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An Investigation into whether psychopathic traits negatively contribute to moral judgements

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Abstract

High psychopathy and low morality have been associated as potential causes of anti-social and criminal behaviour. Literature suggests that high levels of psychopathic traits have a negative effect on an individual's ability to make rational moral judgements. Much of this research focuses on offenders, creating a gap within research encompassing the typical population and whether the same affect is observed. It was hypothesised that high levels of psychopathic traits negatively affect moral judgement, however no predictions were made regarding specific traits. A sample of 50 students, ages ranging from 18 to 44 ($M = 22.18$), were asked to complete two self-report scales The Triarchic Psychopathy Measure (TriPM) measured traits of *meanness*, *disinhibition*, and *boldness*, providing an overall score for psychopathy. The Moral Foundations Questionnaire (MFQ) measured the dimensions *harm*, *fairness*, *authority*, *ingroup*, and *purity*, providing an overall score for moral judgement. There was a negative correlation between psychopathy and moral values ($r = -.29$, $p = .04$), evidence that higher levels of psychopathic traits can inhibit rational moral judgements. *Meanness* was negatively correlated with *harm* ($r = -.59$, $p = .0$) and *fairness* ($r = -.28$, $p = .5$), suggesting that care-based judgements are hindered when an individual displays a higher level of *meanness*. No other significant relationships were observed highlighting the role of *meanness* and the importance of care-relative moral judgements. Limitations of the study are discussed, providing suggestions for future research. Overall, the study supports that psychopathic traits can negatively contribute to moral judgement, extending this finding to the typical population also.

Keywords: Psychopathy, Moral Judgement, MFQ, TriPM, Meanness

Introduction

The last reported crime statistic according to the Office for National Statistics (2021) in the United Kingdom and Wales June revealed there were over 12.7 million criminal offences recorded for that year. This is an increase of 12% since the previous report (2019) showing crime and anti-social behaviour is a growing issue in our society. Anecdotal evidence would assume that with the increase in crime, the effect it leaves on victims and society increases also. As well as experiencing fear, a loss of trust, depression, Post Traumatic Stress Disorder (PTSD), and an overall alteration to their life, victims may have also been subject to physical injury (severe or minor) and financial losses depending on the crime (Shapland & Hall, 2007). To tackle crime and anti-social conduct, it is vital to understand what drives an individual to engage in that behaviour.

Research has been undertaken to comprehend the causes of undesirable behaviour. Specifically, psychopathy has been found to be a popular and empirically rich research topic in determining the causes of such behaviour (Heilbrun, 1979; DeLisi, 2009). Psychopathy is outlined as a clinical personality disorder, closely related to Anti-Social Personality Disorder (ASPD), that effects an individual's interpersonal and emotional capacity (Strickland, Drislane, Lucy, Krueger & Patrick, 2013). Those with a high score of psychopathy are likely to exhibit behaviour described as impulsive, anti-social, aggressive, and unrepentant (Venables, Hall & Patrick, 2013). Individuals with high psychopathy are linked closely with immoral behaviour. Furthermore, morality has been defined as a concept concerning good or bad judgements regarding and applying to other individuals' wellbeing, rights, and fairness (Haidt & Kesebir, 2010). The values that are proposed are not typically parallel with the classification of psychopathy. The current study aims to investigate the association between the two concepts which could lead to a better understanding of criminal behaviour.

The development of 'high' psychopathy is an ongoing debate, some associate it with social explanations such as childhood trauma (Craparo, Schimmenti & Caretti, 2013), and others associate it with a biological vulnerability such as genetics (Viding & McCrory, 2012). No matter the debate, researchers have sought to classify and characterise psychopathy, with the most influential being Hare & Neumann's (2008) four-factor model, the Psychopathy Checklist-Revised (PCL-R), characterising the psychopathic profile. This checklist includes the traits; Interpersonal, Affective, Lifestyle and Anti-Social. However, the practical application of this checklist is limited to interview and clinical settings, therefore has not been used in a self-report context (Evans & Tully, 2016).

Patrick, Fowles & Krueger (2009) proposed an alternative model of psychopathy, the Triarchic Psychopathy Model. This model specifies three main constructs which are implemented in psychopathy: *disinhibition*, *meanness*, and *boldness*. Individuals who score high in *disinhibition* are more likely to take part in behaviour that is impulsive, without consequential regard, and that increases the likelihood of immediate gratification. Scoring high in *boldness* suggests individuals are more likely to display risky and thrill-seeking behaviour with a high tolerance for stress and anxiety in provoking situations. Finally, individuals with a high score of *meanness* are likely to engage in cold-hearted, antagonist behaviour, displaying low interpersonal skills and a lack of empathy for others.

