Respectfully	Disobedient	Sanctifying	Sinful
Protectiveness	Victimizes	Reparation	Inequality	Unity	Unfaithfulness	Honorable	Subverted	**Noble**	Necrophiliacs
Nurtured	Torment	Lawfully	Liars	Union jack	Backstabbing	Dictate	Transgresses	Modesty	Desecrates
Benevolent	Destroy	Lawful	Defrauders	Uniter	**Rebel**	Commandments	Transgressed	Decency	Sleaziness

Mothering	Brutalise	Honest	Hypocrite	Old glory	Cheat on	Commandment	Disarray	Scriptures	Desecrating
Cared	Brutalises	Compensation	Biased	Companions	**Treacherous**	Venerate	Misruled	**Nobility**	Desecrated
Healing	Distresses	Lawyers	Ripoffs	Country	Backstabs	Politeness	Rioting	Religion	Grossness
Empathises	Endangering	Sportsmanship	Scams	Companion	**Heresies**	Respects	Lawless	Hallow	Contaminates
Humane	Mistreats	Tribunal	Fleecing	Homeland	Outsider	Obedience	Transgressing	Soul	Sinning
Comfort	Afflict	Do unto others	Defrauder	Sacrificing	Outgroup	Divine right	Illegality	Hallowed	Promiscuity
Pitied	Distressing	Golden rule	Discriminates	Indivisible	Cheated on	Forbids	Overthrowing	Deism	Befouls
Loved	Destroys	Lawyer	Mislead	Sacrificed	Against us	Permission	Dishonorable	Pristine	Rottenness
Altruist	Victimises	Proportional	Inequalities	Solidarity	Cheating on	Veneration	Dishonoring	Exalted	Hedonism
Cares	Maltreat	Equity	Prejudice	Troops	**Rebels**	Hierarchy	Rebelled	Hallowing	Revolting
Pitying	Pain	Lawyering	Fleeced	Nation	Infidelity	Forbade	**Rebellions**	Eternal	Repugnant
Comforted	Harsh	Trust	Defrauding	Cult	Outgroups	Honoring	Riot	Holy cross	Godless
Hug	Mistreated	Reciprocal	Ripoff	Kinship	**Rebellions**	Proper	Dishonouring	Deities	Scum
Comforting	Ravage	Being objective	Scamming	Companionship	Outsiders	Venerated	Disrespected	Faith	Befoul
Consoling	Threatened	Justification	Imposters	Clique	Cheat on	Stature	Permissiveness	Unadulterated	Satanic
Empathizes	Harass	Trustworthiness	**Exploitation**	Allied		Acquiesce	Refuser	Scripture	Sluttiness
Care	Unkindness	Unbiased	Crooked	Community	*54 words*	Adherence	Unruly	Wholesomely	Disgusting
Caregiver	Afflicted	Vengeance	**Oppress**	Group		Deferential	Subverts	Divinities	Pestilence
Empathised	Threatens	Revenge	Racist	Factions		Leadership	Unlawfulness	**Worship**	Debased
Hugs	Threatening	Retributions	Oppression	Familiarity		Punish	Overthrown	Virgin	Trashiness
Heal	Distress	Equals	Imposter	Solidarities		Forbidding	Anarchistic	God	Sins
Generous	Brutalize	Equalize	Swindled	Enlist		Revered	Dishonours	Catholicism	Degradingly
Condolences	Tormenting	Referring	Hypocrites	Companionships		Filial piety	Riots	Saintly	Corrupting
Mothered	Brutalized	Restitution	Plagiarism	Wife		Patriarchs	Refuse	Saintliness	Deprave
Charitable	Victimizing	Compensating	Lied	United		Decree	Chaotic	Goddess	Perverted
Generously	Damager	Been objective	Untrustworthiness	Belongs		Coerce	Noncomformity	Religiosity	Debase
Pities	Damaged	Pay back	Hoodwink	Congregation		Dominions	Dissenters	Purify	Fornicating
Condolence	**Bully**	Justified	Scammed	Brothers in		Dictating	Uprising	Koranic	Degraders
Help	Agony	Justifies	Blackmail	arms		Venerating	Insurrections	Pure	Defiling
Consolingly	Abused	Retaliation	Bilks	Clan		Wear the crown	Rioters	Holy crosses	Slime
Solace	Coldhearted	Lawyered	Swindling	Trooper		Venerates	Disordering	Exalt	Horrors
Mother	Inhuman	Compensated	**Betrayed**	Sect		Institution	Insubordinate	Virginity	Repugnantly
Healer	Injured	Referees	Bias	Enlisted		Monarchical	Mutinied	Divinity	Defiler
Hospitality	Torments	Karma	Connive	Enlistment		Servant	Insurrectionist	Consecrates	Deviants
Charity	Brutalizes	Will share	Crooks	Tribalism		Decrees	Unlawful	Heaven	Degrades
Empathized	Uncompassionate	Avenger	Deceive	Cohorts		Permit	Noncomformists	Virginal	Corrupts
Healers	Cruelty	Trusting	Freeloaders	War		Do as one says	**Heresy**	Devout	Debasing
Pityingly	Tormented	Avengers	Favoritism	Joining		Supervise	Uprisings	Dignified	Perverts
Mothers	Mistreating	Square deal	Disparity	Troop		Duty	Dishonors	Tabernacle	Parasitic
Child	Endangered	Trusts	Swindles	Sacrificial		Compliance	Tumult	Exalts	Disgusts
Lovingly	Uncaring	Compensate	Deceived	Coalition		Lionize	Overthrew	Buddhas	Deflowering
Parenting	Anguishes	Trustworthy	**Exploiters**	Insider		Supervision	Overthrows	Souls	Hedonistic
Rescuing	Destroying		Misleading	Pledge		Take orders	Rabble rousers	Temple	Deviant

