The moral reasoning abilities of men and women with intellectual disabilities who have a history of criminal offending behaviour

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Peter E Langdon is funded by a National Institute for Health Research Postdoctoral Fellowship

This article presents independent research funded by the National Institute for Health Research (NIHR). The views expressed are those of the author(s) and not necessarily those of the National Health Service, the National Institute for Health Research or the Department of Health.

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Abstract

Purpose. The current study had the following two aims (a) to examine the moral reasoning abilities of four groups of people: (i) men and women with IDs who had a documented history of criminal offending, and (ii) men and women with IDs and no such history, and (b) to examine the relationship between emotional and behavioural problems and moral reasoning. It was predicted that (a) there would be no significant difference between the moral reasoning of men and women with IDs, (b) men and women with IDs who are not offenders will have "developmentally immature" moral reasoning in comparison to offenders, and (c) moral reasoning will significantly predict emotional and behavioural problems.

Methods. Sixty-eight men and women with mild intellectual disabilities (IDs) with and without a history of criminal offending were recruited and asked to complete measures of intelligence, moral reasoning, and emotional/behavioural problems.

Results. As predicted, men and women did not have different moral reasoning, but offenders did have "developmentally more mature" moral reasoning than non-offenders. Women had higher levels of physical and verbal aggression, while offenders, generally, had higher levels of psychopathology. Women with a history of criminal offending had higher levels of sexually inappropriate behaviour compared to men and women in the community. Moral reasoning significantly predicted emotional and behavioural problems.

Conclusions. Further work in this area is needed, and interventions that aim to address a moral developmental "delay" may be beneficial in reducing recidivism amongst this population.

The moral reasoning abilities of men and women with intellectual disabilities who have a history of criminal offending behaviour

There is evidence of a relationship between moral reasoning and criminal offending amongst young offenders (Blasi, 1980; Nelson, Smith, & Dodd, 1990; Stams *et al.*, 2006), and some evidence to support the existence of such a relationship amongst men with intellectual disabilities (IDs) (Langdon, Murphy, Clare, Steverson, & Palmer, 2011b). Both Gibbs (2003, 2010) and Palmer (2003a, b) have provided a theoretical rationale for the relationship between moral reasoning and criminal offending by arguing that young offenders present with immature moral schema, which lead to the creation of distorted cognitions and lower levels of empathy, thus increasing the risk of criminal offending. Gibbs (2003, 2010) also argues that social skills deficits are common amongst young offenders, while Palmer (2003a, b) highlights the important role that peer and parental influence play with regard to shaping moral development, which is inherent within moral developmental theories, and together they contribute to the propensity to engage in criminal offending.

Although Langdon, Clare and Murphy (2010a) have criticised the previous literature regarding the moral development of people with IDs, they went on to argue (Langdon, Clare, & Murphy, 2011a) that the relationship between moral reasoning and illegal behaviour should be moderated by intelligence, and this relationship should take the shape of an inverted U-curve. However, it is also possible that the relationship may be mediated by intelligence, or intelligence may act as both a moderator and a mediator, which was not previously discussed by Langdon *et al*. (2010a). Recently, Mears and Cochran (2013) evidenced that the relationship

between offending and intelligence does indeed appear to be curvilinear amongst a sample of people without IDs.

These theoretical assumptions suggest that those with IDs who have no history of engaging in illegal behaviour, should evidence moral reasoning that is "developmentally immature", in comparison to those with IDs and a history of such behaviour. The reason for this is that "developmentally immature" moral reasoning at the lower stages of moral development is associated with egocentricity, but also with the avoidance of punishment and rule adherence (Stage 1; Gibbs, 2003, 2010), and therefore should be associated with a reduced propensity to engage in illegal behaviour. Reasoning at higher, but still "developmentally immature" stages, is associated with exchanges, deals and meeting needs, along with some decentration, but the continuation of an egocentric bias where one's own needs and interests may take priority continues (Stage 2; Gibbs, 2003, 2010), and as a consequence, the propensity to engage in illegal behaviour is increased. Reasoning at the "mature" stages is associated with further decentration, and the development of an understanding of pro-sociality, care and good conduct, as well as an understanding of society, rights and character (Stages 3 and 4; Gibbs, 2003, 2010); the potential propensity to commit illegal acts is therefore reduced.

