

Relationships Among Moral Reasoning, Empathy, and Distorted Cognitions in Men With Intellectual Disabilities and a History of Criminal Offending

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Abstract

Eighty men, spread equally across 4 groups, were recruited, including men with and without intellectual disabilities. The men were either criminal offenders or nonoffenders. Participants completed measures of moral reasoning, empathy, and distorted cognitions. The results indicated that the moral reasoning abilities of offenders with intellectual disabilities were developmentally delayed but were still more mature than those of nonoffenders with intellectual disabilities. Offenders without intellectual disabilities had less mature moral reasoning abilities than nonoffenders without intellectual disabilities. The differences may be partially accounted for by intellectual ability. The results also indicated that the relationship between empathy and distorted cognitions was mediated by moral reasoning. The findings have implications for the use of psychological interventions with offenders with intellectual disabilities.

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Piaget (1932) is often credited as the first theorist to consider the moral development of children from a psychological perspective. Later, Kohlberg (1969, 1976) revised Piagetian theory and extended the theory beyond childhood and into adolescence and adulthood. However, Kohlberg's

theory has been criticized for being culturally biased (Simpson, 1974) and based on Western liberalism (Schweder, 1982; Sullivan, 1977). Others have noted that the theory appears based on masculine conceptualizations of morality (Gilligan, 1982), whereas others have commented that the

Table 1. Gibbs' Sociomoral Stage Theory (Gibbs, 2003, 2010)

Level and stage	Description
Level 1: Immature	
Stage 1: Unilateral and physicalistic	Moral justifications are based on unilateral authority and rules, or related to punitive consequences of the violation of rules.
Stage 2: Exchanging and instrumental	Moral justifications based on an understanding that has arisen from social interaction. For example, decisions to help others may be justified because that person may help you in the future. However, justifications remain superficial.
Level 2: Mature	
Stage 3: Mutual and prosocial	Moral justifications are characterized by further decentration, and are based on a prosocial understanding of emotional states (e.g., empathy), care, and good conduct.
Stage 4: Systemic and standard	Further maturity is indexed by the development of an understanding of the complex social structures in which humans live. Justifications are also based on constructs such as rights, values, and character within society. Other justifications may be based on social justice and responsibility or conscience.

theory does not consider emotion (Sullivan, 1977). More recently, Krebs and Denton (2005) have argued that, in contrast to Kohlberg's proposals, moral reasoning is not structurally consistent across all contexts. Some of these criticisms led Gibbs (1979, 2003, 2010) to revise Kohlberg's theory into a sociomoral stage theory (Table 1). Other perspectives have also been adopted, placing moral development within the social (Semetana, 1999; Turiel, 1983, 2002) or emotional (Eisenberg, Reykowski, & Staub, 1989; Hoffman, 2000) domains.

Although there are some differences among these theoretical approaches, both Gibbs (1979, 2003, 2010) and Hoffman (2000) argued that empathy is an important emotion that relates to moral reasoning and behavior. However, Hoffman (2000) considered empathy to be the primary motivator of moral behavior and argued that this relationship is affected by moral reasoning or principles. Hoffman (2000) stated that "the cognitive dimension...helps give structure and stability to empathic affects, which should make empathic affects less vulnerable to bias" (p. 216). He suggested that moral principles are activated by empathy, and empathy can become embedded within or bonded with moral principles. In turn, moral principles are augmented by empathic states and, therefore, affect behavioral responses. He further argued that this bonding leads to the

creation of "hot cognitions—cognitive representations charged with empathic affect thus giving them motive force" (Hoffman, 2000, p. 239).

Gibbs (2003, 2010) also recognized that empathy may motivate moral behavior, but it may not be the primary motivator of moral behavior. Gibbs (2003, 2010) considered Hoffman's (2000) theory as one of "affective primacy," and instead, argued for a model of *coprimacy*, where both empathy and moral principles motivate moral behavior. Nevertheless, both theories of Gibbs and Hoffmann recognized that cognition and empathy may be augmented by each other and that cognitions stem from moral schema.

Unfortunately, the advances in moral development theory have not explicitly considered people with intellectual disabilities, and, in an attempt to address this shortcoming, Langdon, Clare, and Murphy (2010) undertook a structured review of the literature regarding the moral development of people with intellectual disabilities. They concluded that the moral development of children, adolescents, and adults with intellectual disabilities tends to occur at a slower pace than that of typically developing individuals. These differences in the rate of development may disappear when cognitive ability is controlled. Langdon, Clare, et al. (2010) stressed that their conclusions must be considered preliminary

because many of the existing studies made use of measures of moral reasoning that were idiosyncratic and unstandardized.

To address the issues highlighted by their review, Langdon, Murphy, Clare, and Palmer (2010) examined the psychometric properties of two different moral reasoning measures. They presented the Moral Theme Inventory (MTI; Narvaez, Gleason, Mitchell, & Bentley, 1999), a recognition instrument, and the Socio-Moral Reflection Measure—Short Form (SRM-SF; Gibbs, Basinger, & Fuller, 1992), a production instrument, to men with and without intellectual disabilities of similar age and with no known history of arrests, cautions, or convictions. They reported that, for men with intellectual disabilities, the 2-week test–retest reliability of the MTI was poor, whereas it was good for the SRM-SF. They also found that the moral reasoning abilities of men with intellectual disabilities were less developed than those of their counterparts without intellectual disabilities and that the differences could be partially accounted for by intellectual ability. Nevertheless, even when IQ was controlled, differences between the two groups remained in relation to moral reasoning about the law. The scores of men with intellectual disabilities fell within a transition stage between Stages 1 and 2 (Table 1).

In a subsequent article, Langdon, Clare, and Murphy (2011) suggested that the relationship between moral reasoning and illegal behavior may be moderated by intellectual functioning and that this relationship may approximate an inverted U-curve. Based on these proposed relationships, the moral reasoning of men with intellectual disabilities and no history of engaging in illegal behavior should be developmentally immature. Moral justifications at the early stages are based on unilateral authority or avoidance of punishment, and, therefore, such individuals should be less likely to engage in illegal behavior. In contrast, as a group, individuals with a history of engaging in illegal behavior should be more likely to have borderline intellectual functioning and more mature moral reasoning, but this reasoning is still developmentally immature and should fall within the stages associated with meeting one's own needs.

There is considerable evidence that moral reasoning is related to offending behavior among young offenders (Blasi, 1980; Nelson, Smith, & Dodd, 1990; Stams et al., 2006). From a theoretical perspective, Gibbs (2003, 2010) has

argued that young offenders have immature moral judgement, distorted cognitions, and social skills deficits that interact and lead to illegal behavior. Illegal behavior is then driven by cognitive distortions that are generated by the development of schema reflecting the individual's moral stage. This account has been elaborated on by Palmer (2003a, b), who embedded moral reasoning within a developmental theory incorporating parental and peer influence, information processing, and social and environmental factors. Like Gibbs, Palmer proposed that immature moral reasoning leads to the generation of cognitive distortions, which are used by an individual to support his or her illegal behavior. Palmer, thereby, provided a theoretical link between moral reasoning theory and illegal behavior.

Given the evidence of a relationship between illegal behavior and immature moral reasoning among young offenders, we undertook this study to investigate the moral reasoning abilities of offenders with and without intellectual disabilities. The purpose of the study was twofold. First, we examined the moral reasoning abilities of offenders with and without intellectual disabilities and compared these abilities to those of non-offenders with and without intellectual disabilities. We hypothesized that the moral reasoning abilities of nonoffenders with intellectual disabilities should be more limited than offenders with intellectual disabilities. Among those without intellectual disabilities, offenders should have more immature moral reasoning than nonoffenders. Second, based on the theoretical relationships among moral reasoning, distorted cognitions, and empathy (Gibbs, 2003, 2010; Hoffman, 2000), we examined whether the relationship between empathy and distorted cognitions would be mediated by moral reasoning.