This has since been translated into a self-report scale, the Triarchic Psychopathy Measure (TriPM; Evans & Tully, 2016). In support, many studies using samples from criminal populations, have made use of the TriPM in measuring psychopathic traits. Many psychologists have praised the validity of TriPM, using it in within criminal populations (Stanley, Wygant & Sellbom, 2013; Laurinavičius et al., 2020). However, the support for *disinhibition* and *meanness* in terms of validity is much greater than that of *boldness* (Hannibal, Gatner, Douglas, Viljoen & Aknin, 2019). As the TriPM has been well-received, the current study will utilise the TriPM in measuring and scoring psychopathy.

There has been an on-going debate on what moral judgement is and what governs it such as moral reasoning (Turiel, 1983) or intuition (Haidt, 2001). However, moral judgement is thought to lead to decision making in every-day dilemmas and utilitarian dilemmas. Moral judgement has been placed within the Situational Action Theory (SAT), which extends to which an individual's moral judgements and self-control can predict criminal behaviour (Barton-Crosby, 2020). Furthermore, the SAT highlights that a reduction of moral judgement can explain criminal behaviour, suggesting moral judgement has mediating affect. However, the SAT illustrates a gap as to what can contribute to immoral judgements, thus, psychopathy is a relevant concept to investigate.

Morality, through research, has been positioned within a domain, the Moral Foundations (Haidt & Graham, 2007). The five dimensions of morality are described as: *harm/care*, *fairness/reciprocity*, *ingroup/loyalty*, *authority/respect*, and *purity/sanctity*. *Harm* refers to an individual's compassionate response to seeing others suffer, motivating them to resolve another's distress. *Fairness* is the concept of having equality and inclusivity as a value, whether this is for an individual or on a societal basis. *Ingroup* is practicing cooperation and trust within their group and shutting out individuals who threaten them, if they dissociate from their group this is seen as immoral. *Authority* is the concept of an individual obeying those in an authoritative position in society as well as statutory law, and in cases where authority is undermined, it's seen as deviant behaviour. Finally, *purity* refers to an individual showing behaviour of the seven deadly sins (pride, envy, gluttony, lust, anger, greed & sloth)-as behaving immorally.

The Moral Foundations domain and its dimensions have since been represented in a self-report scale, the Moral Foundations Questionnaire (MFQ) developed by Graham et al. (2011), a two-part questionnaire that measures an individual's value of each dimension when making a judgement. The overall validity of the MFQ has mixed reviews, the controversy being around cultural variation (Glover et al., 2014; Iurino & Saucier, 2020). However, where morality is not a universal concept, it would be difficult to find a self-report scale that has high cultural validity. Moreover, as this scale does not require participants to decide from a moral situation, the items are more relevant to judgements rather than decision-making. Therefore, the current study will use this questionnaire to score participants on their moral judgement.

Researchers have investigated the effects of psychopathy, using a variety of scales to measure this, and the effects it has on moral judgements, using the MFQ. Irvin-Vitela et al., 2021 found female offenders displaying high psychopathy are less likely to value *harm* and *fairness* when making a judgement, as well as displaying a negative relationship with *authority*. Furthermore, young offenders displaying high levels of psychopathic traits were associated with low scores of all five dimensions.

Here they suggested atypical emotional characteristics found within psychopathy, such as limited experiences of guilt, could explain this (Fernandes, Aharoni, Harenski, Caldwell & Kiehl, 2020). Finally, Aharoni, Antonenko & Kiehl (2011) found abnormalities in judgements regarding *harm* and *fairness* within male offenders. The shared findings that psychopathy negatively affects *harm* and *fairness* has been suggested to be due to low levels of empathy, common in the classification of psychopathy. Further, a lack of empathy has been suggested to be due to adverse emotional processing (Blair, 1995) which inhibits individuals who possess high levels of psychopathy from making care-relative judgements. This research introduces the disparities among moral dimensions; however, they aren't consistent with each other which encourages further investigation.

There is very limited research among specific traits displayed within the Triarchic Model of psychopathy and the dimensions situated within the Moral Foundations. However, in one significant piece of research to look at psychopathy and morality, Almeida et al., (2015) asked participants from the general population to fill out questionnaires regarding their psychopathy, empathy, and morality. To score participants, they used the TriPM for psychopathy and the MFQ for moral judgement. They found trait *meanness* was negatively associated with *harm* and *fairness*, suggesting those who are perceived as callous and without concern for others, are less likely to value the welfare and justice of others in a situation. Furthermore, they found *boldness* and *purity* displayed a negative correlation which they explained through the insensitivity to disgust, which they indicate being an important consideration within *purity*. Finally, *disinhibition* and *authority* were negatively correlated which may be due to a limited anxiety experienced when in the presence of authoritarian figures and the perception of the law, atypical of someone with lower levels of *disinhibition*. Overall, these findings show that characteristics within each TriPM sub-scale may alter an individual's reaction, if exhibiting abnormal levels of the traits, to certain moral values, thus impeding on their ability to make a rational moral judgement.