Langdon *et al*. (2011b) reported that the moral reasoning of men with IDs who have a history of criminal offending was indeed more mature than that of men with IDs and no such history, which offers limited support to Langdon *et al*.'s (2011a) proposed relationship between moral reasoning, illegal behaviour and intelligence. In an earlier study, Langdon, Murphy, Clare and Palmer (2010b) also reported that men with IDs and no known history of criminal offending engaged in moral reasoning at

the “developmentally immature” stages associated with avoidance of punishment and rule adherence, but specifically in relation to the Law construct on the Sociomoral Reflection Measure – Short Form (Gibbs, Basinger, & Fuller, 1992), which is a moral reasoning assessment questionnaire that is reliable when used with men who have IDs (Langdon, *et al.*, 2010b).

Nevertheless, one of the problems with this research is that it has predominately focused on men. Moral developmental theory has been criticised as being inherently sexist as it is based upon masculine conceptualisations of morality (Gilligan, 1982). Lyons (1983) demonstrated that women are more likely to make moral judgements based upon a “care” orientation, while men are more likely to appeal to “rights”. However, Lyons (1983) included only 32 participants in her study, and it appears that the sample were very well educated, suggesting the presence of some sampling bias. Others have also reported or argued that the moral reasoning of men and women is indeed different, (Baumrind, 1986; Crandall, Tsang, Goldman, & Pennington, 1999; Ford & Lowery, 1986; Gilligan & Attanucci, 1988; Yacker & Weinberg, 1990), while many others have empirically refuted these findings (Daniels, D'Andrea, & Heck, 1995; Derry & Green, 1989; Forte, 2008; Friedman, Robinson, & Friedman, 1987; Garrod, Beal, & Shin, 1990; Gregg, Gibbs, & Basinger, 1994; Knox, Fagley, & Miller, 2004; Rest, 1979; Rothbart, Hanley, & Albert, 1986; Walker, 1984, 1986).

Langdon *et al*. (2010a) reviewed the literature that has attempted to investigate the moral development of people with IDs, and none of the studies included attempted to investigate sex differences, although one study reported that girls with IDs tended to appeal to helping others more frequently than did boys (Petrovich, 1982), while

another commented that there was no difference between boys and girls with IDs when asked what they "should do" when given a temptation to steal task (Jackson & Haines, 1982). Following on, there has been little attention given to the differences between men and women with IDs who engage in criminal offending behaviours, bearing in mind that there is an emerging literature examining the characteristics of women with IDs who have engaged in criminal offending behaviours (Lindsay *et al.*, 2004).

Although this literature remains sparse, there are some emerging similarities between the few studies within this area. Lindsay *et al*. (2004) reported that a small sample of women with IDs and a history of criminal offending were more likely to be younger, have histories of being sexual abused, and have higher rates of aggression and mental illness compared to a sample of men with IDs who also had a history of criminal offending. Similarly, Alexander *et al*. (2010) reported that women with IDs and a history of criminal behaviour were more likely to be diagnosed with a mental health problem, namely personality disorder, and they reported a similar finding previously in a different study, where aggression and a history of sexual abuse were reported to be more prevalent amongst women with IDs (Alexander, Piachaud, & Gangadharan, 2005; Alexander, Piachaud, Odebiyi, & Gangadharan, 2002). Lindsay, Steele, Smith, Quinn and Allan (2006) also reported that a sample of women with IDs who were offenders were younger, had problems with aggression and sexual relationships, and higher rates of mental health problems, while they also had lower rates of recidivism, when compared to groups of men with IDs who also had a history of criminal offending. However, there have been no studies that have attempted to understand potential sex differences in the aetiology of offending amongst people who have IDs.

