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The combined roles of moral emotion and moral rules in explaining acts of violence using a situational action theory perspective

The roles of shame and guilt, and their relationships to empathy, have not been modelled adequately as key factors in moral decision-making in the study of violence. The role of moral emotion has been neglected in existing criminological research and this study seeks to develop current explanations of the comprehensive myriad of factors that play a role in moral crime decision-making. This research will test the different roles of empathy, shame, and guilt in violence decision-making using a situational action theory perspective. Data taken from the Peterborough Adolescent and Young Adult Development Study (PADS+), a longitudinal study with a large representative sample, provides quantitative questionnaire indices to enable comparison of a persistent and frequent violent offender subsample (N = 48) with the remaining PADS+ study sample (N = 607). A striking majority of violent offenders report that they do not think it is wrong to commit violence, and do not care about it, i.e. they lack shame and guilt, and report that violence comes as a morally acceptable and natural action alternative. Furthermore, violent offenders do not register the predicament of their victims; there is a distinct lack of empathy. This paper demonstrates a key finding which has rarely been explored to date; regression analyses reveal an interaction effect whereby individuals with weak shame and guilt, combined specifically with weak moral rules, are more likely to commit acts of violence. The study findings provide strong support for the situational action theory of the role of weak morality in violence decision-making. In order to reduce the possibility of crime being seen as an action alternative, moral development programs should be developed and administered in childhood.

Keywords: Empathy, shame, guilt, moral emotion, morality, violence decision-making

It isn't wrong and I don't feel bad: weak empathy, shame, guilt, and moral rules in violent offenders

Introduction

There are few existing criminological theories that directly incorporate the role of moral emotion or morality in the study of crime. Some criminologists, such as Bottoms (2002, p. 24) have argued that 'If they are to be true to their calling, all criminologists have to be interested in morality', but it remains to be explored in depth in criminological research (Tittle, 2007; Wikström, Oberwittler, Treiber, & Hardie, 2012; Wikström, Treiber, & Hardie, 2012; Wikström & Treiber, 2009a). Typically, criminological theories that have focused on individual or person-level factors have ignored the role of morality (including moral emotion); rather, the focus has been on self-control (Gottfredson & Hirschi, 1990), strain (Agnew, 1985), and/or rational choice in weighing costs and benefits (Cohen & Felson, 1979; Cornish & Clarke, 1986). This has led to an under-estimation of the role of the more intuitive, unconscious role of moral emotion in criminal decision-making (Treiber, 2011). A purely rational view is unrealistic in real-life terms because emotions undoubtedly play a role in many everyday action tendencies (Blair, 2017; Damasio, 1994), to which criminal behaviour is no exception (Clay-Warner, 2014; Dippong & Fitch, 2017). Furthermore, by viewing emotion as a variable that can change depending on the specific moral evaluation in question rather than as a constant, new insight can be gained into the moral decision-making process (Helion & Ochsner, 2016).

Although strain theory (Agnew, 1985, 2001, 2014), reintegrative shaming theory (Braithwaite & Braithwaite, 2001; Braithwaite, 1989, 2000; Sherman, 1993), and Anderson (1999, see also Anderson & Bushman 2002) do partially acknowledge the role of emotion, often they do not elaborate or provide underdeveloped explanations of

1
2 the mechanisms that link moral emotion to crime.¹ Of the studies that have examined
3
4 the relationship between morality and crime outcomes, they have generally used moral
5
6 values or rules measures and the next useful steps are to measure and incorporate moral
7
8 emotions (Wikström & Svensson, 2010). Existing research that will be outlined below
9
10 often fails to address various issues: first, existing research studies explore one or two
11
12 emotions in isolation but do not account for the role of the remaining moral emotions.
13
14 Second, studies do not delve into a detailed discussion or interpretation of their
15
16 findings; i.e. they fail to discuss the proposed relationship between moral emotions and
17
18 other key variables. For example, shame and guilt are viewed as deterrents in crime
19
20 prevention (Braithwaite, 1989), rather than as key contributors to the strength of overall
21
22 morality that inform whether acts of crime are viewed as morally acceptable.
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27 Social learning theory (Bandura, 1977) dictates that young children learn from,
28
29 mirror, and imitate the values, attitudes, and actions of people that they spend time with
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31 and the theory can provide compelling arguments for the importance of the role of
32
33 moral behaviour of significant others in the development of personal morality.
34
35 Increases in moral emotion capacities are likely to be facilitated by moral displays from
36
37 significant others in childhood and adolescence, including parenting style, school-based
38
39 teaching style, and relationships with peers (Svensson et al, 2016).
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43
44 Situational action theory (SAT) supports the notion that morality is a
45
46 fundamental predictor of crime involvement (Wikstrom et al, 2012). Situational action
47
48 theory is the most suitable theoretical model for empirical testing of the role of moral
49
50 emotion in crime because it fully acknowledges the crucial importance of various moral
51
52 measures of interest (Pauwels, Svensson & Hirtenlehner, 2018); moral rules, moral
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57
58 ¹ [Author(s)] provide a detailed evaluation of the extent to which these theories incorporate the role of
59
60 moral emotion specifically.

1
2 emotion, and empathy. A further reason to adopt the SAT framework is that its
3
4 perception-choice process offers a mechanism by which moral emotion may influence
5
6 crime decision-making. According to SAT, individual-level factors and environmental-
7
8 level factors both come together in the perception-choice process that leads to an act of
9
10 crime (Wikstrom & Treiber, 2009a). The premise of the perception-choice process is
11
12 that different people (for example, with different levels of moral emotion) act in
13
14 different environments, and their interaction is fundamental to explaining behaviour;
15
16 including crime.² The perception-choice mechanism involves a two part process; the
17
18 perception of action options (specifically influenced by moral emotion), followed by the
19
20 selection (choice) of one of them to act upon (Wikstrom & Treiber, 2009a).
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25 This research seeks to build upon existing explanations of the roles of shame,
26
27 guilt, and empathy in offending decisions by examining how they inter-relate via moral
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29 reasoning. The need for this attempt to disentangle the role that empathy plays in
30
31 violence has been highlighted (Joliffe & Murray, 2012). This will be achieved by
32
33 integrating the various moral measures into situational action theory's perception-choice
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35 process in an attempt to offer more understanding of the offender decision-making
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51 ² Individual morality interacts with the setting features in determining whether crime is perceived for
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53 action. Although in reality situations are less extreme and more nuanced, this can be explained using 4
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55 possible individual/environment scenarios. If morality is weak and the environment is also conducive to
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57 crime, individual and environment correspond and crime is more likely to occur. If morality is strong and
58
59 the environment is also not conducive to crime, individual and environment correspond and crime is not
60
likely to occur (Wikström, 2009a). Finally, if there is a mismatch between morality and the environment
and one if conducive to crime and the other is not, controls come into play (see Wikström & Treiber
(2009b).