Even where there are a number of studies that demonstrate a negative association, there are still contradictory findings that psychopathy does not hinder moral judgement but does hinder moral decision-making. Cima, Tonnaer & Hauser (2010) found there was little difference in making moral judgements between low and high displays of psychopathy within participants. Further suggesting that emotional processing may not be necessary when making judgements. Glenn, Koleva, Iyer, Graham & Ditto (2010) further implied that the adverse behaviour displayed in those possessing high psychopathy is not produced from limited familiarity of moral judgements. The evidence from these studies implies that psychopaths are more than capable of making moral judgements but choose to ignore them and behave adversely.

Offenders are a useful sample to look at when measuring psychopathy and morality as they have already displayed violations of moral normalities which correlate positively with psychopathy (Aharoni, Antonenko & Kiehl, 2011). Though, individuals within the typical population may have already committed a crime or have the capabilities to, and there is no knowledge of it. 'The dark figure' refers to the crime that goes unnoticed, which has been associated with a lack of reporting of criminal behaviour (Doorewaard, 2014). In other words, offenders who were also a part of the typical population, but have just been reported, caught, and sentenced for exhibiting anti-social or criminal behaviour.

Research has had a primary focus on offender samples or participants who have previously displayed criminal behaviour. There is very limited evidence that supports that moral judgement may be inhibited by an increase of trait psychopathy within the typical population. This limits the generalisability of the findings to the typical population and depreciates that psychopathy is a construct within all individuals but on a scale, suggested from studies measuring psychopathy in non-offender samples (Levenson, Kiehl & Fitzpatrick, 1995; Lee & Salekin, 2010). If psychopathy can be measured and scored suggesting high levels within the general population, it can be assumed their moral judgement can be equally distorted. This illustrates a gap within the research which the current study aims to address through sampling participants from a student population.

Most of the literature supports the notion that psychopathic traits do negatively contribute to making moral judgements, overriding the contradicting evidence. Furthermore, literature has focused on this relationship within offenders and those who have already exhibited anti-social behaviour. It will be interesting to investigate whether the same findings are replicated in the typical population by acquiring and observing results from a sample within the typical, student population. Overall, I hypothesise that psychopathic traits will negatively contribute to moral judgements. Though, no prediction has been made in which traits and dimensions will display a relationship. This is due to the inconsistent and relatively varied findings within the research in how the moral dimensions have been affected. Therefore, any relationships will be observed in the discussion based on the results of the student population

The current study will undertake this investigation using self-report scales. The TriPM will measure and score individuals on their psychopathy levels and within each trait: *meanness*, *disinhibition*, and *boldness*. Participants moral judgements will be measured using the MFQ and scoring them within each dimension: *harm*, *fairness*, *authority*, *ingroup*, and *purity*.

Methodology

Participants

The study was advertised on the University of Plymouth's Participation Pool, where participants volunteered for the study for the reward of 0.5 points toward their course. Overall, fifty-two participants volunteered. The participant sample was fully made up of students from the University of Plymouth, including both male, female, and other (6 males, 45 females, and 1 other). Additionally, the ages ranged from 18 to 44 (M= 22.18). All individuals had to consent to taking part in the study before proceeding. Despite fifty-two participants partaking in the study, two participants' data was removed as they failed to complete the study appropriately (1 female and 1 other). It therefore meant the recorded study sample-size was fifty.

Materials

Participants were first presented with a consent form for participating in the study. This outlined the aim of the study, the procedure which included the instructions the participant was asked to follow, and their ethical rights. Furthermore, it provided contact details for the relevant persons if they had any queries. The study was approved by the Faculty Ethical Committee at the University of Plymouth.

Participants were then asked to consent to the study before proceeding. Those who consented were then asked demographic questions regarding their age and gender before beginning the study.

Triarchic Psychopathy Measure (TriPM)

Psychopathic traits were measured through a modified version of the TriPM developed by Evans & Tully (2016). The TriPM aims to produce an overall score of psychopathy based off the scores of three sub-scales: *disinhibition* ($\alpha = .84$), *meanness* ($\alpha = .88$), and *boldness* ($\alpha = .77$). The questionnaire consisted of a four-point scale for participants to choose from in how much each statement related to them, ranging from 'True' to 'False'. The measure originally consisted of fifty-eight items; however, two questions were removed due to ethical concerns.

As the original TriPM questionnaire was used to test within the criminal population, two questions were criminally implied and not appropriate for testing within a student population. The two questions removed were 'I have robbed someone' and 'I have stolen something out of a vehicle'. Additionally, question fifty was edited from 'I don't stack up well against most others' to 'I don't compare well to most people' as it was felt the wording was vague and incoherent. Finally, example items of each sub-scale are specified. *Disinhibition*: 'My impulsive decisions have caused problems with loved ones'. *Meanness*: 'It doesn't bother me see someone else in pain'. *Boldness*: 'I'm afraid of far fewer things than most people'.