Rescuer	Killed	Levels the	Discriminated	Cohort		Take up arms	Renegade	Unsullied	Scummy
Loves	Mistreatment	playing field	Kilked	Enlisting		Duties	Impolite	Heavenly	Horrifying
Consoled	**Bullied**	Tit for tat	Deceiving	Unite		Dictated	Renegades	Cleanliness	Necrophilia
Clothe	Harsher	Retaliate	Untrustworthy	**Communion**		Elders	Rabble rousing	Abstinance	Contamination
Sympathizing	Cruelness	Level the	Prejudiced	Familiarities		Emperors	Dishonored	Spotlessness	Rot
Helping	Tortured	playing field	False advertise	Belong		Commands	Illegal	Talmudic	Stain
Shared	Pained	Eye for an eye	Scammers	Ingroup		Acquiesced	Rioter	Deists	Contaminating
Childhood	Tortures	Square deals	Swindler	Belonged		Emperor	Mutinous	Gospels	Contaminants
Mommy	Torturing	Repayment	Theft	Company		Adheres	Disarrayed	Prophets	Dirtying
Vulnerability	Maltreated	Payback	Duplicitous	Collective		Servants	**Apostates**	Religions	Debases
Helpers	Anguish	Equities	Hoodwinked	Fellows		Regulations	Dissidents	Temples	Contaminate
Lover	Persecutes	Justify	Bigoted	Cliques		Covenant	Anarchists	Buddhist	Abhor
Hospitable	Maltreatment	Dues	Sexism	Uniting		Hierarchical	Raise hell	Goddesses	**Heresy**
Sharer	Brutalizing	Square dealing	Disproportionate	Clans		subordinate	Disorder	Saints	Sleaze
Feeding	Attacked	Referee	Swindlers	Hazing		Policing	Refusers	Temperance	Staining
Nursed	Victim	Repaid	Discriminate	Congregates		Decreeing	Permissive	Celibacy	Defilers
Helper	Crying	Square dealer	Conniving	Herd		Acquiesces	**Apostate**	Consecrated	Harlot
Safeness	Damages	Equalizer	Sexist	Sects		Authorizing	Anarchist	Priestly	Plagues
Nurses	Discomforting	Due process	**Betraying**	Uniters		**Nobles**	**Treacherous**	Bless	Sullies
Protector	Abusing	Level playing	Hoodwinking	Undivided		Permits	Dissident	Marriage	Fornicators
Motherhood	Threat	fields	Partiality	Unites		Matriarchal	Raises hell	Prophet	Vermin
Alleviation	Persecute	Repay	Misleads	Pledgers		Authorizes	Disordered	Exalting	Befouling
Nursemaid	Brutalization	Compensates	Disproportion	Coalitions		Control	**Heretic**	Unchaste	Incest
Safeguard	Violent	Justifying	Economic	Enlists		Command	Overpower	Supernatural	Trashy
Protect	Annihilated	Due processing	disparity	Grouping		Subordinating	Rabble rouser	Eternally	Excreting
Healthiness	Torturous	Due process	**Exploiter**	Insiders		Hierarchies	**Rebel**	Purification	Deforms
Protecters	Harasses	Repayments	Bilk	Families		Reverential	Raising hell	Apostles	Abhorred
Patient	Injurer	Repaying	Biases	Troupe		Deferentially	**Heretics**	Monastic	Decayed
Nurse	Destroyed	Level playing	Bigots	Fellowship		Punishes	Unauthorized	Purified	Whores
Vulnerable	Molests	field	Distrust	Kin		Patriarch	Refusing	**Communion**	Deformities
Benefit	Molest	Retaliating	Dupe	Pledger		Empires	**Rebels**	Gods	Perverse
Feed	Injuring	Square dealers	Crooke	Horde		Honored	Refuses	Celibate	Adultery
Childcare	Afflicts	Retaliated	Racists	Nations		**Allegiant**	Rioted	Christians	Fornicate
Rescuers	Killing	Refereed	Con artist	Tribe		**Protect**	Orders	Theological	Excrement
Hugged	Ache	Revenger	Bilking	Hordes		Traditional	Dissenter	Monasticism	Harlots
Helpful	**Wounded**	Avenging	Blackmailing	Pledges		Subordination	Chaotically	Unspoiled	Decaying
Rescues	Persecuted	Repays	Deceives	Herder		Punished	Nonconformist	Sterility	Fornicator
Nursing	Ravages	Trusted	**Betrayers**	Commune		**Noble**	**Heresies**	Christian	Unclean
Protecting	Harassed	Avenge	Deceiver	Cults		Order	Illegals	Buddha	Nauseating
Heals	**Exploited**	Retaliates	Blackmailed	Congregations		**Worship**	Unlawfully	Deist	Sully
Childbearing	Injury	Equalizers	Duping	Organizations		Social order	**Heretical**	Prophetic	**Heresies**
Hugger	Brutalisation	Avenged	Shyster	Herds		Monarchs	Dissents	Saint	Satan
Relief	Discomfort	Avenges	Connivers	Pledging		Ruling	Traditions	Righteously	Damns