As a consequence of the suggested relationship between criminal offending and moral reasoning, and the emerging evidence that a similar relationship may exist for men with IDs, coupled with the lack of research involving women with IDs, we undertook the current study which had the following two aims (a) to examine the moral reasoning abilities of four groups of people: (i) men and women with IDs who had a documented history of criminal offending, and (ii) men and women with IDs and no such history, and (b) to examine the emotional and behavioural problems within these four groups and any relationship with moral reasoning. The following three specific hypotheses were made (a) there will be no significant difference between the moral reasoning abilities of men and women with IDs, (b) men and women with IDs who are not offenders will have "developmentally immature" moral reasoning in comparison to offenders, as proposed by Langdon *et al*. (2011a), and (c) moral reasoning ability will significantly predict emotional and behavioural problems.

Method

Participants

Sixty eight people with mild IDs (50% women, M_{age} = 35.68, *SD* = 12.58, M_{FIQ} = 59.90, *SD* = 7.70) were recruited from the community or inpatient forensic mental health care services in the United Kingdom and spread equally across four groups (a) men who are offenders (MO Group, M_{age} = 35.82, *SD* = 14.20, M_{FIQ} = 61.94, *SD* = 4.55), (b) women who are offenders (WO Group, M_{age} = 34.12, *SD* = 12.29, M_{FIQ} = 62.00, *SD* = 5.65), (c) men (M Group, M_{age} = 39.65, *SD* = 12.87, M_{FIQ} = 60.12, *SD* = 6.17), and (d) women (W Group, M_{age} = 33.12, *SD* = 10.88, M_{FIQ} = 55.13, *SD* = 4.16), who both had no known history of criminal offending. The age of participants across the four groups did not differ significantly, $F(3, 64) = <1$, $p =$

.46, while the Full Scale IQ between the four groups did differ significantly, $F(3, 64) = 5.82$, $p = .001$. Posthoc testing employing the Sidak method revealed that the W Group had a significantly, $p < 0.05$, lower Full Scale IQ than the three other groups, while there was no significant difference between the MO, WO or M Groups, $p > 0.05$.

The specific inclusion criteria for all participants were, a) evidence of mild IDs as indicated by a Full Scale IQ of less than 70, and associated difficulties with adaptive behaviour. Difficulties with adaptive behaviour were assumed to be present if the individual was in receipt of support from services for people with IDs, and b) aged 18 or greater. Turning to the offenders, they were included only if they were detained using the Mental Health Act, 1983 (amended, 2007) and had committed an indictable offence that had been dealt with by a Crown Court in England, indicating that they had committed serious crimes that could not be dealt with by a magistrates court. Non-offenders were included if they had no known offence history, including a history of arrests, cautions or convictions. Participants who were thought to be non-offenders were asked whether they had any history of arrests, cautions or convictions, and care records were checked for any evidence of offending behaviours. Additionally, carers were also asked whether they knew whether the person with IDs had any history of criminal offending behaviours. If there was any evidence of offending behaviour, the participant was excluded. Finally, participants with a diagnosis of an autistic spectrum condition were also excluded from both the offender and non-offender groups.

In order to account for the difficulties with indexing convictions simply by frequency, without taking severity into account, offence data collected about the WO

and MO Groups 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 offence seriousness score. This method has been used previously (Langdon, *et al.*, 2011b). Regarding the offence severity score, there was no significant difference between the MO and the WO Group, $z = 1.13$, $p = 0.27$.

Design

A 2 (Sex: Men or Women) X 2 (Offending: Offenders or Non-Offenders) between-groups design was used to investigate the hypotheses. Participants were invited to complete the following measures (a) Wechsler Abbreviated Scale of Intelligence, (b) Sociomoral Reflection Measure – Short Form, and (c) Emotional Problems Scales Self Report Inventory. Carers or staff were asked to complete the Emotional Problems Scales Behavior Rating Scale.

Measures. ***General Intellectual Functioning*****.** The Wechsler Abbreviated Scale of Intelligence (WASI, Wechsler, 1999) was used to estimate the general intellectual functioning of participants. The WASI is a shortened version of the Wechsler Adult Intelligence Scale – III (WAIS-III, Wechsler, 1998), and contains four subtests which assess verbal and non-verbal reasoning. If WAIS-III scores were available for participants that had been calculated within the last 5 years, these were used instead of WASI scores, with consent from the participant.