Method

Participants

Eighty men were recruited from the east of England (United Kingdom) and allocated to four groups: (a) men with intellectual disabilities and no self-reported known history of arrests, cautions, or convictions (M IQ = 58.8, SD = 5.87; M age = 45.35 years, SD = 16.57 years) formed the intellectual disabilities group; (b) men with intellectual disabilities and a documented history of at least one Crown Court conviction that led to

a custodial sentence ($M IQ = 62.9$, $SD = 5.22$; M age = 33.60 years, $SD = 7.54$ years) formed the intellectual disabilities–offenders group; (c) men without intellectual disabilities with a documented history of at least one Crown Court conviction that led to a custodial sentence ($M IQ = 89.50$, $SD = 11.12$; M age = 38.80 years, $SD = 15.20$ years) formed the comparison-offender group; and (d) men without intellectual disabilities with no known history of arrests, cautions, or convictions as determined by self-report ($M IQ = 103.25$, $SD = 5.77$; M age = 38.70, $SD = 12.99$) formed the comparison group.

The specific inclusion criteria were as follows: (a) male sex, because there is some evidence that men and women make moral judgments differently (Gilligan, 1982; Kohlberg et al., 1983, 1984; Walker, 1995); (b) Full-Scale IQ score less than 70 for participants within the intellectual disabilities and intellectual disabilities–offender groups, with associated difficulties with adaptive behavior (considered present if the person was receiving support from specialist services for health and/or social care) that had an onset before the age of 18 years (American Psychiatric Association, 2000), (c) Full-Scale IQ score more than 70 in participants in the comparison and comparison–offender groups; and (d) offenders having committed an indictable offense that had been handled by a Crown Court. Offenders who had tried by a Crown Court were included because, in England, these are used to deal with more severe offenses (attracting a prison sentence of more than 6 months).

Design

A 2 (intellectual disabilities: with vs. without) \times 2 (offense: offended vs. not offended) between-subjects design was used. Initially, all participants completed the Wechsler Adult Intelligence Scale—III^{U.K.} (WAIS-III^{U.K.}) to assess their general intellectual functioning. Participants then completed the (SRM-SF; Gibbs et al., 1992), a measure of moral reasoning; the Bryant Empathy Index (BEI; Bryant, 1982), a measure of emotional empathy; and, last, the How I Think Questionnaire (Barriga, Gibbs, Potter, & Liau, 2001), a measure of distorted cognitions.

Measures

Offense data. Information about convictions was initially sought from the research participant

directly and consent was obtained to verify disclosures by referencing records. To account for the difficulties with indexing convictions simply by frequency, without taking severity into account, offense data were ranked in terms of severity by drawing on the findings of Francis, Soothill, and Dittrich (2001), who used a paired-comparisons method to devise an offense-seriousness score. Similar methods have been used more recently in the United States (Ramchand, Macdonald, Haviland, & Morral, 2009). As a consequence, offense data from participants were assigned a severity score on the basis of the data presented by Francis et al. (2001), and the offense with the highest severity score for each participant was ranked in ascending order (higher ranks indicate greater severity).

General intellectual functioning. The WAIS-III^{U.K.} (Wechsler, 1998) was used to assess the general intellectual functioning of participants. This form of the WAIS-III is a well-developed, reliable, and valid measure of general intelligence that has been standardized on a British population. Reliability coefficients for the WAIS-III^{U.K.} IQ Scales range from 0.88 to 0.97 (Tulskey, Zhu, & Ledbetter, 1997). The WAIS-III^{U.K.} yields three different IQ scores; Verbal IQ, Performance IQ, and Full-Scale IQ. Full-Scale IQ is an aggregate of the Verbal and Performance IQ scores and represents global intellectual functioning.

Moral reasoning. The SRM-SF is a production measure of moral reasoning (Gibbs et al., 1992) and has been shown to possess high levels of test–retest reliability ($r = .88$; Gibbs et al., 1992), and excellent internal consistency ($\alpha = 0.92$; Gibbs et al., 1992). Langdon et al. (Langdon, Clare, & Murphy, 2010; Langdon, Murphy, Clare, & Palmer, 2010) demonstrated that the SRM-SF has substantial internal consistency and good test–retest reliability when used with men with intellectual disabilities. The SRM-SF is valid because it is positively correlated with the Moral Judgement Interview and discriminates between children of differing chronological ages, as well as between adolescents who are “delinquent” and those who are “nondelinquent” (Gibbs et al., 1992).

The SRM-SF comprises 11 questions and generally takes about 20 min to present. The questions relate to the following seven constructs: (a) contract (Questions 1–3), (b) truth (Question 4), (c) affiliation (Questions 5–6), (d) life (Questions 7–8), (e) property (Question 9), (f) law (Question 10), and (g) legal justice (Question 11).

Each question is relatively brief and invites the respondent first to consider the importance of behaving in a certain manner, or making a certain decision, within the context of a forced choice. For example, when asked the question, “Think about when you’ve made a promise to a friend of yours. How important is it for people to keep promises, if they can, to their friends?”, the respondent is asked to choose whether this is *very important*, *important*, or *not important*. Next, respondents are asked to consider further by answering the following question, “Why is that very important/important/not important?”. Respondents write their answers on the questionnaire, or give them orally to be recorded by the interviewer. All answers from the participants with intellectual disabilities were recorded by the interviewer.

Verbatim answers are scored according to a set of complex rules and heuristics, and the development of proficient and reliable scoring occurs through the use of practice scoring material (Gibbs et al., 1992). Responses to each question are assigned a developmental rating that corresponds to a moral stage associated with Gibb’s sociomoral reasoning theory. At least 7 of the 11 questions must be answered with scoreable material for a questionnaire to be scored reliably. After a developmental rating is assigned to each question, it is converted to a number (e.g. a developmental rating of 1 corresponds to Moral Stage 1 and is assigned the value of 1). Scores across all the questions are then summed, and the mean is calculated and multiplied by 100, yielding a possible score of 100 to 400. As shown in Table 2, these scores correspond to a person’s global moral stage. In addition, moral stage ratings can be generated for each of the seven constructs examined by the SRM-SF: The scores generated across these constructs are interpreted using Table 2. The interrater reliability of the scoring of the SRM-SF was also calculated using an expert rater (E. P.), who scored a random sample of 19% ($n = 15$) of completed questionnaires. Interrater reliability was determined to be $r_1 = .99$ using an intraclass correlation.

Empathy. The (BEI; Bryant, 1982) is a 22-item measure of emotional empathy. The scale was designed for use with children and adolescents to measure emotional empathy in a trait-like manner. Bryant demonstrated that the BEI had good to excellent test-retest reliability and adequate to substantial internal consistency. One of the

Table 2. The Relationship Between Scores on the Sociomoral Reflection Measure—Short Form (Gibbs, Basinger, & Fuller, 1992) and Moral Stages

Score	Moral stage
100–125	Stage 1
126–149	Transition Stage 1(2)
150–174	Transition Stage 2(1)
175–225	Stage 2
226–249	Transition Stage 2(3)
250–274	Transition Stage 3(2)
275–325	Stage 3
326–349	Transition Stage 3(4)
350–374	Transition Stage 4(3)
375–400	Stage 4

difficulties associated with measuring empathy among people with and without intellectual disabilities is that there is no measure of empathy that can be satisfactorily used with both groups. We considered the BEI a measure that might be suitable because it is short and relatively easy to understand and responses to items are coded as simply *yes* or *no*. However, some of the items are potentially inappropriate for use with adults, and some minor modification to items was, therefore, required. For example, some of the items make reference to “boys” or “girls,” and these words were replaced with “men” or “women.” Details of the original items contained within the BEI, and the revised items, are shown in Table 3. As a consequence of these revisions, the internal consistency and split-half reliability of the BEI was calculated. The internal consistency of the BEI was found to be $k = 0.64$.