The roles of empathy, shame, and guilt in crime

Existing research confirms shame and guilt to be of crucial importance in the explanation of offending (Treiber, 2013), and furthermore, they are found to mediate the effects of other variables (such as parental monitoring) in explaining crime (Svensson, Weerman, Pauwels, Bruinsma, & Bernasco, 2013; Svensson, 2004; Svensson, 2016). Wikström & Svensson (2008) found that both in an English and Swedish sample weak shame predicted violence, and other research finds that weak shame predicts antisocial behaviour (Olthof, 2012). Weak guilt and shame are correlated to aggression (Pornari & Wood, 2010; Roos, Salmivalli, & Hodges, 2011), the intention to engage in a deception (Seiter & Bruschke, 2007), and offending itself (Schalkwijk, Stams, Stegge, Dekker, & Peen, 2014). Shame and guilt have ‘presumed roles in inhibiting immoral, socially undesirable behaviour and in fostering altruistic, prosocial behaviour’ (Tangney, Stuewig, & Hastings, 2011, p. 1). A meta-analysis of 25 studies showed significant negative associations between guilt and delinquency ($r = -.278$) and between shame and delinquency ($r = -.130$) regardless of the type of shame and guilt measure or the type of crime (Spruit, Schalkwijk, van Vugt, & Stams, 2016).

However, not all research finds evidence of a link between shame and crime; some contrasting research findings state that shame does not play a role in rule-following behaviour because it motivates devaluation, defensiveness, anger, and aggression (Tangney & Fischer, 1995). Likewise, there is work that has linked shame to more, rather than less, aggression and violent behaviour (Elison, Garofalo, & Velotti (2014).³ Although these findings are in the minority, they oppose the theoretical

³ Inconsistencies between findings from such studies and the hypotheses of the current study are likely to be partially explained by the different definitions (and therefore data measures) of shame and guilt employed across studies.

1
2 propositions of the current study, and highlight that the relationship between shame and
3
4 crime may be more complex than the relationship between guilt and crime.
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6 The relationship between guilt and offending behaviour has received more
7
8 research attention than shame. Weak guilt is found to predict violence (Beyers, Loeber,
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10 Wikström, & Stouthamer-Loeber, 2001; Krettenauer, Campbell, & Hertz, 2013;
11
12 Tibbetts, 2003). Weaker guilt is reported by individuals with antisocial personality
13
14 disorder compared to matched controls (Dinn & Harris, 2000), and individuals with
15
16 weak guilt are more likely to engage in unethical behaviour and delinquency (Cohen,
17
18 Panter, Turan, Morse, & Kim, 2013; Malti, Gasser, & Buchmann, 2009; Sobhani &
19
20 Bechara, 2011), in risky and illegal behaviours, have more time spent in prison, more
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22 criminal convictions (Tangney et al., 2011), and engage in substance use and criminal
23
24 behaviour (Tangney & Fischer, 1995). Children that commit rule-breaking behaviour
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26 are found to lack guilt from 3-4 years of age (Frick, Ray, Thornton, & Kahn, 2013) and
27
28 furthermore, feelings of guilt about past violence have been found to prevent subsequent
29
30 involvement in violence (Bowes & McMurrin, 2013). Malti & Krettenauer (2013)
31
32 carried out a meta-analysis of 42 studies (over 8,000 participants) and found that guilt in
33
34 particular plays a significant role in the moral behaviour (including antisocial
35
36 behaviour) of children and adolescents. The link between guilt and various levels of
37
38 delinquent behaviour has been replicated using various methodologies, including
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40 hypothetical scenarios (Krettenauer, Asendorpf, & Nunner-Winkler, 2013) and self-
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42 reports and observer reports of guilt (Cohen et al., 2013).
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50 As well as shame and guilt, empathy is also believed to play a fundamental role
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52 in morality (Eisenberg, 2000). The role of empathy in crime has attracted attention in
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54 recent years (Posick et al., 2012). In his 2010 American Society of Criminology
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56 presidential address, Francis Cullen urged criminologists to 'recognize the importance
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1
2 of examining not only negative but positive emotions, such as empathy' (Cullen, 2011,
3 p. 314). Although researchers state that empathy is a core concern in understanding
4 criminality (Hepper, Hart, Meek, Cisek, & Sedikides, 2013), further work can develop
5 understandings of the role of empathy in crime decision-making (Jolliffe & Murray,
6 2012).
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13 Empathy has been found to be a key factor in distinguishing between prosocial
14 behaviour and non-prosocial behaviour, including offending (Baron-Cohen, 2011;
15 (Bock & Hosser, 2014; Brauer & Tittle, 2017; Frick & Morris, 2004; Hoffman, 2000;
16 Jolliffe & Farrington, 2004; Malti et al., 2009; Marshall, Marshall, Serran, & O'Brien,
17 2009; Miller & Eisenberg, 1988; Posick et al., 2012; Spinella, 2005). Furthermore,
18 individuals with higher empathy show moderate-strong negative associations with
19 aggressive behaviour (Vachon & Lynam, 2016), especially for offenders (Llorca-
20 Mestre, Malonda-Vidal, Samper-Garcia, 2017). Further, those with higher empathy are
21 found to be more successful in reducing aggression and delinquency (Crockett, Clark,
22 Hauser, & Robbins, 2010). Lack of empathy is renowned to be the central characteristic
23 of violent psychopathic behaviour (Anderson & Kiehl, 2012; Blair, 2017; Blair,
24 Mitchell, & Blair, 2005; Farrington, 2005; Fine & Kennett, 2004). The application of
25 empathy has been found to be particularly impaired in violent situations; non-moral
26 emotions such as fear and anger can lead to an increase in self-focus and a
27 corresponding decrease in other-focus, i.e. in empathy and shame (Barnett & Mann,
28 2013).
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50 It is important to note that other research finds weak-moderate correlations
51 between empathy and antisocial behaviour (Day, Casey, & Gerace, 2010; Jolliffe &
52 Farrington, 2004; Miller & Eisenberg, 1988), including substance abuse and
53 involvement in crime (Jolliffe & Farrington, 2006; Jolliffe & Murray, 2012; Schalkwijk
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2 et al., 2014; van Langen, Wissink, van Vugt, Van der Stouwe, & Stams, 2014). It
3
4 remains to be explored whether this is because empathy has an indirect link to crime via
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6 its role in the ability to exercise moral emotion, or whether existing empathy
7
8 measurement tools are flawed (Vachon, Lynam, & Johnson, 2014).
9
10