Moral Reasoning. The Sociomoral Reflection Measure (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 ($\alpha = .92$; Gibbs, *et al.*, 1992). Langdon et al. (2010b)

demonstrated that the SRM-SF has substantial internal consistency and good test-retest reliability when used with men with IDs.

The measure comprises eleven questions, and generally takes about twenty minutes to present. The questions relate to the following seven constructs, a) Contract (questions one to three), b) Truth (question four), c) Affiliation (questions five and six), d) Life (questions seven and eight), e) Property (question nine), f) Law (question ten), and g) Legal Justice (question eleven).

Verbatim answers to the questions 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 which corresponds to a moral stage associated with Gibb's Socio-Moral Reasoning Theory. An overall score is calculated, and as shown in Table 1, these scores correspond to a person's global moral stage. Additionally, moral stage ratings can be generated for each of the seven constructs examined by the SRM-SF; the scores generated across these constructs are also interpreted using Table 1. The inter-rater reliability of the scoring of the SRM-SF was calculated using an expert blind rater (PEL) who scored a random sample of 29% (n=20) of completed questionnaires. Interrater reliability was determined to be *ICC* = .99.

Emotional and Behavioural Problems. Two measures were used to index emotional and behavioural problems. The first was the Emotional Problems Scales Self Report Inventory (SRI, Prout & Strohmer, 1991), which was completed by participants, while the second measure was the Emotional Problems Scales Behavior Rating Scale (BRS, Prout & Strohmer, 1991), which was completed by carers or staff members. The SRI is a 147-item questionnaire designed for use with people with

mild IDs. The questionnaire has six subscales (a) positive impression, (b) thought/behaviour disorder, (c) impulse control, (d) anxiety, (e) low self-esteem, and (f) depression. Prout and Strohmer (1991) have reported that the internal consistency for the SRI subscales ranges from α = .77 to .96, while the test re-test reliability ranges from .65 to .92. The BPS is a 135-item questionnaire which asks respondents questions about the behaviour of the participant over the last month. The person completing the BPS must know the participant well, as they are asked to rate how frequently the participants engages in various behaviours; therefore only key staff or family members were invited to complete this instrument. The BRS is comprised of 12 subscales (a) thought/behaviour disorder, (b) verbal aggression, (c) sexual maladjustment, (d) non-compliance, (e) hyperactivity, (f) distractibility, (g) anxiety, (h) somatic concerns, (i) withdrawal, (j) depression, and (k) low self-esteem. Four subscales are summed to form the Externalising Behaviour Problems Scale, while three subscales are summed to form the Internalising Behaviour Problems Scale. Prout and Strohmer (1991) have reported that the internal consistency for the BRS subscales ranges from α = .90 to .97, while the inter-rater reliability ranges from .26 to .96.

Procedure

A favourable ethical opinion was sought and gained from the Essex National Health Service (NHS) Research Ethics Committee for this study. Consent was sought from all participants. Participants were also asked for consent to speak to a person who knew them well and the researchers asked them to complete the BRS.

Both the M and W Groups were recruited from the community. Community services for people with IDs within the east of England, which included NHS services

and County Council services, were approached and asked to share information about the study with participants who they thought met the inclusion criteria. Staff were asked not to share information about the study with anyone in the community who they knew had a history of arrests, cautions or convictions. Similarly, for the MO and WO Groups, inpatient forensic mental health services were approached and also asked to share information with participants who they thought met the inclusion criteria. Staff within the community and within hospitals were asked to only share information about the study with participants who were likely to have capacity to give or withhold consent to participate in the study. Participants who provided consent to take part in the study were asked to complete the WASI initially, as needed, before being invited to complete the other questionnaires.