Cognitive distortions. The HIT Questionnaire (Barriga et al., 2001) is a measure of cognitive distortions based on the following four categories proposed by Gibbs and colleagues (Gibbs, 1991, 1993; Gibbs, Potter, & Goldstein, 1995): (a) Self-Centered, (b) Blaming Others, (c) Minimizing–Mislabeled, and (d) Assuming the Worst. The HIT has 54 items, and respondents are asked to indicate their degree of agreement along a 6-point scale from *agree strongly* to *disagree strongly*. Total and mean scores are derived for the four categories of distorted thinking as well as four Behavioral Referent subscales: (a) Opposition–Defiance, (b) Physical Aggression, (c) Lying, and (d) Stealing. An Anomalous Responding scale is also calculated, along with three Summary Scales:

Table 3. Original Modified Items of the Bryant Empathy Index (Bryant, 1982)

Original items	Modified items
1. It makes me sad to see a girl who can't find anyone to play with. ^a	1. It makes me sad to see an elderly woman who has no one to talk to.
2. People who kiss and hug in public are silly.	2. People who kiss and hug in public are silly.
3. Boys who cry because they are happy are silly. ^a	3. Men who cry because they are happy are silly.
4. I really like to watch people open presents, even when I don't get a present myself.	4. I really like to watch people open presents, even when I don't get a present myself.
5. Seeing a boy who is crying makes me feel like crying. ^a	5. Seeing a man who is crying makes me feel like crying.
6. I get upset when I see a girl being hurt.	6. I get upset when I see a girl being hurt.
7. Even when I don't know why someone is laughing, I laugh too.	7. Even when I don't know why someone is laughing, I laugh too.
8. Sometimes I cry when I watch TV.	8. Sometimes I cry when I watch TV.
9. Girls who cry because they are happy are silly. ^a	9. Women who cry because they are happy are silly.
10. It's hard for me to see why someone else gets upset.	10. It's hard for me to see why someone else gets upset.
11. I get upset when I see an animal being hurt.	11. I get upset when I see an animal being hurt.
12. It makes me sad to see a boy who can't find anyone to play with. ^a	12. It makes me sad to see an elderly man who has no one to talk to.
13. Some songs make me feel so sad I feel like crying.	13. Some songs make me feel so sad I feel like crying.
14. I get upset when I see a boy being hurt.	14. I get upset when I see a boy being hurt.
15. Grown-ups sometimes cry even when they have nothing to be sad about. ^a	15. Adults sometimes cry even when they have nothing to be sad about.
16. It's silly to treat dogs and cats as though they have feelings like people.	16. It's silly to treat dogs and cats as though they have feelings like people.
17. I get mad when I see a classmate pretending to need help from the teacher all the time. ^a	17. I get angry when I see someone pretending they need help all the time.
18. Kids who have no friends probably don't want any. ^a	18. People who have no friends probably don't want any.
19. Seeing a girl who is crying makes me feel like crying. ^a	19. Seeing a woman who is crying makes me feel like crying.
20. I think it is funny that some people cry during a sad movie or while reading a sad book.	20. I think it is funny that some people cry during a sad movie or while reading a sad book.
21. I am able to eat all my cookies even when I see someone looking at me wanting one. ^a	21. I am able to eat all my biscuits even when I see someone looking at me wanting one.
22. I don't feel upset when I see a classmate being punished by a teacher for not obeying school rules. ^a	22. I don't feel upset when I see someone being punished for breaking the rules.

^aItem has been modified.

(a) Overt Scale, (b) Covert Scale, and (c) Total Score Scale. The Overt Scale is calculated from the Opposition–Defiance and Physical Aggression subscales, whereas the Covert Scale is calculated from the Lying and Stealing subscales. The Total

Score is calculated from all subscales. Barriga et al. (2001) reported that confirmatory factor analysis supported the structure of the HIT. The internal consistency of the HIT has been reported to range from 0.63 to 0.96, and the measure has been

shown to possess convergent, divergent, and discriminant validity (Barriga et al., 2001).

Procedure

Following the receipt of a favorable ethical opinion from the Hertfordshire NHS Research Ethics Committee, information about the study was disseminated in different ways to participants who were likely to have capacity to give or withhold consent to participation.

For the intellectual disabilities group, managers of day services and community intellectual disabilities teams were contacted directly and informed of the project. They were asked to distribute information leaflets to men with intellectual disabilities using their services. They were specifically directed not to share information regarding the study with anyone using their service who they knew to have a history of arrests, cautions, or convictions. Any man who expressed an interest in taking part was asked to alert his keyworker, who then informed the relevant manager. The manager then contacted the researcher (P. E. L.) to inform him of the number of possible participants at a site, and a mutually convenient time was arranged to attend the site and speak to potential participants. After someone indicated that he might like to take part, full information about the study was provided, and if he wished to take part, written consent was sought.

The intellectual disabilities–offender group was recruited by contacting medium–secure hospitals in the east of England and gaining permission to share information about the study with potential participants who were known to have intellectual disabilities and a history of criminal offending. All men were detained in hospital under the Mental Health Act 2003 (amended in 2007). Any men who expressed an interest in taking part were asked to inform a member of staff, who contacted the researcher. The researcher then met with the potential participant and additional information about the study was provided, and again, written consent was sought.

The comparison–offender group was recruited through the National Probation Service. Information about the study was shared with Probation Services, who passed information to individuals who met the inclusion criteria. Any potential participants who expressed an interest in taking part were advised to share this information with a

member of staff, who then contacted the researcher. The researcher then met with the potential participant and additional information about the study was provided. Participants who wished to take part were asked to provide written consent.

Last, information about the study was disseminated to the comparison group in several ways. Information sheets were distributed by their managers to men employed within a university in a nonacademic position. Information about the study was also disseminated using an advertisement email system at this university. Participants were asked not to volunteer for the study if they had a history of arrests, cautions, or convictions. Interested participants were invited to contact the researcher directly, and written consent was given by those who wished to take part.

No participant was included if he appeared to lack capacity to take part or withheld consent. Participants in all of the four groups were given £10.00 (approximately \$15.00 U.S.) in shopping vouchers as a token of appreciation.

Data Preparation and Analysis

All data were entered into a database and analysed using PASW Statistics Version 18.0.2 (IBM, 2009). Descriptive data were generated and examined, and any errors were checked and corrected as appropriate. Data were inspected for departures from normality by visual inspection of histograms and the generation of P-P plots. No variables departed substantially from normality, with the exception of the seven constructs assessed using the SRM-SF; however, the overall SRM-SF score was not affected. As a consequence of the nonnormal data, we made use of bootstrapping with 5,000 samples with replacement, within analysis of variance (ANOVA) and analysis of covariance (ANCOVA), using appropriate post hoc testing. Parameter estimates for each model were determined, and bias-corrected-and-accelerated (BC_a) confidence intervals were calculated. The F statistic reported in the Results section was derived using the original data, whereas the significance level and the 95% BC_a confidence interval were derived using bootstrapping. If the BC_a confidence interval does not include zero, differences are considered to be statistically significant at $p < .05$.