11 12 13 **The roles of empathy, shame and guilt in crime involvement in a situational action** 14 15 **theory framework** 16

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18 To date, the role of moral emotion in crime involvement has not been as well
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20 developed as other parts of situational action theory (Wikström et al., 2012; Wikstrom
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22 & Svensson, 2008; Wikström & Treiber, 2009a; Wikstrom, Tseloni, & Karlis, 2011;
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24 Wikström, 2005, 2006, 2009, 2010, 2014). Although the theory prioritises the
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26 importance of clear definitions of concepts and mechanisms, further work is required in
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28 order to build a comprehensive explanation of the specific role of moral emotion in
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30 crime.
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34 Moral acts are defined as acts that are governed by what is right or wrong to do
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36 in a particular circumstance (Wikström & Treiber, 2009a; Wikström, 2006). Acts of
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38 crime are characterised as the breaking of moral rules as defined by law; that is, the law
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40 prescribes which acts are legally permissible. This study will focus on violence as an
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42 example crime type, but crucially, the role that moral emotion plays in the occurrence of
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44 crime is hypothesised to be the same regardless of the crime type (see Wikstrom &
45
46 Treiber 2009; Bouhana & Wikstrom 2008; Wikstrom, Tseloni, amd Karlis 2011).⁴
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51 According to situational action theory, the moral emotions that are relevant for
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53 an explanation of crime decision-making are shame and guilt because these moral
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58 ⁴ Situational action theory has been specifically applied to violence (Wikström & Treiber, 2009),
59 terrorism (Bouhana & Wikström, 2008), shoplifting, theft from cars, and vandalism (Wikström, Tseloni,
60 & Karlis, 2011) but crucially attempts to explain all types of crime with a unified theory.

1 emotions are widely recognised to be relevant to moral behaviour (Eisenberg, 2000;
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3 Tangney & Fischer, 1995; Tangney, Stuewig, & Mashek., 2007). Guilt is defined as a
4
5 negative feeling, often experienced as a result of an action, which is felt inwardly
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7 towards oneself (Wikström et al., 2012). Guilt can be anticipated on contemplation of
8
9 an action and is measured along a spectrum; strong guilt indicates that one cares very
10
11 much about the potential breaking of a moral rule, whereas weak guilt indicates that one
12
13 does not care very much about the potential breaking of a moral rule. Anticipated shame
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15 is defined as a negative feeling, not necessarily experienced as a result of an action,
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17 which is felt in the presence or consideration of others (Wikström et al., 2012).
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19 Anticipated shame can also be measured along a spectrum; strong shame indicates a
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21 perception that others care very much about the potential breaking of a moral rule,
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23 whereas weak shame indicates a perception that others do not care very much about the
24
25 potential breaking of a moral rule.⁵
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32 According to situational action theory, actions are seen as morally acceptable or
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34 unacceptable depending on the act-specific moral rule and the act-specific moral
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36 emotion (Wikstrom & Treiber, 2009a). Shame and guilt are hypothesised to contribute
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38 to moral rules to form overall individual morality; if one doesn't feel it is wrong to
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40 commit an act, and subscribes to that weak moral rule with weak emotional intensity
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42 (feels weak shame or guilt regarding the moral act in question) this taken together will
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44 play a role in whether the act of offending will take place (see figure 1). Essentially,
45
46 moral emotion and moral rules can be viewed as two measures of the overall construct
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48 of morality; whether a personal subscribes to a moral rule (moral rules) and the intensity
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50 to which they subscribe to the moral rule (moral emotions). Individuals with weak
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58 ⁵ One of the primary differences between shame and guilt is that shame is often experienced as a global
59 evaluation of the self, whereas guilt is often experienced with regards to a specific act. The differences
60 and similarities between shame and guilt are discussed in more detail in Elison (2005).

1 overall morality are more likely to see crime as a morally acceptable action alternative.⁶
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4 Many people simply do not perceive crime to be a potential behavioural action
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6 alternative and this is primarily determined by their strong moral emotions and moral
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8 rules (Wikstrom et al, 2012); it follows logic that if crime is not perceived as an action
9
10 alternative, crime will not occur (Wikstrom & Treiber, 2009a).⁷
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13 This paper adds nuance to the existing field of research that finds an association
14
15 between moral emotion and offending. This paper also contributes to the existing SAT
16
17 framework by introducing the concept of empathy and its relationship to shame and
18
19 guilt (see figure 1). The current study defines the ability to exercise empathy as an
20
21 emotional process and trait (as opposed to a state or emotion).⁸ A strong ability to
22
23 exercise empathy is hypothesised to play a role in the increased potential to feel shame
24
25 and guilt during the crime decision-making process. Inversely, if an individual has a
26
27 weak ability to exercise empathy, this is hypothesised to play a role in the reduced
28
29 possibility to feel shame and guilt during the crime decision-making process. Without
30
31 consideration of the consequences of actions for others, or a perception of the judgment
32
33 that others would make, feelings of shame and guilt may not arise (see Blair, 2017).⁹
34
35 Empathy involves a personal evaluation that requires knowledge or perception of how
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37 others would view the act in question; it is variable depending on the circumstances.
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47 ⁶ The morality component of individual propensity is crucially important because it is relevant to all acts
48 of crime. Self-control is also important but only relevant under specific circumstances (see Wikstrom &
49 Svensson, 2010; Wikstrom & Treiber, 2007).