Data Analysis

All data were entered and analysed using IBM SPSS Statistics Version 20.0.0. Descriptive data were generated and inspected for departures from normality. Some of the individual constructs on the SRM-SF, and the subscales of the SRI and BRS departed from normality, while total scores on these measures did not. As a consequence, bootstrapping using 5000 samples with replacement was employed within a 2 (Sex) X 2 (Offending) ANCOVA, where Full Scale IQ was the covariate. The F Statistic was generated using a parametric model; main effects were investigated independent of the interaction, while the interaction was examined within a full factorial model. Parameter estimates were generated using bootstrapping and the bias corrected and accelerated (BC_a) 95% confidence intervals (CI) were calculated. The significance level (two tailed) reported was derived using bootstrapping. In order to understand the relationship between moral reasoning and

emotional and behavioural problems, the Total Pathology Score from the SRI, and the Externalising and Internalising Behaviour Scores from the BRS were predicted independently using Total SRM-SF scores within linear regression. Data were centred around their mean, and again, bootstrapping using 5000 samples with replacement was employed and the bias corrected and accelerated (BC_a) 95% confidence intervals (CI) and *p* values were calculated.

Results

Aim 1: The Moral Reasoning Abilities of the Men and Women with Intellectual Disabilities

General intellectual functioning accounted for 16% of variability in total moral reasoning scores, $R^2 = .16$; $\beta = .39$; $B = 2.18$; $t = 3.48$, $p = .001$; BC_a 95% CI [1.01, 3.37], and was included as a covariate in the analysis. There was no significant difference between men and women, $F(1, 64) = < 1$, $p = .98$, BC_a 95% CI [-11.76, 11.92], while non-offenders scored significantly lower than offenders, $F(1, 64) = 33.08$, $p < .001$, BC_a 95% CI [-49.11, -24.49] on the SRM-SF Total Score. The Sex X Offending interaction for SRM-SF Total Score was not significant, $F(1, 64) = < 1$, $p = .79$, BC_a 95% CI [-25.26, 18.80], (Table 2).

Turning to the seven constructs on the SRM-SF, there was no significant difference between men and women on Contract, $F(1, 64) = < 1$, $p = .97$, BC_a 95% CI [-14.18, 15.75], Truth, $F(1, 64) = < 1$, $p = .63$, BC_a 95% CI [-19.24, 32.78], Affiliation, $F(1, 64) = 1.34$, $p = .23$, BC_a 95% CI [-27.07, 7.11], Life, $F(1, 64) = < 1$, $p = .59$, BC_a 95% CI [-15.17, 27.84], Property, $F(1, 64) = < 1$, $p = .44$, BC_a 95% CI [-

14.36, 34.38], Law, $F(1, 64) = < 1$, $p = .68$, BC_a 95% CI [-17.54, 28.61], or Legal Justice, $F(1, 64) = < 1$, $p = .65$, BC_a 95% CI [-36.19, 21.52], (Table 2).

Offenders scored significantly higher that non-offenders on Contract, $F(1, 64) = 23.43$, $p < .001$, BC_a 95% CI [-58.54, -26.54], Truth, $F(1, 64) = 4.45$, $p = .04$, BC_a 95% CI [-58.93, -.76], Affiliation, $F(1, 64) = 5.85$, $p = .02$, BC_a 95% CI [-40.84, -3.60], Life, $F(1, 64) = 5.67$, $p = .01$, BC_a 95% CI [-48.23, -7.23], Property, $F(1, 64) = 15.36$, $p < .001$, BC_a 95% CI [-76.15, -28.12], Law, $F(1, 64) = 4.94$, $p = .04$, BC_a 95% CI [-56.06, -4.41] and Legal Justice, $F(1, 64) = 16.09$, $p = .001$, BC_a 95% CI [-99.98, -33.59], (Table 2). None of the Sex X Offending interactions were significant across the seven SRM-SF constructs, $p > .05$.