To examine the relationships among moral reasoning, empathy, and distorted cognitions, we

followed the recommendations of Baron and Kenny (1986) for investigating mediation, but we also uses appropriate methods for investigating mediation in small samples. Hayes (2009) argued that bootstrapping procedures are more appropriate than parametric statistics for investigating the indirect effect within mediation models because assumptions regarding normality are not necessary and these methods are more powerful. As a consequence, we made use of the methods and macros described by Preacher and Hayes (2004, 2008) for investigating mediation models using bootstrapping. For each of the two simple mediation models we examined, we generated 5,000 bootstrap samples. BC_a confidence intervals were calculated and reported here to examine the significance of the indirect effect within each model.

Results

Descriptive Data

In relation to age, the initial analysis revealed that there was no significant main effect of intellectual disabilities, $F(1, 79) \leq 1.00$, $p = .589$, BC_a 95% CI = -3.40 – 1.93 , or offense, $F(1, 79) = 3.20$, $p = .079$, BC_a 95% CI = -5.22 – 0.21 , but the interaction was significant, $F(1, 79) = 5.83$, $p = .018$, BC_a 95% CI = 0.61 – 5.94 (Table 4). Post hoc testing revealed that the intellectual disabilities group was significantly older than both the intellectual disabilities–offender group ($p = .007$, BC_a 95% CI = 4.26 – 19.24) and the comparison group ($p = .049$, BC_a 95% CI = 0.25 – 16.17), whereas there were no significant differences between the other groups ($p > .05$).

There was no significant difference in offense severity between the intellectual disabilities–offender and the comparison–offender groups ($z = -0.22$, $p = .83$). For intellectual functioning, as expected, those with intellectual disabilities scored significantly lower on the WAIS- III^{U.K.} than those without, $F(1, 79) = 461.60$, $p < .001$, BC_a 95% CI = 16.17 – 19.37 . Offenders also scored significantly lower than nonoffenders, $F(1, 79) = 8.52$, $p = .006$, BC_a 95% CI = -4.07 to -0.76 . There was a significant interaction between the intellectual disabilities factor and offense, $F(1, 79) = 29.14$, $p < .001$, BC_a 95% CI = -6.12 to -2.77 . Post hoc analysis revealed a significant difference among all the groups ($p < .05$; Table 4).

Empathy and Distorted Cognitions

For empathy, participants with intellectual disabilities scored significantly lower on the BEI than those without, $F(1, 79) = 12.00$, $p = .002$; BC_a 95% CI = 0.51 – 1.82 , whereas neither the difference between offenders and nonoffenders, $F(1, 79) \leq 1.00$, $p = .88$, BC_a 95% CI = -0.71 – 0.61 , nor the interaction, $F(1, 79) = 2.17$, $p = .145$, BC_a 95% CI = -0.18 – 1.18 , was significant. However, post hoc analysis indicated that the intellectual disabilities group scored significantly lower ($p = .013$, BC_a 95% CI = -3.22 to -0.57) than the comparison–offender group. The intellectual disabilities–offender group also scored significantly lower than both the comparison–offender group ($p = .002$, BC_a 95% CI = -5.31 to -1.45) and the comparison group ($p = .023$, BC_a 95% CI = -4.43 to -0.36). Differences between the other groups were not significant ($p > .05$; Table 4).

On the HIT, the measure of distorted cognitions, there was no significant main effect for intellectual disabilities with respect to the Anomalous Responding, $F(1, 79) = 3.81$, $p = .06$, BC_a 95% CI = -0.01 – 0.41 ; Self-Centered, $F(1, 79) = 1.68$, $p = .19$, BC_a 95% CI = -0.28 – 0.06 ; or Lying, $F(1, 79) \leq 1.00$, $p = .375$, BC_a 95% CI = -0.25 – 0.09 , subscales; and the Covert Scale, $F(1, 79) = 3.48$, $p = .065$, BC_a 95% CI = -0.29 – 0.01 (Table 4). However, men with intellectual disabilities scored significantly higher than men without intellectual disabilities on the Blaming Others, $F(1, 79) = 17.16$, $p < .001$, BC_a 95% CI = -0.51 to -0.19 ; Minimizing–Mislabeling, $F(1, 79) = 4.15$, $p = .046$, BC_a 95% CI = -0.32 to -0.01 ; Assuming the Worst, $F(1, 79) = 6.07$, $p = .019$; BC_a 95% CI = -0.39 to -0.05 ; Opposition–Defiance, $F(1, 79) = 13.12$, $p = .001$, BC_a 95% CI = -0.51 to -0.15 ; Physical Aggression, $F(1, 79) = 4.15$, $p = .048$, BC_a 95% CI = -0.35 to -0.01 ; and Stealing, $F(1, 79) = 5.94$, $p = .021$, BC_a 95% CI = -0.36 to -0.04 , subscales; as well as the Overt, $F(1, 79) = 9.54$, $p = .004$, BC_a 95% CI = -0.41 to -0.10 , and HIT Total, $F(1, 79) = 7.30$, $p = .011$, BC_a 95% CI = -0.35 to -0.05 , Scales.

There were no significant differences between the offenders and nonoffenders on the Anomalous Responding, $F(1, 79) \leq 1.00$, $p = .602$, BC_a 95% CI = -0.15 – 0.26 , and Physical Aggression subscales, $F(1, 79) = 2.14$, $p = .146$, BC_a 95% CI = -0.04 – 0.30 . However, offenders scored

Table 4. Descriptive Statistics for Empathy and Cognitive Distortions for Men With and Without Intellectual Disabilities and Offenders and Nonoffenders

Variable	Intellectual disabilities (IDs)		Intellectual disabilities—offenders (IDs-O)		Comparison offenders (CO)		Comparison (C)		Post hoc tests
	M	SD	M	SD	M	SD	M	SD	
Age	45.35	16.58	33.60	7.54	38.80	15.20	37.05*	7.88	IDs > IDs-O**; IDs > C*
Offense severity (rank)			20.83	12.47	20.18	10.86	—	—	
WAIS-III Full-Scale IQ	58.80	5.87	62.90	5.22	89.50	11.12	103.25	5.67	IDs < IDs-O*; IDs < CO***; IDs < C***; IDs-O < CO***; IDs-O < C***; CO < C***
Bryant Empathy Index	14.65	2.85	13.55	3.62	16.90	2.65	16.00	2.91	IDs < CO*; IDs-O < CO**; IDs-O < C*
How I Think Questionnaire (M Scores)									
Anomalous Responding	3.05	0.84	3.29	1.12	3.56	0.99	3.59	0.72	
Self-Centered	2.07	0.67	2.56	0.97	2.26	0.78	1.91	0.59	IDs-O > C*
Blaming Others	2.44	0.73	3.12	0.94	2.36	0.72	1.81	0.56	IDs < IDs-O*; IDs > C**; IDs-O > CO**; IDs-O > C***; CO > C*
Minimizing—Mislabeling	2.04	0.59	2.49	0.86	2.11	0.86	1.76	0.52	IDs-O > C**
Assuming the Worst	2.20	0.60	2.47	1.03	2.17	0.75	1.65	0.63	IDs > C**; IDs-O > C**; CO > C*
Opposition—Defiance	2.50	0.59	3.26	1.05	2.57	0.94	1.88	0.51	IDs < IDs-O**; IDs > C**; CO**; IDs-O > C***; CO > C**
Physical Aggression	2.09	0.75	2.16	0.97	1.99	0.79	1.55	0.56	IDs > C*; IDs-O > C*; CO > C*
Lying	2.09	0.52	2.91	1.10	2.49	0.77	2.21	0.55	IDs < IDs-O**; IDs-O > C*
Stealing	2.01	0.58	2.40	0.97	1.99	0.72	1.63	0.56	IDs > C*; IDs-O > C**
Overt Scale	2.29	0.57	2.70	0.91	2.28	0.81	1.73	0.50	IDs > C**; IDs-O > C***; CO > C*
Covert Scale	2.05	0.52	2.64	0.90	2.22	0.65	1.92	0.54	IDs < IDs-O*; IDs-O > C**
Total Score	2.18	0.53	2.67	0.85	2.24	0.72	1.81	0.50	IDs < IDs-O*; IDs > C*; IDs-O > C***; CO > C*