50 ⁷ Habitual violence develops and persists when individuals with weak morality repeatedly spend time in settings that
51 are conducive to crime (Wikström & Treiber, 2009). For example, an individual with weak morality (i.e. that one
52 does not think violence is very wrong, and does not feel shame and guilt about violence) who spends time in pubs
53 and clubs every Saturday night and often commits violence, gradually, week after week, may automatically perceive
54 only one alternative for action when a potentially violent situation arises: to be violent.

55 ⁸ It is important to note that although the general theory of crime believes lack of empathy to be one of the six
56 components of self-control (Gottfredson & Hirschi, 1990), SAT takes an oppositional view that self-control is a
57 distinct concept from empathy and is only relevant when moral rules are weak but the environment is not conducive
58 to crime, i.e. when there is something to control in the decision-making process (Wikstrom & Treiber, 2007).

59 ⁹ A detailed outline of the definitions and concepts of empathy, shame and guilt (and their comparison
60 and relationships to one another) can be found in Hoffman (1982).

1
2 Empathy plays a different role to shame and guilt in the decision-making
3
4 process that leads to an act of violence.¹⁰ The current study hypothesises that a poor
5
6 general ability to exercise empathy will reduce the possibility to feel shame and guilt.¹¹
7
8 If the crime-specific moral rule is weak-moderate, weak shame and guilt, by way of
9
10 providing a low intensity to which they subscribe to the moral rule, results in weak
11
12 overall morality and allows crime to be seen as a morally acceptable and viable action
13
14 alternative. Inversely, it is hypothesised that if one is aware that their subsequent action
15
16 will cause emotional or physical harm to someone via a strong ability to exercise
17
18 empathy, this increases the possibility to feel negative feelings of shame and guilt, and
19
20 overall morality will be strengthened (see figure 1). In this case, it is hypothesised that
21
22 violence will not be perceived as an action alternative because it is not seen as a morally
23
24 acceptable behaviour; and violence will not occur.
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32 **Method**

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34 Data were collected with the Peterborough Adolescent and Young Adult
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36 Development Study (PADS+); a longitudinal study that follows 700 young people from
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38 the age of 12 into adolescence and adulthood and was designed to test the role of
39
40 morality amongst other numerous factors in crime involvement. The sample was
41
42 recruited in 2002 using a random sampling method from a pool of young people listed
43
44 to begin year 7 at school (school sampling frame).¹² At age 12 when the study began,
45
46 there were equal numbers by sex, 83% were white, and family occupational social class
47
48 was varied (22% lower working class, 39% working class, 34% middle class, 5% upper
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54 ¹⁰ For the current study, the focus is upon moral emotion; however, motivation, decision-making type,
55 and controls also play a key role in this process (see Wikström et al., 2012).

56 ¹¹ Research in support of an association between empathy and the possibility to feel shame and guilt is
57 outlined elsewhere (Fraser, 1996; Hoffman, 1982; Lewis, 1971).

58 ¹² Young people from Independent Schools and Peterborough Youth Offending Service were also
59 included to ensure sampling of young people not captured by the school sampling frame.
60

1
2 class). In the current study, seven waves of questionnaire data are used from 2003-2012.
3
4 The retention rate for the full study sample has remained very high (92% at wave 7).
5
6 Peterborough is a medium-sized UK city located in Cambridgeshire with a typical crime
7
8 rate (per 1,000 population) when compared to other similar sized areas in the UK
9
10 (Office of National Statistics, 2018). There is variation in area deprivation, i.e. it
11
12 contains areas of high and low disadvantage, and there is a mixed ethnic composition
13
14 (particularly, people of Pakistani, Indian, Irish, Polish, Italian, and Caribbean descent)
15
16 within the population. This variation in ethnicity is comparable to the rest of the UK
17
18 (10.3% of Peterborough residents responded as non-white compared to 9.1% UK
19
20 average, Office for National Statistics, 2011).
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25 All of the data presented was collected using a structured paper questionnaire
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27 which was administered in person at the participants' schools, homes, or public
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29 locations (such as library conference rooms). Questionnaire scales included empathy,
30
31 shame, guilt, moral rules, violence and total crime scales (all of which are described in
32
33 [author(s)]. The general empathy scale constitutes 17 items using examples from
34
35 specific, everyday occurrences (for example, 'Other people's problems are theirs, not
36
37 mine') and was developed specifically for the current study. The scale includes a
38
39 combination of cognitive empathy items (identifying another person's viewpoint) as
40
41 well affective empathy items (feeling emotional congruence with another person's
42
43 viewpoint). The scale items refer to a range of small embarrassments to more serious or
44
45 emotionally painful situations. The response options are 'Strongly agree', 'Mostly
46
47 agree, and 'Mostly disagree', and 'Strongly disagree'. Descriptive statistics indicate that
48
49 there is variation in the data (normal distribution), that the internal consistency of the
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51 scale is reasonably high and that the scale items are closely related with a Cronbach's
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53 alpha of 0.81.
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2 The shame scale constitutes six items for which participants report how ashamed
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4 they would feel (in front of parents, teachers, or best friends) if they were caught
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6 shoplifting or breaking into a car. For example, 'If you were caught shoplifting and your
7
8 parents found out about it, would you feel ashamed?'. Although the items on the shame
9
10 scale specifically include shoplifting and car crime as example crime types, the total
11
12 scale score is assumed to represent 'general' shame with regards to committing all acts
13
14 of crime because they can be grouped together as moral transgressions. The guilt scale
15
16 constitutes six items for which participants report how guilty they would feel for
17
18 committing various acts, including moral transgressions not defined by law (legal acts),
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20 as well as acts of crime (illegal acts). For example, 'Would you feel guilty if you broke
21
22 into a car and stole something?'. Although the scale items measure anticipated shame
23
24 and guilt, this is not viewed as problematic for the theoretical aims of the current study;
25
26 anticipated shame and guilt is found to be a good indicator of experienced shame and
27
28 guilt in real-life situations, as is evidenced in a comparison of qualitative and
29
30 quantitative data in [Author(s)]. For the shame and guilt scales, the response options are
31
32 'No, not at all', 'Yes, a little', and 'Yes, very much'. Both scales were developed in
33
34 2004 by Professor Wikström (Director of the Peterborough Adolescent and Young
35
36 Adult Development study) and administered in waves 2-7.