Healed	Unmerciful		Imbalanced	Communities		Lead by	Dissenting	Apostle	Satanically
Rescued	Annihilate	*147 words*	Con artists	Familiar		example	Overpowers	Prayer	Sinned
Patients	**Exploiters**		Sexists	Hazings		Authorities	Trouble maker	Faiths	Sinners
Share	Injurers		Thieving	Belonging		Guiding	Refused	Shrine	Adulterous
Rescue	Destruction		**Betray**	Pledged		Presidents	Rock the boat	Purifying	Repulses
Healthy	Manhandle		Imbalance	**Bowed**		Slavishly	Overpowering	**Worships**	Corruption
Hospitalise	Kills		Disproportions	Collectively		Patriarchy	Tumultuous	Virgins	Tainting
Hospitalising	Casualties		Disproportionately	Together		Subordinates	Overpowered	Glorious	Deformity
Hugging	Maltreating		Freeloader	Groups		**Protection**	Dissented	Dignifies	Necrophiliac
Nursery	Victims		Misleaders	Homelands		Supervisers	Nonconforming	Atonement	Decays
Healthier	Harassing		Connived	Collectives		Bow before		Deification	Corrupted
Sharing	Needier		Shysters	Troopers		Fathers	*139 words*	Orthodoxy	Deforming
Helps	Smother		Scammer	Tribes		Bow down		Hallows	Contaminant
Sympathizers	Harassment		Connives	Companies		Institutions		Enshrining	Disgust
Hospitalises	Smothers		Conniver	Countries		Coercion		Nunneries	Tarnishes
Alleviating	Unhelpful		Disadvantaged	Troupes		Governors		Church	Hell
Wounded	Agonize		Plagiaristic	Fellowships		Commanded		Religiously	Filthy
Wounds	Inhumanity		Moocher	Tribal		Police		Blessings	Taint
Hospitalize	Duress		Dupes	Communes		Authorize		Consecrate	Horrific
Alleviate	Victimization		Discriminating	Herders		Bullys		Gospel	Fecal
Protective	**Exploiting**		Tricked	Grouped		**Bully**		Pray	Dirtied
Protection	Cried		Segregation	Herding		**Protecting**		Beatifying	Flesh
Health	**Wounds**		False advertised	Congregate		Acquiescing		Yogis	Stained
Relieve	**Wounding**		Thief	Herded		Empire		Theology	Deform
Sympathizer	Murderous		**Betrayer**	Congregating		Mentor		Purifies	Putrid
Safety	Ravaged		Bigot			Chiefs		Orthodox	Scatalogical
Beneficiary	Uncaringly		**Exploiting**	*157 words*		Monarchies		Untainted	Dirties
Helped	Pains		Lying			Honors		Torah	Whoring
Hospital	Painfulness		Thieves			Preside over		Faithfully	Cocksucker
Childbirth	Manhandles		Stealing			Acquiescent		Catholic	Plague
Benefits	**Bullies**		Suckered			**Allegiances**		Heavens	Adulterers
Healthcare	Assaulted		Deceivers			Bowing		Yogi	Excretes
Relievers	Uncharitable		Bamboozled			Oligarchy		Consecrating	Infesting
Feeds	Distressed		False			Willing		Blessed	Slimy
Hospitalization	Persecution		advertisement			Polite		Faithful	Excrete
Benefitting	Murdered		Freeload			Supervising		Koran	Scuzz
Relieving	Ravaging		Bamboozle			Pecking order		Abstinence	Horror
Safe	Discomforted		Did rob			Compliantly		Jesus	Tarnish
Feeder	**Exploitation**		Freeloading			Bishops		Monastery	Sexuality
Benefitted	Torture		Steal			Monarch		Purities	Parasite
Hospitalized	Murderers		Pickpocketing			Slaves		Consecration	Obscenity
Unharmful	Aches		Blackmailer			**Traitors**		Catholics	Deformed
Protects	Afflictions		Prejudicing			Punishments		Prayers	Adulterer