Note. WAIS-III = Wechsler Adult Intelligence Scale (Wechsler, 1998); Bryant Empathy Index (Bryant, 1982); How I Think Questionnaire (Barriga et al., 2001). **p* < .05. ***p* < .01. ****p* < .001.

significantly higher on the Self-Centered, $F(1, 79) = 5.92, p = .017$, BC_a 95% CI = 0.05–0.38); Blaming Others, $F(1, 79) = 13.39, p < .001$, BC_a 95% CI = 0.13–0.47); Minimizing–Mislabeling, $F(1, 79) = 3.24, p = .016$, BC_a 95% CI = 0.04–0.36; Assuming the Worst, $F(1, 79) = 5.30, p = .025$, BC_a 95% CI = 0.04–0.37; Opposition–Defiance, $F(1, 79) = 15.88, p < .001$, BC_a 95% CI = 0.18–0.53; Lying, $F(1, 79) = 10.27, p = .04$, BC_a 95% CI = 0.11–0.44; and Stealing, $F(1, 79) = 5.29, p = .028$, BC_a 95% CI = 0.03–0.35) subscales; and the Overt, $F(1, 79) = 9.16, p = .003$, BC_a 95% CI = 0.09–0.40; Covert, $F(1, 79) = 8.91, p = .004$, BC_a 95% CI = 0.08–0.38; and HIT Total, $F(1, 79) = 9.68, p = .003$, BC_a 95% CI = 0.08–0.38, Scales (Table 4). None of the interactions between the intellectual disabilities and offense factors were significant, and, as a consequence, post hoc analyses of the subscales are not reported here (but they can be found in Table 4).

However, post hoc analyses of the Total scales on the HIT indicated that the intellectual disabilities group scored significantly lower than the intellectual disabilities–offender group on the Covert ($p = .014$, BC_a 95% CI = -1.08 to -0.14), and Total HIT Scales ($p = .034$, BC_a 95% CI = -0.95 to -0.02). The intellectual disabilities group scored significantly higher than the comparison group on the Overt ($p = .002$, BC_a 95% CI = 0.22–0.88) and Total HIT ($p = .029$, BC_a 95% CI = 0.04–0.71) Scales. There were no differences between the intellectual disabilities group and the comparison-offenders group on the Overt, Covert, or Total HIT Scales ($p > .05$). The intellectual disabilities–offender group and the comparison-offender group did not differ significantly on the Covert, Overt or Total HIT Scales ($p > .05$), whereas the intellectual disabilities–offender group scored significantly higher than the comparison group on the Overt ($p < 0.001$, BC_a 95% CI = 0.53–1.46), Covert ($p = .003$, BC_a 95% CI = 0.26–1.20), and Total HIT ($p < .001$, BC_a 95% CI = 0.45–1.30) Scales. The comparison-offenders group scored significantly higher than the comparison group on the Overt ($p = .015$, BC_a 95% CI = 0.14–0.95), and Total HIT Scales ($p = .033$, BC_a 95% CI = 0.05–0.81; Table 4).

Moral Reasoning

On the SRM-SF, the measure of moral reasoning, those with intellectual disabilities

scored significantly lower than those without intellectual disabilities on Contract, $F(1, 79) = 120.95, p < .001$, BC_a 95% CI = 40.57–58.34; Truth, $F(1, 77) = 102.89, p < .001$, BC_a 95% CI = 51.56–75.89; Affiliation, $F(1, 79) = 53.79, p < .001$, BC_a 95% CI = 30.41–52.26; Life, $F(1, 79) = 50.97, p < .001$, BC_a 95% CI = 27.64–49.39; Property, $F(1, 78) = 73.92, p < .001$, BC_a 95% CI = 44.57–71.16; Law, $F(1, 74) = 165.65, p < .001$, BC_a 95% CI = 70.97 to 96.29; Legal Justice, $F(1, 79) = 207.25, p < .001$, BC_a 95% CI = 59.12–77.39; and total SRM-SF, $F(1, 79) = 207.91, p < .001$, BC_a 95% CI = 45.18–59.66, Scores. In contrast, there were no significant differences ($p > .05$) between offenders and nonoffenders across all seven constructs and Total Score. There was a significant interaction between intellectual disabilities and offense regarding Contract, $F(1, 79) = 14.95, p < 0.001$, BC_a 95% CI = -26.27 to -8.85 ; Truth, $F(1, 77) = 8.77, p = .003$, BC_a 95% CI = -30.60 to -6.66 ; Affiliation, $F(1, 79) = 6.15, p = .014$, BC_a 95% CI = -25.09 to -2.89 ; Life, $F(1, 79) = 13.79, p < .001$, BC_a 95% CI = -30.91 to -9.31 ; Property, $F(1, 78) = 17.41, p < .001$, BC_a 95% CI = -41.52 to -14.69 ; Law, $F(1, 74) = 22.88, p < .001$, BC_a 95% CI = -43.76 to -18.65 ; Legal Justice, $F(1, 79) = 29.11, p < .001$, BC_a 95% CI = -34.97 to -16.58 ; and Total SRM-SF Scores, $F(1, 79) = 31.03, p < .001$, BC_a 95% CI = -27.49 to -13.01 (Table 5).

Post hoc testing revealed that the intellectual disabilities group scored significantly ($p < .05$) lower than the intellectual disabilities–offender group on Contract, Life, Property, Law, Legal Justice, and Total SRM-SF Scores. However, the difference between the intellectual disabilities group and the intellectual disabilities–offender group on Truth ($p = .22$, BC_a 95% CI = -56.41 – 14.62 , and Affiliation ($p = .215$, BC_a 95% CI = -49.84 – 10.37) was not statistically significant. The intellectual disabilities group scored at the Transition Stage 1(2) on Property, Stage 1 on Law, and at the Transition Stage 2(1) on Legal Justice, whereas the intellectual disabilities–offender group scored at Stage 2 across these constructs. The intellectual disabilities group also scored significantly ($p < .05$) lower than the comparison-offenders and comparison groups on all seven constructs and the Total SRM-SF Score (Table 5).