Moral Foundations Questionnaire (MFQ)

Moral judgements were tested through the MFQ developed by Graham et al. (2011). The Likert-scale questionnaire consists of five sub-scales in which a total score of morality is produced: *harm* ($\alpha = .69$), *fairness* ($\alpha = .65$), *ingroup* ($\alpha = .71$), *authority* ($\alpha = .74$) and *purity* ($\alpha = .84$). The thirty-two-item questionnaire is split into two parts (16 items in each part). Both parts are scored on a six-point scale, but the responses differ in each point in relevance to what's asked, no reversed statements are included.

The first part of the questionnaire asked participants to score how relevant is to their judgement, and the second part asked how much they agree or disagree with a statement. The original instruction for the first part was 'When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking?', however within my pilot study, the feedback caused confusion for participants when responding in whether the situation was right or wrong. Therefore, the instruction was changed to be more directional, 'When you decide whether something is morally wrong, to what extent are the following considerations relevant to your thinking?'.

Example items of each sub-scale are specified. *Harm*: 'Whether or not someone suffered emotionally'. *Fairness*: 'Whether or not someone was denied his or her rights'. *Ingroup*: 'Whether or not someone did something to betray his or her group'. *Authority*: 'Whether or not someone conformed to the traditions of society'. *Purity*: 'Whether or not someone acted in a way that God would approve of'.

A debriefing page was presented to participants. This provided more detailed information about the purpose of the study. It explained the processes of how to get their data removed and what to do if they experienced any psychological consequences from the contents of the study. This included contact details of the researcher, supervisor, and the University's Ethics Committee.

Procedure

Participants volunteered to take part in the study through the University of Plymouth's Participation Pool, where they were given a link to the study. Through the link, the participants were automatically generated a participant ID to keep their identity and information anonymous and confidential. They were then directed to the Qualtrics (2022) website where the study was created, presented, and where the data from the responses was stored. The first page presented was the consent and information page, if participants consented, they were able to continue with the study. However, if they didn't consent, they were redirected back to the Participation Pool and did not have access to the study. Consenting participants were then asked to fill out the demographic information, complete the TriPM and finished with the MFQ. Once the study was completed and responses are recorded for each statement, participants were redirected back to the Participation Pool where they were awarded their participation point.

Statistical Analysis

The data was transported from Qualtrics (Qualtrics, 2022) to R-Studio (2021) a statistical software, where it was analysed. A descriptive statistical table was created to show the distribution of each scale and sub-scale. Due to the vast number of statistics, a table seemed the most effective and clear way to present the data. Further, the relationships between the scales and their sub-scales were all displayed using correlation matrices. This was decided to be the most efficient figure to use as it portrays all the correlations within and between the TriPM and MFQ scales clearly and all together.

Results

The purpose of this analysis (Fig.1) is to observe whether there is negative relationship between the total scores of the MFQ and TriPM. The MFQ and TriPM display a slight negative correlation, $r = -.29$, $p = .04$. This is consistent with the hypothesis, suggesting that psychopathic traits negatively contribute to moral judgement.

The aim of this correlation matrix (Fig. 2) is to display interactions between the TriPM sub-scales. Boldness and disinhibition were found to have almost no effect between each other, $r = .01$, $p = .95$. However, meanness and disinhibition displayed a moderate positive correlation, $r = .45$, $p = .0$. This suggests that participants who displayed higher levels of trait meanness were also more likely to display trait disinhibition.

A further correlation matrix was created to display interactions between the MFQ sub-scales (Fig. 3). *Harm* and *fairness* were observed to be positively correlated, $r = .47$, $p = .0$, suggesting participants who make judgements in relation to *harm* tend to justify the *fairness* in the situation as well. Furthermore, positive correlations were observed between *purity* and *authority*, $r = .63$, $p = .0$, and *purity* and *ingroup*, $r = .62$, $p = .0$. These statistics indicate that individuals who value purity in their moral judgements, are more likely to also consider *authority* and *ingroup* values. Finally, a positive correlation between *ingroup* and *authority* can be observed, $r = .58$, $p = .0$. This result indicates individuals who respect *authority* will also consider *ingroup* values when making a moral judgement.

No predictions were made regarding specific effects between the TriPM and MFQ sub-scales, therefore this analysis (Fig. 4) aims to observe if any occurred. Meanness and harm were observed to be strongly negatively correlated, $r = -.59$, $p = .0$. Further, meanness and fairness indicate a moderate negative correlation, $r = -.28$, $p = .5$. These results suggests that participants scoring higher in meanness, were less able to make rational judgements regarding harm and fairness. No other significant relationships were displayed within the correlation matrix.