Unharmed	Ungenerous		Chauvinists			Authorized		Prayed	Befouled
Protecter	Victimizer		**Exploit**			**Protector**		Sterile	Muck
Safely	Agonizing		Misleader			Compliant		Blesses	Corpses
Safekeeping	Paining		Hoodwinks			Dutiful		Enshrined	Soiled
Hospitalizing	Persecuting		False advertiser			Father		Torahs	Infest
Wounding	**Exploit**		Imbalances			Punishment		Organic	Incestuously
Reliever	Harassers		Pickpocketed			Coerces		Bible	Incestuous
Shares	Malevolent		**Exploited**			Toe the line		Glory	Fucker
Relieves	Stabs		Pickpockets			Monarchy		Allah	Devil
Alleviates	Sorrowful		Bamboozles			Obediently		Glories	Parasites
Relieved	Assaults		Tricking			Elder		Priests	Stains
Hospitalizes	Needy		Taking advantage			Oligarchies		Dignifying	Skanks
Console	Affliction		Pickpocket			Dictators		Enshrine	Corpse
Protectorate	Cries		False advertisers			Leaders		Mosques	Whore
Alleviated	Fighting		Biasing			Bishop		Spotlessly	Lepers
Protected	Fight		False impression			Lorded over		Prude	Curses
Wound	Attack		Bamboozling			**Worships**		Reverend	Corrupt
Consoles	Annihilates		False witness			Coercing		Soulful	Pathogens
	Sorrow		Robs			Protectors		Deify	Diseased
	Agonized		Moochers			Dictator		Christ	Deflower
181 words	Assaulting		**Betrays**			**Protected**		Cathedrals	Hedonists
	Inhospitable		Robbing			Punishing		Churches	Sinner
	Threats		False advertises			**Traitor**		Cathedral	Debaucherous
	Ached		False impressions			Commanding		Dignify	Fester
	Rapists		Blackmails			Coerced		Monasteries	Hedonist
	Abuser		Double cross			Commanders		Raw	Sleazy
	Raped		Blackmailers			**Pope**		Enshrines	Fucks
	Assassinates		Will rob			Punitive		Refinement	Promiscuous
	Stabbed		Stolen			Underlings		Nuns	Cursed
	Inhospitality		Distrustful			Master		Monks	Curse
	Annihilation		False advertising			Subordinated		Gloriously	**Apostates**
	Punch		Double crossers			President		Almighty	Cocksuckers
	Harshness		Mooches			In charge		Marring	**Heretic**
	Abusers		Disproportioned			Matriarchy		Repent	Lewdness
	Killer		Mooching			Lionizing		Prays	Slutty
	Sufferers		Segregated			Slave		Clean	Infests
	Victimizers		Double crosser			Chief		Orthodoxies	Festers
	Smite		Robbed			Covenants		Exterminates	Pervert
	Killers		Misleadingly			Commander		Rabbis	Fuck
	Discomforts		Segregating			Matriarch		Spotless	Skanky
	Fatalities		Stole			Authorizer		Bibles	Dirty
	Molested		Double crosses			Guide		Mosque	Mucky
	Brutality		Being partial			Ordered		Immaculate	Puke