The intellectual disabilities–offender group scored significantly ($p < .05$) lower than the comparison-offenders and comparison groups across all seven constructs and the Total SRM-SF

Table 5. Moral Reasoning Scores for Men With and Without Intellectual Disabilities and Offenders and Nonoffenders

Sociomoral Reflection Measure—Short Form	Intellectual disabilities group		Intellectual disabilities—offenders group		Comparison—offenders group		Comparison—group		Post hoc tests
	M	SD	M	SD	M	SD	M	SD	
Contract	204.17	46.79	229.17	30.52	293.33	46.01	337.92	35.20	IDs < IDs-O*; IDs < CO***; IDs < C***; IDs-O < CO***; IDs-O < C***; CO < C**
Truth	175.00	55.01	197.37	56.45	287.50	60.43	339.47	48.81	IDs < CO***; IDs < C***; IDs-O < CO***; IDs-O < C***; CO < C**
Affiliation	211.25	53.48	231.25	46.51	286.33	56.83	322.50	45.09	IDs-O < C***; CO < C**
Life	206.25	58.98	247.50	39.65	285.08	58.50	325.25	33.85	IDs < CO***; IDs < C***; IDs-O < CO***; IDs-O < C***; CO < C*
Property	140.00	57.58	205.00	48.40	265.00	69.02	313.16	64.21	IDs < IDs-O***; IDs < CO***; IDs < C***; IDs-O < CO***; IDs-O < C***; CO < C*
Law	122.50	34.31	186.84	36.67	292.50	83.15	353.13	56.18	IDs < IDs-O***; IDs < CO***; IDs < C***; IDs-O < CO***; IDs-O < C***; CO < C*
Legal Justice	167.50	40.64	225.00	42.87	310.53	48.82	355.56	29.15	IDs < IDs-O***; IDs < CO***; IDs < C***; IDs-O < CO***; IDs-O < C***; CO < C**
Total Score	186.59	33.35	224.37	27.64	288.70	36.85	331.92	31.53	IDs < IDs-O***; IDs < CO***; IDs < C***; IDs-O < CO***; IDs-O < C***; CO < C***

Note. ID = intellectual disabilities; O = offenders; CO = comparison offenders; C = comparisons. **p* < .05. ***p* < .01. ****p* < .001.

Score. The intellectual disabilities–offender group scored consistently at Stage 2 across constructs, whereas the comparison–offenders group scored at Stage 2 on Property only (scoring at Stage 3 across the other constructs). However, the comparison–offenders group scored significantly ($p < .05$) lower than the comparison group across all seven constructs and the Total SRM-SF Score (Table 5). The comparison group scored consistently at Stage 3 across all constructs. Examining the differences between the four groups with respect to total SRM-SF score indicated that the differences took the shape of a significant linear trend ($p < .001$).

Moral Reasoning: Controlling for Intellectual Functioning

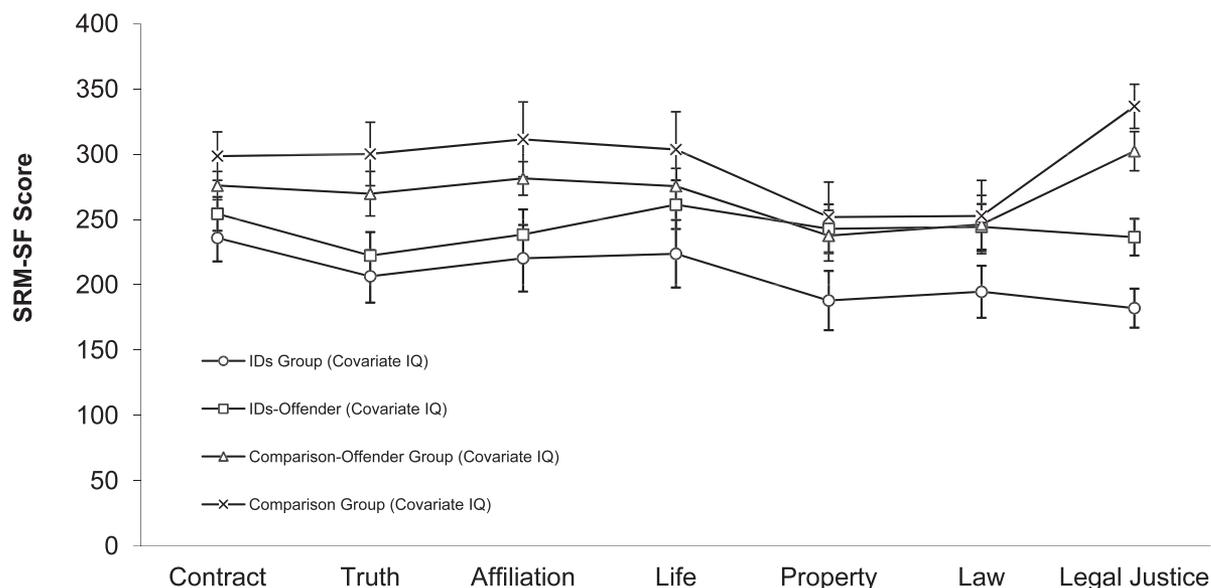
Because there was a positive relationship between intellectual functioning and moral reasoning, with intellectual functioning accounting for 74% of the variability in total moral reasoning score ($R^2 = .74$; $\beta = 0.86$; $B = 2.80$; $t = 14.99$, $p < .001$, BC_a 95% CI = 2.37–3.23), the previous analysis was repeated, controlling for scores on the WAIS- III^{U.K.}. There was no longer a significant main effect for intellectual disabilities regarding Contract, $F(1, 79) = 3.35$, $p = .083$, BC_a 95% CI = -4.64 – 42.96 ; Affiliation, $F(1, 79) = 4.89$, $p = .079$, BC_a 95% CI = -2.55 – 66.27 ; Life, $F(1, 79) = 2.61$, $p = 0.232$, BC_a 95% CI = -10.10 – 56.51 ; Property, $F(1, 78) \leq 1.00$, $p = .42$, BC_a 95% CI = -23.31 – 51.96 ; or Law, $F(1, 74) = 1.04$, $p = 0.316$, BC_a 95% CI = -16.71 – 55.94 . The absence of a significant main effect for offense remained, however, with the exception of moral reasoning regarding the law, where offenders scored higher than nonoffenders, $F(1, 79) = 3.30$, $p = .05$, BC_a 95% CI = 0.75–21.20. The significant interactions among factors remained but not in relation to Contract, $F(1, 79) = 4.06$, $p = .079$, BC_a 95% CI = -21.02 – 2.25 ; Truth, $F(1, 77) = 3.57$, $p = .110$, BC_a 95% CI = -26.07 – 3.13 ; Affiliation, $F(1, 79) = 3.22$, $p = .177$, BC_a 95% CI = -29.64 – 6.96 ; or Life, $F(1, 79) = 6.52$, $p = .06$, BC_a 95% CI = -34.15 – 3.14).

Post hoc analyses indicated that, when Full-Scale IQ was controlled, the intellectual disabilities group was no longer significantly different from the intellectual disabilities–offender group on Contract ($p = .157$, BC_a 95% CI = -43.10 – 6.61), Truth ($p = .371$, BC_a 95% CI = -50.69 – 20.16), or Affiliation ($p = .284$, BC_a 95% CI = -54.19 – 15.98). The intellectual disabilities group

was not significantly different from the comparison–offenders group on Contract ($p = .093$; BC_a 95% CI = -88.19 – 10.42), Affiliation ($p = .068$, BC_a 95% CI = -131.17 – 9.55), Life ($p = .136$, BC_a 95% CI = -124.10 – 17.29), Property ($p = .170$, BC_a 95% CI = -114.91 – 20.33), or Law ($p = .160$, BC_a 95% CI = -130.82 – 12.48). There was no significant difference between the intellectual disabilities group and the comparison group on Contract ($p = .070$, BC_a 95% CI = -125.42 – 11.53), Affiliation ($p = .081$, BC_a 95% CI = -191.83 – 20.67), Life ($p = .139$, BC_a 95% CI = -183.04 – 30.97), Property ($p = .155$, BC_a 95% CI = -152.68 – 22.60), or Law ($p = .167$, BC_a 95% CI = -143.49 – 15.64 ; Figure 1). However, the intellectual disabilities group remained significantly different ($p < .05$) from all other groups on Legal Justice and the Total SRM-SF Score.