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38
39 The population distribution for the shame scale is negatively skewed; indicating
40
41 that the majority of the participant sample report strong shame in response to carrying
42
43 out hypothetical moral transgressions and acts of crime. Data from both scales indicate
44
45 that there is variation in the data (normal distribution for guilt scale), that the internal
46
47 consistency of the scale is reasonably high and that the scale items are closely related
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49 (see table 1). The shame and guilt scale alphas (Cronbach's alpha of 0.94 for shame
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51 scale and 0.88 for guilt scale) were calculated by summing 6 total scale item scores for
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2 each of the 6 waves (ages 14-21). A comparison of the shame and guilt scale reveals
3
4 that the mean guilt score is lower and there are no large differences in the range and
5
6 standard deviation. A promax factor analysis of all wave 7 shame and guilt scale items
7
8 (6 shame items and 6 guilt items) confirms that shame and guilt can be treated as
9
10 distinct concepts; with 'general shame' (4 of the shame items loading above .4), and
11
12 'general guilt' (5 of the guilt items loading above .4) emerging as distinct factors.
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16 The moral rules scale constitutes 16 items for which participants report how
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18 right or wrong they think certain acts (of differing severity) are in particular
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20 circumstances. As with the guilt scale, the item acts include moral transgressions not
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22 defined by law (legal acts, e.g. 'How right or wrong do you think it is to lie, disobey, or
23
24 talk back to teachers?') as well as acts of crime (illegal acts, e.g. 'How right or wrong
25
26 do you think it is to smash a street light for fun?'). The response options are 'Not wrong
27
28 at all, 'A little wrong, 'Wrong', and 'Very wrong'. The moral rules scale is a modified
29
30 version of the Pittsburgh Youth Study prosocial values scale (Loeber, Farrington,
31
32 Stouthamer-Loeber, Moffitt, & Caspi, 1998); it was developed in 2001 by Professor
33
34 Wikström and administered in waves 1-7. Descriptive statistics indicate that there is
35
36 variation in the data; that the internal consistency of the scale is reasonably high, and
37
38 the scale items are closely related. Cronbach's alpha varies from 0.88-0.90 for waves 1-
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45 7 (see table 1).

46
47 Assault frequency (waves 1-7) and total crime (which covers several crime types
48
49 including vandalism, arson, and burglary) frequency data have been used in the current
50
51 study. Moral emotion and moral rules are modelled to predict past committed violence
52
53 with the understanding that first, moral emotions and moral rules are found to be
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55 relatively stable over time (see Wikstrom et al, 2012) and second, that past violence is
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57 an indicator of future violence. The prevalence of assault was 58% (n=373) in waves 1-
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1
2 7 combined, i.e. 58% of participants had self-reported at least one act of assault from
3
4 age 12 to age 21, ranging from minor to more serious incidents.
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7 Participants were selected for inclusion in the violent subsample if they had
8 reported violence (assault and/or robbery) in the preceding interview wave (wave 6,
9 2010, aged 19) and exceeded 2 or more of the criteria thresholds regarding violence
10 frequency (15+), violence duration (5+ interview waves), and violence age of onset
11 (below age 11). Early age of violence onset (onset before age 11) was included in the
12 sampling criteria because existing PADS+ findings state that early age of onset
13 offenders, compared to late onset offenders, are responsible for the majority of crimes
14 from interview waves 1-5, are more likely to continue offending as they get older, and
15 are more likely to offend with a higher frequency (Wikström et al., 2012). In order to
16 increase the likelihood that most active violent offenders had been captured in the
17 subsample, participants with medium-high violence (violence frequency of 10+, N=5)
18 in the immediately preceding waves (interview waves 5 and 6) were also added to the
19 sample. Qualitative interviews were conducted specifically to explore the real-life
20 circumstances under which persistent and frequent violent offenders carry out violence.
21 The rationale for the interview subsampling was that in order to facilitate discussion of
22 recent violence during interview, prolific offenders were required. The majority of the
23 participant sample was male (39 male, 9 female) .There is no significant association
24 between the ethnicity ($\chi^2(1) = 1.3, p > .05$) or family social position (which is measured
25 using parental income, parental education, and parental employment level) ($\chi^2(4) = 6.4,$
26 $p > .05$) between the violent subsample (N=48) and the rest of the PADS+ study sample
27 (N=607).
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Results

For all analyses, the higher the empathy, shame, and guilt score, the stronger the empathy, shame and guilt reported; and the higher the moral rules score, the more young people think it is wrong to commit moral transgressions and acts of crime. The data analytic plan was as follows: first, investigate whether empathy is required for shame and guilt (OLS regression). Second, explore whether there is a difference in empathy, shame, guilt, and moral rules between the violent subsample and the rest of the sample (estimates of effect size). Third, test whether shame, guilt, and moral rules predict violence involvement in the full sample (OLS regression). Finally, and crucially, explore whether moral emotion, moral rules, and their interaction, predict involvement in violence for the full sample (OLS regression models 1 & 2).