	Murdering Torturer Torturers Fights Harmfulness **Bullying** Casualty Sufferer **Exploiter** Fatality Punches Abuses Attacks Vulnerability Carnage Tribulation Annihilator Smothering Bullyboy Murderer **Wound** Stabber Tormenters Malevolence Raping Smothered Assault Genocidal Anguishing Aching Anguished Stabbing Rapist Harasser Hungers Hinger Molesting Rape Molesters Punched Violence Distressingly Molester		**Exploits** Distrusts Mooch Segregate Robbers Distrusted Double crossing Distrusting Double crossed Be partial Go back on Stacking the deck Robber Segregates Ripping off Trickster Rips off Behind their backs Mooched Stacked the deck Was partial Am partial Stacked deck Stacks the deck Behind their back Been partial Free rider Ripped off Free riders Deceivingly Steals Unequaled *281 words*			Supervised Captains Punisher Supervises Bossing Commandant Governor **Protects** Admiral Top gun **Bowed** Dominate Arrest Mentored Ordering Submit Institutional Prime minister Lionizes Ranking Boss Captain By the book Mentors **Bullies** Dominant Arrested Bossed Leader Rank Arresting Chieftain Prime ministers Regulation Superviser Dean Arrests Punishers **Bullied** Matriarchs Controlling Managerial Bosses		Organics Purifier Foods Lord Praying Repenting Marry Elevating Marrying Immaculately Rabbi Nunnery Priest Food Bloodiness Marries Synagogues Synagogue Refined Repents Angel Blessing Monk Rabbinical Organically **Pope** Nun **Nobles** Prophetically Blood Repented Pastor Purifiers Lords Bloody Untouched Cleaning Exterminating Exterminated Imam Higher power Cleaners Married	Alcoholism Feces Sullied Disgustingly Sexual Cunt Taints Profane **Heretics** Fucking Tarnishing Fornicated Mar Shitting Slut Obscene Barf Rotten Disgusted Cunts Waste Parasitically Sinfully Wastes Vomit Pathogen Rats Pathogenic Indecent Infect Leper Indecently Shit Abhors Skank Infestation Deflowered Leprosy Diseases **Heretical** Dirt Cursing Tarnishment

	Stabbers Neediness Assassinate Agonizingly Tribulations Unhelpfulness Assaulter Puncher Punching Rapes Genocides Attackers Tormentor Assassinations Destroyers Punchers Sorrows Tormenter Threateningly Murder Destroyer Assassinating Crier Assassinated Molestation Attacker Murders Genocide Fighter Assassins Assaulters Hungering Achingly Hungered Murderess Assassin **Exploits** Fighters Assassination *288 words*					Ranks Controls Dictation Guides Oligarchs Principals Top dog Admirals Caste Captaining Queen Mentoring Elderly Castes Governess Captained Principal **Bullying** Submission Dominated Corporate ladders Queens Underling Corporate ladder Fathered Dominates Dominating Presidential Oligarch Controlled Submits Submitting Head honcho Commandingly Vice president Slaving Fathering Slaved Managers Forbiddingly Controllers		Beatification Beatify Extermination Exterminate Cleaner Body Immune Atoning Imams Cleaned Atones Mary Refines Cleans Atone Immunities Immunity Stainless Refining Refine Atoned Exterminator exterminators *275 words*	Disease Prostitution Infested **Apostate** Sluts Fuckers Profanity Addiction Contaminated Scuzzy Infectiousness Indecency Vomited Germ Prostituting Excreted Rubbish Fucked Sodomy Untouchables Epidemics Swear Shits Whorehouses Pigsty Germs Prostituted Mud Dung Epidemic Rat Douchebag Perversely Pukes Puking Prostitutes Barfs Slutting Trashing Whored Douchebags Infection Shite

						Submitted Ringleaders Ringleader Controller Ranked Manager Prime ministerial Submissions Ceo Punishingly Submitter Submitters *333 words*			Spoil Gross Repulsed Pus Festering Cockroaches Tainted Contagion Barfed Insects Damned Addictions Shitty Skanking Trash Whorehouse Phlegm Moldy Plaguing Shat Drugged Garbage Infecting Pandemics Viruses Nauseated Cockroach Puked Drugging Manure Mucking Lewd Alcoholics Gangrenous Barfing Gangrene Shitter Shittier Tarnished Cock Vomits Hookers Damn

									Addict Alcoholic Nausea Swearing Vomiting Skanked Infections Foul Prostitute Risque Lice Gonorrhea Wasting Profanities Divorces Crappy Spreading Wasters Addicting Trashed Addicts Scabies Swore Nauseous Phlegmatically Soiling Nauseatingly Drugs Virus Waster Untouchable Addicted Damning Pandemic Hooker Bm Infected Festered Marred Phlegmatic Divorce Viral Contagiously

									Plagued Repulsing Swears Drug Spoiled Cum Divorcing Wasted Divorced Contagious *388 words*