When Full-Scale IQ was controlled, the scores of the intellectual disabilities–offender group were not significantly different from those of the comparison–offenders group on Contract ($p = .241$, BC_a 95% CI = -59.76 – 19.38), Truth ($p = .105$, BC_a 95% CI = -109.43 – 15.28), Affiliation ($p = .123$, BC_a 95% CI = -97.28 – 13.43), Life ($p = .613$, BC_a 95% CI = -73.62 – 38.46), Property ($p = .869$, BC_a 95% CI = -54.46 – 65.14), Law ($p = .952$, BC_a 95% CI = -74.36 – 58.45) or total SRM-SF scores ($p = .128$, BC_a 95% CI = -56.72 – 7.06 ; Figure 1). The intellectual disabilities–offender group also did not differ significantly from the comparison group on Contract ($p = .132$, BC_a 95% CI = -97.59 – 19.94), Affiliation ($p = .124$, BC_a 95% CI = -158.81 – 28.88), Life ($p = .393$, BC_a 95% CI = -132.73 – 51.04), Property ($p = .834$, BC_a 95% CI = -92.20 – 66.54), Law ($p = .821$, BC_a 95% CI = -87.07 – 61.79), or the Total SRM-SF Score ($p = .064$, BC_a 95% CI = -99.06 – 4.88 ; see Figure 1). However, the intellectual disabilities–offender group remained significantly different ($p < .05$) from all other groups on Legal Justice.

When Full-Scale IQ was controlled, the comparison–offenders group was not significantly different from the comparison group on Contract ($p = .202$, BC_a 95% CI = -53.88 to 14.76), Truth ($p = 0.137$, BC_a 95% CI = -70.19 – 12.05), Affiliation ($p = .273$, BC_a 95% CI = -82.94 – 27.49), Life ($p = .303$, BC_a 95% CI = -78.40 – 27.01), Property ($p = .535$, BC_a 95% CI = -59.50 – 27.67), Law ($p = .726$, BC_a 95% CI = -44.88 – 30.42), or Total SRM-SF Score ($p = .130$, BC_a 95% CI = -52.96 – 10.35 ; Figure 1). The



Sociomoral Reflection Measure—Short Form

Figure 1. Adjusted *Means* (*SEM*) on the Socio-Moral Reflection Measure—Short Form (Gibbs, Basinger, & Fuller, 1992), controlling for Full-Scale IQ by group. ID = intellectual disabilities.

differences among the four groups on the Total SRM-SF Score took the shape of a significant linear trend ($p = .002$). Both the comparison-offenders group and the comparison group were significantly different ($p < .05$) from all other groups on Legal Justice. These results indicate that, with the exception of Legal Justice, some of the differences among the four groups could be accounted for by differences in intellectual functioning.

Mediation

Initially, correlations (two-tailed) among moral reasoning (SRM-SF Total Score), cognition distortions (HIT Scale), and empathy (BEI) were examined. There was a significant positive relationship between moral reasoning and empathy, $r(80) = .33$, $p = .002$, and significant negative relationships between moral reasoning and cognitive distortions, $r(80) = -.43$, $p < .001$, and empathy and cognitive distortions, $r(80) = -.25$, $p = .025$.

When we investigated the relationships among moral reasoning, cognitive distortions, and empathy, we found that empathy significantly predicted both cognitive distortions ($p = .0249$) and moral reasoning ($p = .0024$). Moral reasoning also significantly predicted cognitive distortions,

controlling for empathy ($p = .0007$). The indirect effect was significant ($z = -2.37$, $p = .0177$), and this was confirmed by the results using the bootstrapping method (95% BCa CI = -0.0601 to -0.0092 ; Figure 2).

Discussion

The results of the current study demonstrated that the moral reasoning of the intellectual disabilities–offender group was more mature than that of the intellectual disabilities group. The moral reasoning of the comparison-offender group was more developed than that of the intellectual disabilities–offender group but less mature than that of the comparison group. The global moral reasoning scores across these four groups approximated a linear trend, even when intelligence had been controlled. Nevertheless, both groups of men with intellectual disabilities were reasoning at global Stage 2, whereas both groups of men without intellectual disabilities were reasoning at global Stage 3.

The analysis suggested that there was no significant difference in emotional empathy between the two groups of men with intellectual disabilities, but the intellectual disabilities group had more limited empathy than the

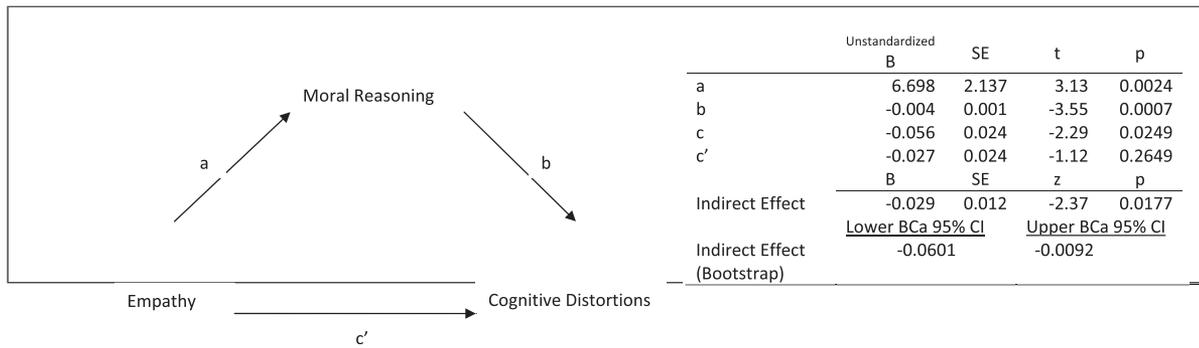


Figure 2. A mediation analysis demonstrating that the relationship between empathy and distorted cognitions is mediated by moral reasoning. Using bootstrapping, a significant indirect effect is found. BC = bias-corrected confidence interval.

comparison-offender group. The intellectual disabilities–offender group had more limited empathy than either of the groups of men without intellectual disabilities. These results contrasted with those of Proctor and Beail (2007), who suggested that offenders with intellectual disabilities have better empathy and theory-of-mind skills than nonoffenders. However, Woodbury-Smith et al. (2005) reported findings similar to those of the current study. They found there was no difference in the scores of offenders and nonoffenders with high-functioning autistic spectrum conditions on theory-of-mind and emotional recognition tasks. They did, however, report that performance on these tasks, together with more limited intellectual ability, was associated with an increased likelihood of being in their offender group. It is important to note, however, that the current study focused on men with intellectual disabilities, rather than men and women with high-functioning autism.

Turning to cognitive distortions, men with intellectual disabilities scored higher on the measure of distorted cognitions than those without intellectual disabilities, and offenders scored higher than nonoffenders, with distorted cognitions being highest among offenders with intellectual disabilities. The findings are consistent with those from studies involving sexual offenders with intellectual disabilities (Broxholme & Lindsay, 2003; Langdon, Maxted, Murphy, & SOTSEC-ID, 2007; Langdon & Talbot, 2006; Lindsay & Michie, 2004; Lindsay et al., 2006; Lindsay, Whitefield, & Carson, 2007; Murphy, Powell, Guzman, & Hays, 2007; Talbot & Langdon, 2006). However, ours is the first study we know of in which the likelihood of endorsing

cognitive distortions has been investigated in men with intellectual disabilities who have been convicted of other offenses.