Basic control variables are not included in the regression analyses because they are not theorised to be explanatory variables of violence or crime. For example, there is no causal relationship between gender and crime (being male does not dictate that you will commit crime, but rather certain factors that relate to being male can play a role in the development of morality, as well play a role in the choice of settings that males may partake in). In contrast, other variables which are deemed to be theoretically relevant are not included here because they are only specifically important under limited and particular setting circumstances and have been tested extensively elsewhere (see Pauwels, Svensson, and Hirtenlehner, 2018 for a review).¹³

¹³ For example, self-control is found to be important specifically when the environment or setting is conducive to crime (e.g. there are no supervisors or authority figures present, and provocations are present) because in these situations, there is something to control (Wikstrom & Treiber, 2007).

Is empathy required in order to anticipate shame and guilt?

Using Ordinary least squares (OLS) regression (enter method) for the full sample (N=655), general empathy significantly predicts shame ($R^2 = .14$, $\beta = .376$, $p < .01$) and guilt ($R^2 = .19$, $\beta = .440$, $p < .01$). This provides evidence of a basic association that supports the hypotheses of the current study; that general empathy plays a significant role in the possibility to feel shame and guilt. It should be noted that R^2 values are low; a path model is constructed in [Author(s)] and reveals the strongest path is from general empathy, mediated by guilt, to violence (as opposed to a direct link to violence). This provides support for the two-part mechanism proposed in the current study; that empathy plays a role in the possibility to feel guilt, and that guilt plays a role in violence.

Is there a difference in empathy, shame, guilt, and moral rules between the violent (prolific violence) subsample and the rest of the sample (zero-moderate violence)?

The violent subsample participants report significantly lower mean scores for empathy, shame, guilt, and moral rules, than the rest of the sample at wave 7 (aged 21) (see table 1.).¹⁴ The maximum scale score is reported in brackets next to each data measure. The assault frequency and total crime frequency measures are total additive scores of measures collected at waves 1-7 (ages 13-21). The estimates of effect size, or η^2 (which measure the strength of the difference between the means for the two samples) are higher for shame and guilt than for the empathy measures. This indicates that there is a stronger difference between shame and guilt (compared to empathy) between the violent subsample and the rest of the sample. This provides evidence of a basic association that supports the hypotheses of the current study that empathy plays an

¹⁴ All violent subsample participants carried out qualitative interviews regarding their morality with regards to their violence; results strongly support the conclusions of the current study.

1
2 indirect role in violence whilst shame and guilt are more proximal to an explanation of
3
4 violent behaviour.¹⁵ There is a significant negative correlation between moral emotion
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6 (shame and guilt combined¹⁶) and assault frequency for the violent subsample ($R^2 = .22$,
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8 correlation $-.47$, $p < .001$) and the rest of the study sample ($R^2 = .17$, correlation $-.41$, p
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10 $< .001$). It should be noted that R^2 values are low; this is because moral rules, as well as
11
12 settings factors not explored in the current study, are also deemed to be of crucial
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14 importance in offending decisions. For the violent subsample in particular, there is a
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16 clear negative correlation, i.e. individuals with weaker shame and guilt report more self-
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18 reported assault. Subsequent analyses will first illustrate the importance of both moral
19
20 rules and moral emotion in explaining violence, and second, provide evidence for an
21
22 interaction effect between moral emotion and moral rules in predicting overall crime
23
24 frequency. ¹⁷

25 26 27 28 29 30 31 32 **Do shame, guilt, and moral rules predict involvement in violence for the full** 33 34 **sample?**

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36 A regression analysis (Ordinary least squares OLS) indicates the extent to
37
38 which shame, guilt, and moral rules together can predict violence involvement for the
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40 full PADS+ sample (see table 2). Model I explains 31% of the variance in assault
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42 frequency; guilt is a significant predictor ($\beta = -.507$, $p < .001$), however shame is not a
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51 ¹⁵ A detailed comparison of the violent subsample and the rest of the sample for the empathy, shame, and
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53 guilt scales, including discussion of individual scale items, can be found in [author(s)].

54 ¹⁶ Shame and guilt ($r^2 = .45$) are combined to form 'moral emotion'.

55 ¹⁷ For all subsequent analyses, summed data measures that comprise total additive scores of measures
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57 collected at waves 2-7, ages 14-21) are used. Note that the empathy measures were introduced at wave 7
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59 only. A logged assault frequency variable is used because it accounts for a positively skewed distribution
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by performing a transformation of the data towards a more normal distribution, making it more suitable
for analysis. This is particularly relevant for the assault variable because there are many zeros inherent in
the data (i.e. there are many participants that report no assault).

1 significant predictor ($\beta = -.062, p = .280$).¹⁸ Model II includes moral rules which
2 increases the explained variance to 34%; guilt is a significant predictor ($\beta = -.357, p <$
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This finding provides support for the hypotheses of the current study which state that the strength of the relationship between shame and violence is moderate compared to the strength of the relationship between guilt and violence. A significant correlation between shame and assault does exist; this indicates that the specific role of shame may not be as straightforward as the role of guilt. It is important to note that although shame is not a significant predictor of violence on the quantitative scales, in contrast, shame is relevant for almost all violent subsample participants in their qualitative recollections of real-life acts of violence (see [author(s)]). When moral rules are added to the regression model (model 2), the explained variance increases slightly; therefore moral emotion should be explored in association with moral rules (as outlined in the theoretical framework of the current study). This relationship is tested further in the following section by modelling an interaction effect between moral emotion and moral rules.

Do moral emotions, moral rules, and their interaction, predict involvement in violence for the full sample?

The current study hypothesises that moral emotions are of crucial importance, but only when combined with other relevant factors (Lapsley & Carlo, 2014), such as moral rules (and the setting, which is explored elsewhere (Wikstrom et al, 2012)). An interaction term offers an exploration of whether the effect of an explanatory variable

¹⁸ Since the correlation between shame and guilt is reasonably high ($r=.67$), multicollinearity diagnostics were carried out in SPSS to explore whether this was the reason that shame is not a significant predictor. The tolerance values are above .1 (.3) and the variance inflation factors are below 10 (3.0), therefore multicollinearity does not pose a problem for this analysis.