Table 1: Descriptive statistics for TriPM, MFQ, and Sub-Scales

Scales	Mdn	M	SD
TriPM	2.67	2.85	.84
Boldness	1.26	1.32	.42
Meanness	.52	.6	.36
Disinhibition	.86	.93	.42
MFQ	14.5	14.45	2.12
Harm	4	3.95	.48
Fairness	4	3.9	.44
Ingroup	2.3	2.2	.76
Authority	2.5	2.4	.72
Purity	2	1.99	.75

Note: This tables displays relevant statistics (Median, Mean & Standard Deviation) of the scale's totals (MFQ & TriPM) and their subscales. This shows an overall normal distribution throughout.

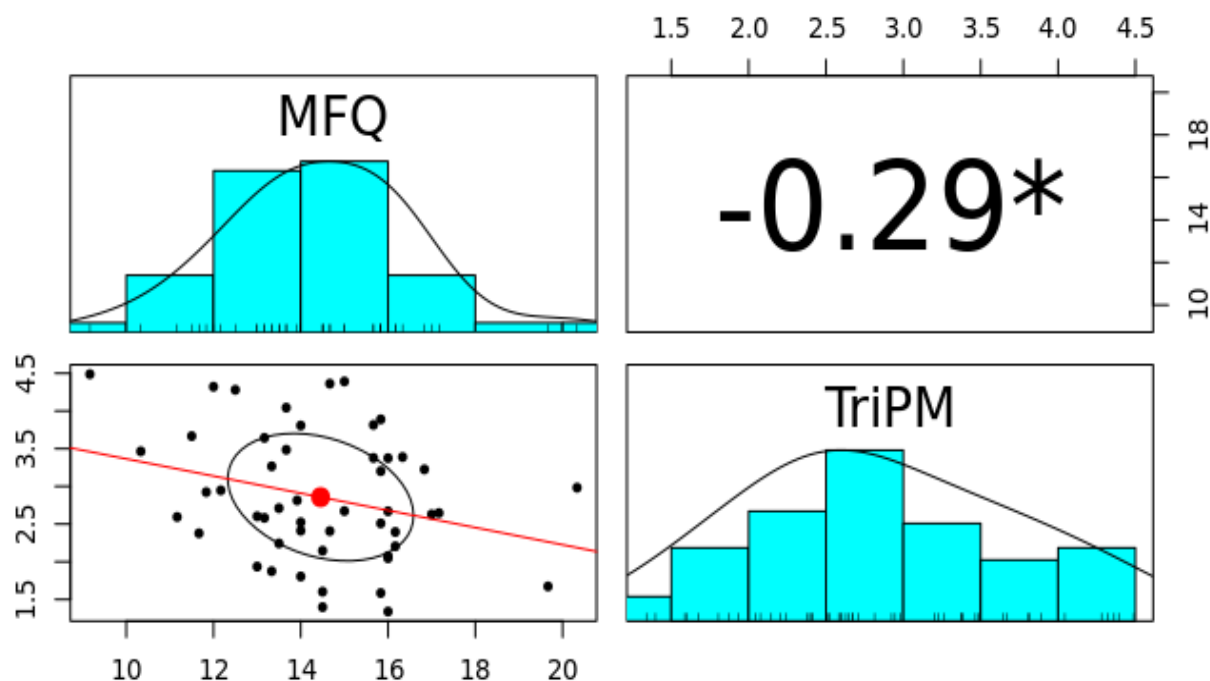


Figure 1: A correlation matrix showing the relationship between the MFQ and TriPM totals.