Turning to our hypothesis, which predicted that the intellectual disabilities group would score lower on the measure of moral reasoning than the intellectual disabilities–offender group and the comparison-offender group would score lower than the comparison group, the results indicated that the differences between the groups were as predicted. After controlling for intelligence in the analysis, results indicated that the total moral reasoning score of the intellectual disabilities–offender group was no longer significantly different from the comparison-offenders group and the comparison-offenders group was no longer significantly different from the comparison group. This suggests that some of the differences between the groups can be accounted for by intelligence. Langdon, Murphy, et al. (2010) also demonstrated that many of the differences between men with and without intellectual disabilities, with no known history of arrests, cautions, or convictions, could be accounted for by intelligence. In their study, intelligence accounted for all the differences between the two groups with the exception of moral reasoning in relation to the law and overall SRM-SF score. Nevertheless, even when IQ was controlled, the four groups differed significantly on Legal Justice. This finding may be related to the finding that there is intergenerational transmission of offending in men (Farrington, Coid, & Murray, 2009) and requires more detailed examination.

In this study, we found that the moral reasoning of both groups of men with intellectual disabilities fell at Stage 2 overall, yet one group had a documented history of criminal offending,

whereas the other had no history of criminal offending. This finding may be accounted for by the differences between the groups across the seven constructs measured by the SRM-SF. Specifically, the intellectual disabilities group demonstrated less mature reasoning in relation to Property, Law, and Legal Justice factors. This finding is consistent with that of Langdon, Murphy, et al. (2010). It suggests moral judgment within these areas is based on the avoidance of punishment and unilateral authority. As expected from the literature relating to young offenders (Blasi, 1980; Campagna & Harter, 1975; Chandler & Moran, 1990; Gavaghan, Arnold, & Gibbs, 1983; Gregg, Gibbs, & Basinger, 1994; Nelson et al., 1990; Trevethan & Walker, 1989), the intellectual disabilities–offender group demonstrated reasoning at Stage 2 in relation to these three constructs. In contrast, the comparison-offenders group demonstrated Stage 2 moral reasoning only on Property, scoring at Stage 3 across the other constructs, whereas the comparison group scored at Stage 3 across all the constructs.

Our findings in relation to offenders without intellectual disabilities were not entirely consistent with the moral reasoning literature relating to young offenders. Gibbs (2003) commented that many studies have demonstrated that young offenders tend to make more use of Stage 2 moral reasoning with regards to concepts such as legal justice and the law (Blasi, 1980; Campagna & Harter, 1975; Chandler & Moran, 1990; Gavaghan et al., 1983; Gregg et al., 1994; Nelson et al., 1990; Trevethan & Walker, 1989). In contrast, young people who are not offenders tend to give Stage 3 reasons for obeying the law (Gibbs, 2003, 2010). Although the comparison-offenders group in our study had significantly lower scores on the test of moral reasoning than the comparison group, our findings were not consistent with this literature, because on average, the comparison-offenders group was reasoning at Stage 3. It is important to note, though, that our offenders were adults rather than young offenders. Such findings are consistent with Stevenson et al. (2003), who also found that adult offenders tend to be reasoning at Stage 3.

In relation to men with intellectual disabilities who are offenders, however, our findings were consistent with the literature relating to young offenders. The intellectual disabilities–offender group was consistently reasoning at Stage 2 across

all constructs. Furthermore, the findings suggested that nonoffenders with intellectual disabilities were reasoning at Stage 1 and, therefore, appealing to unilateral authority and avoidance of punishment when making moral judgments in relation to the law. This may explain why, as a group, they had no history of arrests, cautions, or convictions, considering that their total moral reasoning score fell at Stage 2.

Our findings have substantial clinical implications for men with intellectual disabilities. Langdon et al. (2011) pointed out that the relationship between moral development and social perspective-taking provides a rationale for the effectiveness of group-based interventions over individual treatments, because groups offer more opportunities for social perspective-taking. Gibbs and his colleagues (Gibbs, 2003, 2010; Gibbs et al., 1995) argued that proximal, as well as distal, interventions are required when offering clinical interventions to young offenders on the grounds that moral reasoning abilities are distal schema within the context of a social situation. Cognitive distortions and social skills, which are proximal, also need to be targeted to ensure that interventions are effective. In an attempt to address this issue, Gibbs and colleagues (Gibbs, Potter, Barriga, & Liao, 1996; Gibbs et al., 1995; Potter, Gibbs, & Goldstein, 2001) developed the Equipping Youth to Help One Another Programme (EQUIP), which has been shown to be effective at reducing misconduct and recidivism rates (Leeman, Gibbs, & Fuller, 1993).

Given the evidence that the moral reasoning abilities of offenders with intellectual disabilities are comparable with those of young offenders, the question of whether or not the EQUIP programme is likely to be an effective treatment for this population requires investigation. In view of the strong relationship between intelligence and moral development, Langdon, Clare, et al. (2010) considered whether people with intellectual disabilities would be able to reach the developmentally more mature moral reasoning stages that are protective against illegal behavior. The findings from the current study indicate that men with intellectual disabilities with no history of illegal behavior are reasoning at Stage 1 in relation to Property, Law, and Legal Justice factors, whereas offenders with intellectual disabilities are reasoning at Stage 2. Therefore, an alternative therapeutic approach may be to encourage moral reasoning that appeals to unilateral authority and

avoidance of punishment. It would, however, make sense to examine whether EQUIP can bring about developmental shifts to mature moral reasoning among offenders with intellectual disabilities before endorsing such a strategy.

Our findings suggest that the relationship between empathy and distorted cognitions is mediated by moral reasoning. This was investigated because both Gibbs (2003, 2010) and Hoffman (2000) have argued that cognition serves to augment empathic states. Hoffman argued that empathy is the primary motivator of moral behavior and is affected by moral reasoning, whereas Gibbs argued that moral reasoning and empathy are motivators of moral behavior, with empathy influenced by distorted cognitions, arising from maladaptive moral schema. The findings from our study indicate that the relationship between empathy and distorted cognitions is mediated by moral reasoning. From a theoretical perspective, this makes sense, because distorted cognitions reflect moral schema, and, therefore, the relationship between empathy and distorted cognitions would occur through moral reasoning. Although the findings of our mediation analysis are consistent with Hoffman (2000) and Gibbs (2003, 2010), because of the emphasis that each researcher placed on empathy, the analysis is not a test of whether empathy alone or empathy and moral principles motivate moral behavior; additional research is needed.

There are some limitations with the current study that need to be highlighted. Because some of the participants were in custodial facilities, it is likely that they received some sort of intervention for their offending behavior. This may have affected their moral reasoning. It was impossible to control for this in the analysis, because of such marked variability in the programs available in prisons and hospitals and, moreover, in what is offered to offenders with different index offenses. It is also the case that offenders who volunteered to take part in this study may have different moral reasoning and empathy abilities than those who did not volunteer. It is also important to mention that IQs of men with intellectual disabilities included within this study were necessarily restricted. Last, the internal consistency of the empathy measure used within this study is problematic, and some additional work is needed regarding the development of measures of empathy for offenders with intellectual and other developmental disabilities.

In conclusion, the results indicated that the moral reasoning abilities of offenders with intellectual disabilities are developmentally delayed and that the relationship between empathy and distorted cognitions is mediated by moral reasoning. Future research should focus on whether clinical interventions for offenders with intellectual disabilities, based on moral development theory, are effective.

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