1
2 (moral emotion) on the outcome variable of violence is contingent upon another
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4 explanatory variable (moral rules). This method allows testing of whether moral
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6 emotion is only relevant to violence when moral rules are specifically weak. If this is
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8 the case, it raises clear lines of enquiry and focus for how and where to target
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10 prevention. Very little is known about whether the criminogenic effect of moral emotion
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12 is dependent on moral rules; do strong moral rules protect from the criminogenic effect
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14 of weak moral emotion? Are young people with weak moral rules more susceptible to
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16 the criminogenic effect of moral emotion?
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20 OLS regression method for testing the interaction is deemed to be the most
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22 suitable and appropriate for data of this kind (Svensson & Oberwittler, 2010). However,
23
24 use of interaction terms does not come without its problems (Hirtenlehner, Pauwels,
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26 Maesko, 2015; Svensson & Oberwittler, 2010). First, the skewed distribution of the
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28 outcome variable of self-reported violence violates key assumptions (multivariate
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30 normal distribution and homoscedasticity) of linear regression analyses. It has been
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32 proposed that spurious interaction effects may arise due to the distribution of self-
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34 reported violence (Osgood, Finken, McMorris, 2002). However, OLS regression is
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36 particularly robust to this (Hirtenlehner, Pauwels, Maesko, 2015) and due to the non-
37
38 normal distribution of self-reported violence, robust standard errors have been
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40 calculated (Hannon & Knapp, 2003). When standard errors are re-estimated to be
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42 heteroscedasticity-consistent using the robust technique, both moral emotion and moral
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44 rules have a significance value below .05. In addition, quadratic terms (that account for
45
46 the non-linear relationship of moral emotion and moral rules to self-reported violence)
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48 are calculated to enable estimation of an interaction effect that is not obscured. The
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50 dependent variable is also not log transformed to prevent further difficulties in
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52 identifying an interaction effect (McClelland & Judd, 1993). Finally, the predictor
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1
2 variables have been mean-centred to allow for more meaningful interpretation of the
3
4 regression analyses.
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6 For the full PADS+ sample, regression model I analyses moral emotion ($\beta = -$
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8 $.114, p = .042$) and moral rules ($\beta = -.230, p < .001$) as predictors of assault frequency
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10 (unlogged) and explains 11% of the variance (see table 3).¹⁹ Model II gives a higher
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12 explained variance of 19% and incorporates the interaction term ($\beta = .313, p < .001$), as
13
14 well as moral emotion ($\beta = -.043, p = .426$) and moral rules ($\beta = -.165, p < .001$). This
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16 increase in explained variance can be attributed to the interaction of moral rules with
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18 moral emotion. Of key relevance, when the interaction term is added, moral emotion is
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20 no longer a significant predictor of assault; this indicates that it is the interaction
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22 between moral emotion and moral rules that is the fundamental predictor of violence.
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30 **Conclusion and discussion**

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32 The current study makes three overarching conclusions; violent offenders report a
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34 weak ability to exercise empathy and a weak ability to anticipate shame and guilt,
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36 weak empathy is related to a reduced ability to experience shame and guilt, and
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38 weak moral emotion makes a significant contribution to predicting violence,
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40 specifically when moral rules are also weak (this is a key finding which has not
41
42 been explored to date).
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46 This research develops explanations that have previously received little attention
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48 in relation to moral emotion. It develops a detailed explanation of the role of moral
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50 emotion in crime involvement by first exploring the role of ability to anticipate empathy
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52 in the possibility to feel shame and guilt, and second, by exploring the contribution of
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58 ¹⁹ The results are in the same direction when the model is run using all crime as an outcome variable.
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1
2 shame and guilt to the strength of overall individual morality, which ultimately plays a
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4 role in whether crime is perceived for action.
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6 While many theories acknowledge the role of emotions and moral reasoning,
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8 SAT serves to be the most useful in aiding understanding of the implications of the
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10 inter-relationships between empathy, moral emotion, moral reasoning, and its impact
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12 upon offending decisions. In summary, the primary theoretical proposition of the
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14 current study is that weak moral emotion demonstrates a low intensity to which
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16 individuals subscribe to a moral rule (to lead to weak overall morality), and weak
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18 morality primarily determines whether crime is perceived as a viable and morally
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20 acceptable action alternative; this proposition is supported and evidenced using
21
22 empirical data. A comparison of the violent offender subsample and the rest of the
23
24 sample reveal that violent offenders report weaker general empathy, shame, guilt and
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26 moral rules. Regression analyses provide evidence that empathy can predict shame and
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28 guilt and guilt and moral rules can predict violence.
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34 The interaction effect between moral rules and moral emotion is one of the key
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36 findings of the current study and has rarely been analysed or presented in other existing
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38 criminological research. The interaction finding sheds light on the nuanced processes at
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40 play during crime decision-making and emphasises the importance of the role that
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42 moral emotion plays in weakening individual morality, and its association to crime
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44 involvement. Crucially, it emphasises this to be specifically important for those with
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46 weak moral rules. In conclusion, moral emotion has a stronger effect on violence for
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48 young people with weak corresponding weak moral rules; moral emotion alone does not
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50 predict crime but rather, it makes an essential contribution to overall morality, which is
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52 a key predictor of crime frequency. The results support the key hypotheses of the study
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1
2 and provide a firm context for the importance of further and future work to explore the
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4 role of moral emotion in violence.
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6 There are numerous strengths to the current study. Situational action theory,
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8 combined with robust empirical data, achieves an explanatory line of enquiry (and the
9
10 identification of the mechanisms at play), as opposed to a less fruitful enquiry of basic
11
12 associations. Use of self-reported data enables and captures a more valid picture of real-
13
14 life crime in comparison to incomplete officially recorded police data due to the well-
15
16 documented existence of a hidden or dark figure in police-recorded statistics (see
17
18 Wikstrom 1985). However, it should be noted that self-report data may not be entirely
19
20 bullet-proof; given the constructs of interest in the current study, allowance should be
21
22 made for the possibility that young people who report low levels of guilt and shame
23
24 may be more willing to self-report crime.²⁰ A further strength to the current study is
25
26 that PADS+ data is highly reliable (Wikstrom et al, 2012) and this is particularly
27
28 important for generalisability of these study findings to the population. Although the
29
30 questionnaire scales constitute items which refer to hypothetical situations, and
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32 therefore measure a general ability to exercise empathy, and a general ability to
33
34 anticipate shame and guilt; further research indicates that in-depth interview data, which
35
36 provides more detail and more specificity, confirms the importance of the situational
37
38 application of empathy, shame, and guilt in specific real-life violent events (see
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40 [author(s)]).