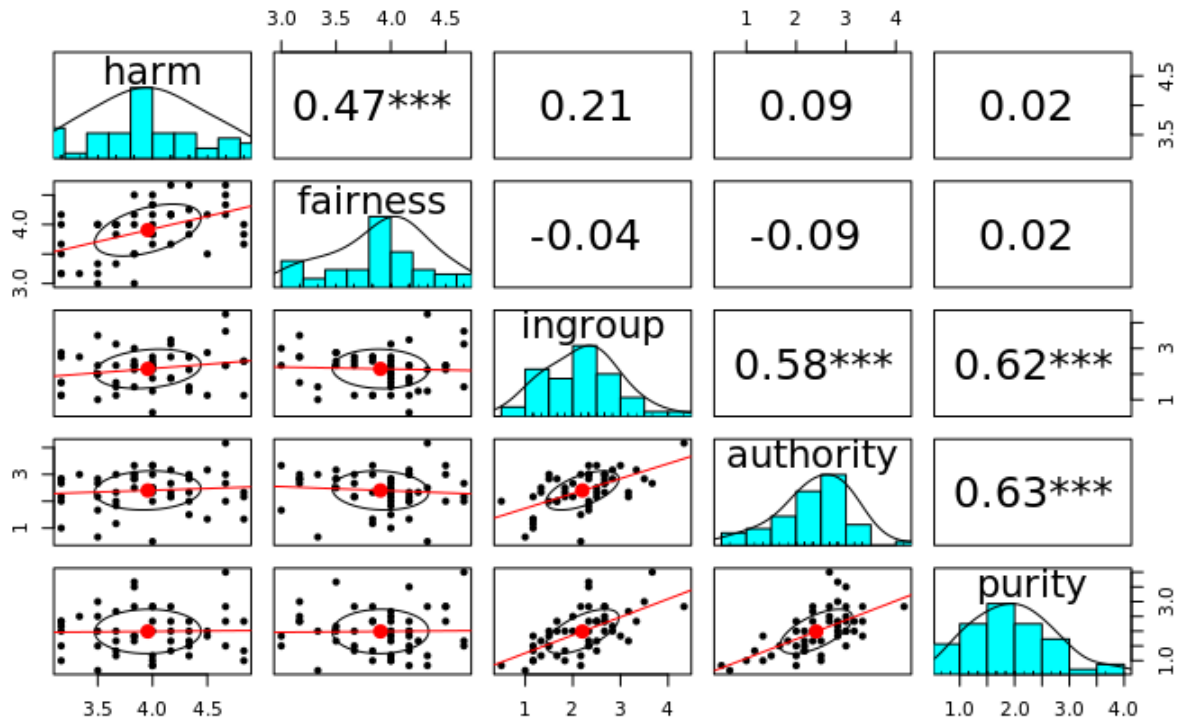


Figure 2: A correlation matrix showing the relationships between the TriPM sub-scales: *boldness*, *meanness*, and *disinhibition*.

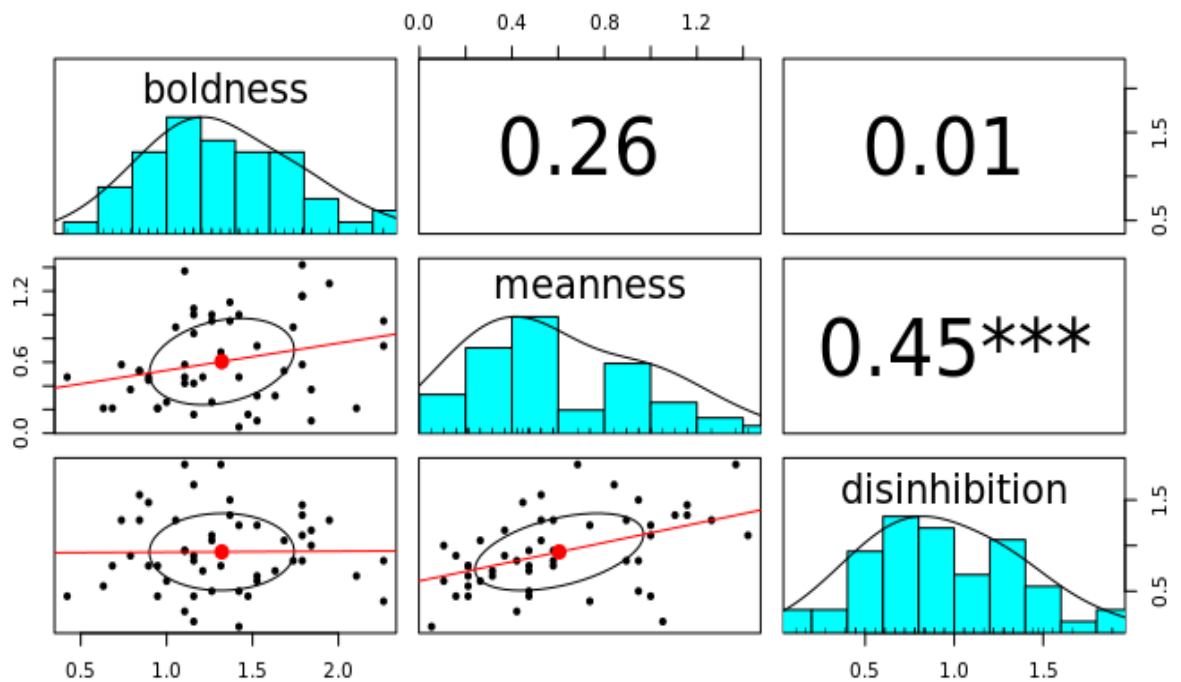


Figure 3: A correlation matrix showing the relationships between the MFQ sub-scales: *harm*, *fairness*, *ingroup*, *authority*, and *purity*.