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43 There are numerous limitations to the current study. First, the study does not
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45 take into account the role of wider societal and cultural factors such as cultural practices
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47 and norms and religiosity (all of which are likely to play a role in the development of
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56 ²⁰ In order to explore this possibility, PADS+ self-reported data has been compared to police recorded
57 official data and reveals that young people in the study self-report the crimes that involved police contact
58 as well as many crimes that did not (see Wikstrom et al 2012).
59
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1
2 morality and the settings that people partake in). Second, as there are no control
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4 variables used in the analyses in the current study, the generalisability of the findings
5
6 may be limited. Third, since the violent subsample includes high-frequency crime
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8 offenders, the specific subsample comparison analyses may be more applicable to
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10 serious and persistent offenders as opposed to individuals that commit minor acts of
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12 violence.
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16 Another primary limitation involves the issue of establishing causation between
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18 moral emotion and violence. Although causation, i.e. the role that a change in moral
19
20 emotion can play in a change in violent behaviour, can only be tested using real-life
21
22 experiments (involving manipulating people's emotions and environments), this is
23
24 unethical, impractical, and likely unfeasible. However, the current study offers a
25
26 suitable alternative, which involves the development of testable implications and
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28 assumptions and testing of them, and therefore enables reasonably firm conclusions to
29
30 be made regarding the processes and mechanisms by which violence occurs.
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35 Future research can accommodate plausible mechanisms that explain a link
36
37 between morality and crime by incorporating the role of the setting, the importance of
38
39 which is evidenced in numerous studies that have tested the situational action theory
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41 framework (Pauwels, Svensson, & Hirtenlenher, 2018). Although the current study
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43 focuses its research efforts on exploration of the explanations and related mechanisms
44
45 of why crime (and specifically violence) occur, the ultimate hope for crime research is
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47 that it will be channelled towards and translated to prevention efforts. This is imperative
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49 in order to investigate the processes by which persistent violent offenders continue to
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51 commit a large volume of violent crime, which constitutes a large proportion of total
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53 crime. In order to reduce the possibility of crime being seen as an action alternative,
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55 moral emotion development in childhood and adolescence is instrumental.
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Figure

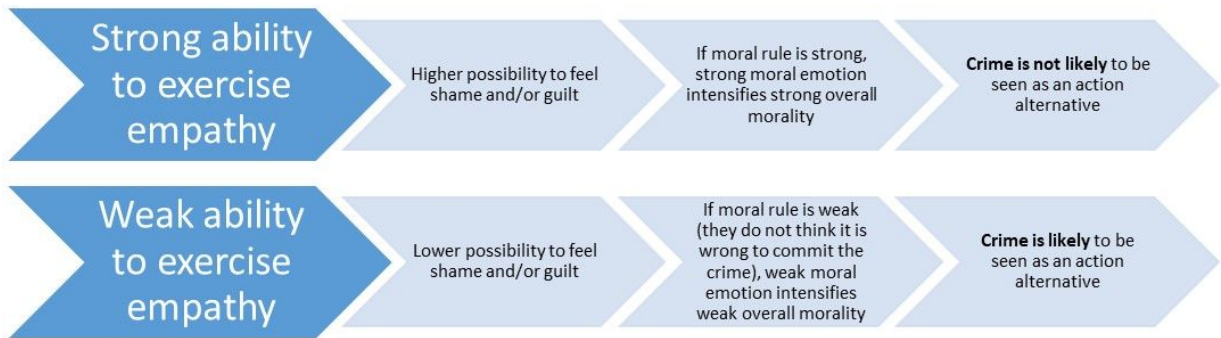


Figure 1: Conceptual model of the relationships between empathy, shame and guilt, and the decision to engage in crime

Tables

	Violent subsample	Rest of the sample	Difference between means	T-test significance	Eta ² x 100
General empathy (total score 51)	29.4	33.8	-4.4	.000	3
Shame (total score 12)	8.7	10.8	-2.1	.000	6
Guilt (total score 12)	7.3	9.7	-2.4	.000	8
Moral rules (total score 48)	25.5	30.1	-4.6	.000	3
Assault frequency (unlogged)	50.7	3.8	46.9	.000	18
Total crime frequency	192.3	14.5	177.8	.000	18

Table 1: Comparison of mean scores for the violent subsample (N=48) and the rest of the sample (N=607): empathy, shame, guilt, moral rules, and crime

-Eta² x 100 is reported to provide the percentage of variance explained for ease of interpretation.

	R Square	B	Beta	Sig
Model I				
	.31			
Guilt		-.020	-.507	.000
Shame		-.002	-.062	.280
Model II				
	.34			
Guilt		-.014	-.357	.000
Shame		-.001	-.026	.645
Moral rules		-.003	-.238	.000

Table 2: Regression predicting assault frequency (logged) by shame and guilt (model I) and shame, guilt, and moral rules (model II) (N=655)

	R Square	B	Beta	Sig
Model I				
	.11			
Moral emotion		-.131	-.114	.042
Moral rules		-.183	-.230	.000
Model II				
	.19			
Moral emotion		-.049	-.043	.426
Moral rules		-.131	-.165	.002
Moral emotion*moral rules (interaction)		1.19	.313	.000

Table 3: Regression predicting assault frequency (unlogged) by moral emotion and moral rules (model I) and moral emotion, moral rules, and their interaction (model II) (N=655)