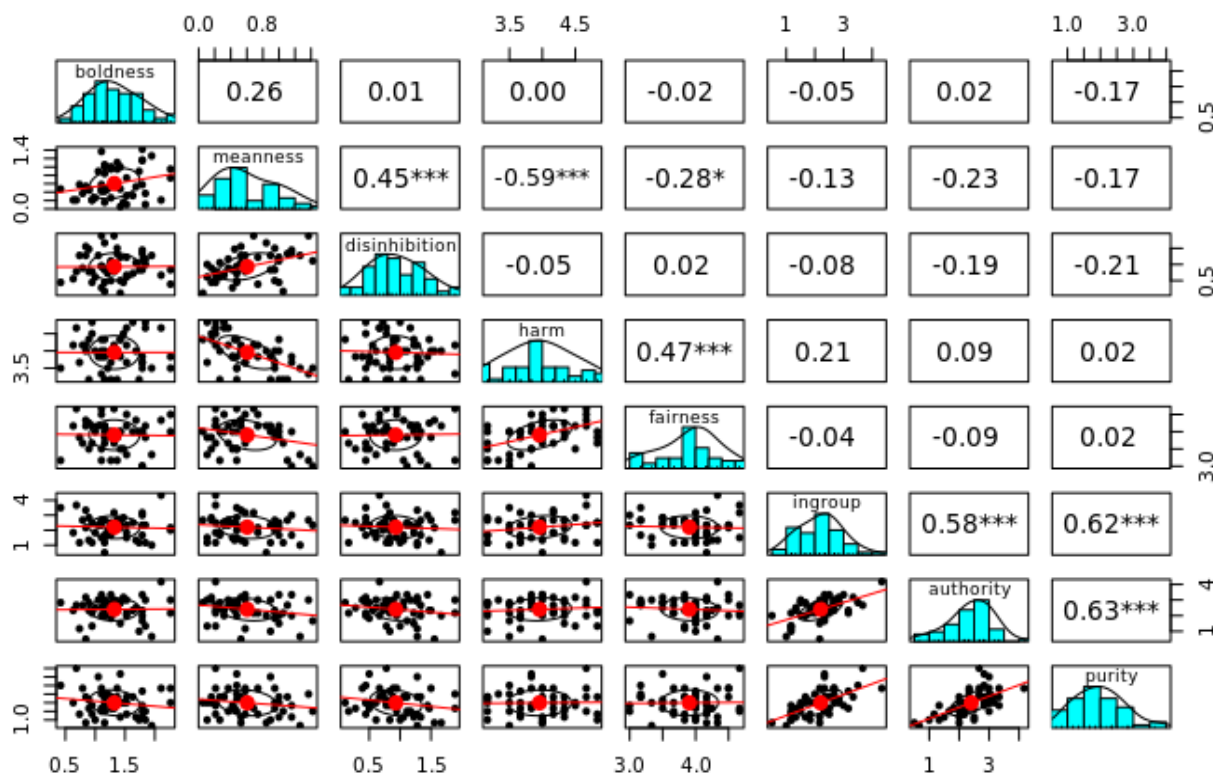


Figure 4: A correlation matrix showing the relationships between the TriPM and MFQ sub-scales.

Discussion

Previous literature has explored the association between psychopathy and morality, the majority suggesting that higher levels of psychopathic traits comport with low levels of moral judgement. This has been established predominantly within the criminal population where undesirable, anti-social behaviour had already been displayed (Aharoni, Antonenko & Kiehl, 2011; Irvin-Vitela et al., 2021). The purpose of the current study was to investigate whether the same findings would be replicated in the typical population, through acquiring a student sample. An additional purpose of the study was to observe any relationships between specific psychopathic traits, outlined by the TriPM (Evans & Tully, 2016), and the moral dimensions situated within the MFQ (Graham et al., 2011)

Overall, the results show a statistically significant negative relationship between the MFQ and TriPM (Fig.1), indicating that participant's moral judgement were generally negatively affected by high levels of psychopathy. This is in line with the current study's hypothesis. This result further contributes to the theories suggesting that psychopaths have limited understanding in making rational moral judgements (Blair, 1995; Blair, 2007). The MFQ items didn't require participants to decide within moral dilemmas, only asking them to deliberate on the extent to which they value certain morals when making a judgement. This therefore limits contradictory evidence that individuals possessing high levels of psychopathy are entirely capable of making moral judgements but just choose to behave immorally (Cima, Tonnaer & Hauser, 2010; Glenn, Koleva, Iyer, Graham & Ditto, 2010).

Furthermore, the analysis provides evidence that findings observed in offender-based studies (Aharoni, Antonenko & Kiehl, 2011; Fernandes, Aharoni, Harenski, Caldwell & Kiehl, 2020; Irvin-Vitela et al., 2021) -is relevant in groups within the typical population. This observation is important in understanding that there may be more individuals among wider society with the capabilities to commit crime than we currently have knowledge of. Within the TriPM sub-scales (Fig. 2) *meanness* and *disinhibition* displayed a strong relationship. The Triarchic Psychopathy Model (Patrick, Fowles & Krueger, 2009) has previously addressed the relationship between the two traits, suggesting the combination diminishes emotional and behavioural management. This can cause individuals scoring higher in both traits to engage in irrational, destructive and unremorseful behaviour toward others. Furthermore, *boldness* had no significant relationship with *disinhibition*. *Boldness* has been implied to be the least descriptive trait of psychopathy (Hanniball, Gatner, Douglas, Viljoen & Akinin, 2019). A key characteristic of *boldness* is thrill-seeking behaviour, but Zuckerman (2007) suggests that thrill-seeking doesn't have to be deviant, it could be benign such as engaging in extreme sports. Thus, *boldness* may not contribute to the triarch in the same way.

The MFQ sub-scales (Fig.3) displayed a clear divide in the relationships. There was a significant association between *harm* and *fairness*, as well as a significant association between *purity*, *authority* and *ingroup*. These relationships have been established before within research (Graham, Haidt & Nosek, 2009., Silver & Abell, 2016). Those who scored low in *harm* and *fairness* are suggested to value care-based judgements far less in relation to others. Therefore, they are more likely to engage in harmful violations, especially towards individual people. On the other hand, *authority*, *purity* and *ingroup* are implied to be a greater influence in abstention of anti-social behaviour. Immoral judgements linked to low scores of these three sub-scales tend to be associated with violations in social scenarios. This therefore suggests, that although these are valid as moral values and reliable predictors of behaviour, they do represent different types of anti-social or deviant displays.

An additional aim of the study was to observe any highlighted relationships between the TriPM and MFQ sub-scales, however, no predictions had been made. The only relationships from the study that were seen to be prevalent were negative correlations between *meanness* and *harm*, and *meanness* and *fairness* (Fig.4). This may be due to *harm* and *fairness* being enriched in well-being and rights of others, and *meanness* being highly associated with limited empathy and concern for others. This indicates that those scoring high in *meanness* are less likely to value another's welfare when making a judgement. This can therefore explain crimes that have a direct negative affect on an individual, such as violence and theft.

Meanness negatively affecting *harm* and *fairness* has also been consistent within research prior to the current study (Aharoni, Antonenko & Kiehl, 2011; Almeida et al., 2015; Irvin-Vitela et al., 2021). A common link in their research is the reference to Blair's (2007) Neuro-cognitive theory, and the contribution *meanness* has in care-relative judgements. Due to atypical emotional processing and regulation linked to *meanness*, it's proposed that this is due to impairments within the amygdala and ventromedial prefrontal cortex. This has been suggested to inhibit those with high psychopathy from recognising distress indications in others (Blair, Jones, Clark & Smith, 1997). This then demotivates the individual from making rational moral judgements regarding others well-being, as they can't process another's suffering.

Thus, this supports the notion that those with high levels of psychopathic traits may not be neurologically capable of making rational care-relative judgements. There were no other significant interplays between the TriPM and MFQ sub-scales in the current study which had been suggested in previous studies (Fernandes, Aharoni, Harenski, Caldwell & Kiehl, 2020, Irvin-Vitela et al., 2021). For example, Almeida et al. (2015) found disinhibition negatively contributed to fairness as well as authority. However, it only further highlights the importance *meanness* has as a role not only within psychopathy itself but also in making rational care-relative judgements.

The current study, however, has limitations; the use of self-report scales limits the validity of the study as the responses may be unreliable. Where both psychopathy and moral values could be perceived as controversial topics, participants may not have been wholly honest when answering. For example, participants may not feel comfortable admitting they've been 'responsible for causing problems with loved ones.' Furthermore, the results don't show causality, only a relationship. Therefore, no definitive cause can be assumed that psychopathic traits negatively affect moral judgement, and not the other way round. However, there is little evidence to suggest otherwise

A further limitation observes that tests of morality, can differ between different cultures. This suggests that there is no universal moral acceptability which makes the questionnaire subjective. For example, some may not believe that disobeying authority is immoral and deviant but instead brave and heroic due to perceived corruption within that authority. Therefore, the results of the current study don't reflect cultural validity and generalisability due to the extremely high variance in perception and socialisation. In the future, it may be ideal to ask participants what culture or any other influential groups, such as religion, they identify with.

Psychopathic traits can have a detrimental effect when making rational moral judgements, this is the case within the typical population as well as predominantly within offender populations. *Meanness* specifically has a significant role in making care-related moral judgements, demotivating individuals to consider another's welfare. Despite the need for further research, this study contributes insight into psychopathy and morality. Understanding the negative interaction between psychopathy and moral judgement drives us to better know why individuals in society engage in criminal and anti-social behaviour. This knowledge is vital in the battle to address the increasing crime statistics that affects so many.

Future work

Based on the present study and the findings, future research could investigate what factors, if any, may protect rational moral judgement from high levels of psychopathy. Similarly, further research may help to understand if any treatments, for example Cognitive Behavioural Therapy (CBT), may assist in the reduction or diverting of certain behaviours, such as thrill-seeking, towards other activities that still satisfy the individual. This sort of research may advance the knowledge of how crime can be tackled, rather than just why it happens.

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