Aim 2: The Relationship between Moral Reasoning and Emotional and Behavioural Problems

Initially, subscale scores and total scores on the SRI and the BRS were compared across the groups (Table 3 and 4). Considering the subscales of the SRI, there was no significant difference between men and women on Positive Impression, $F(1, 64) = < 1$, $p = .67$, BC_a 95% CI [-1.67, 1.06], Thought/Behaviour Disorder, $F(1, 64) = < 1$, $p = .85$, BC_a 95% CI [-2.64, 2.19], Impulse Control, $F(1, 64) = < 1$, $p = .36$, BC_a 95% CI [-4.74, 1.79], Anxiety, $F(1, 64) = < 1$, $p = .67$, BC_a 95% CI [-2.09, 3.39], Depression, $F(1, 64) = < 1$, $p = .90$, BC_a 95% CI [-3.72, 3.21], and Self Esteem, $F(1, 64) = < 1$, $p = .77$, BC_a 95% CI [-1.69, 2.37]. The Total Pathology score was not significantly different between men and women, $F(1, 64) = < 1$, $p = .86$, BC_a 95% CI [-13.24, 11.14].

There was no significant difference between offenders and non-offenders on Positive Impression, $F(1, 64) = 2.75$, $p = .11$, BC_a 95% CI [-.22, 2.90], while offenders scored significantly higher than non-offenders on Thought/Behaviour Disorder, $F(1, 64) = 8.07\ 1$, $p = .005$, BC_a 95% CI [-6.56, -1.09], Impulse Control, $F(1, 64) = 8.02$, $p = .003$, BC_a 95% CI [-8.65, -1.78], Anxiety, $F(1, 64) = 4.50$, $p = .02$, BC_a 95% CI [-6.03, -.60], Depression, $F(1, 64) = 12.67$, $p < .001$, BC_a 95% CI [-10.72, -3.32] and Low Self-Esteem, $F(1, 64) = 7.60$, $p = .004$, BC_a 95% CI [-5.46, -.92]. Turning to Total Pathology on the SRI, again, offenders scored significantly higher than non-offenders, $F(1, 64) = 10.49$, $p = .001$, BC_a 95% CI [-35.25, -9.83], (Table 3). None of the Sex X Offending interactions were significant for the SRI, $p > .05$.

Examining the subscales of the BRS revealed that women scored significantly higher than men on Physical Aggression, $F(1, 40) = 5.04$, $p = .02$ BC_a 95% CI [-7.92, -.85], and Verbal Aggression, $F(1, 40) = 4.06$, $p = .05$, BC_a 95% CI [-7.24, -.17]. There was no significant difference between men and women on Non-Compliance, $F(1, 40) = 1.27$, $p = .30$, BC_a 95% CI [-9.65, 2.17], Hyperactivity, $F(1, 40) = 1.16$, $p = .29$, BC_a 95% CI [-6.33, 1.84], Depression, $F(1, 40) = 3.68$, $p = .08$, BC_a 95% CI [-9.12, .50], Anxiety, $F(1, 40) = <1$, $p = .79$, BC_a 95% CI [-6.19, 4.80], Low Self-Esteem, $F(1, 40) = 2.87$, $p = .09$, BC_a 95% CI [-11.80, .69], Thought/Behaviour Disorder, $F(1, 40) = 2.05$, $p = .19$, BC_a 95% CI [-10.18, 2.05], Sexual Maladjustment, $F(1, 40) = 2.01$, $p = .16$, BC_a 95% CI [-3.93, .62], Distractibility, $F(1, 40) < 1$, $p = .65$, BC_a 95% CI [-5.69, 3.41], Withdrawal, $F(1, 40) = <1$, $p = .52$, BC_a 95% CI [-7.29, 3.69], or Somatic Concerns, $F(1, 40) = 1.06$, $p = .35$, BC_a 95% CI [-8.78, 3.48], (Table 4).

Offenders scored significantly higher than non-offenders on Physical Aggression, $F(1, 40) = 6.38$, $p = .02$, BC_a 95% CI [-11.04, -2.04], Verbal Aggression, $F(1, 40) = 6.38$, $p = .008$, BC_a 95% CI [-9.35, -2.01], Non-Compliance, $F(1, 40) = 4.59$, $p = .03$, BC_a 95% CI [-14.54, -1.19], Depression, $F(1, 40) = 11.69$, $p = .005$, BC_a 95% CI [-14.99, -4.88], Thought/Behaviour Disorder, $F(1, 40) = 9.82$, $p = .01$, BC_a 95% CI [-18.99, -4.52], and Sexual Maladjustment, $F(1, 40) = 16.70$, $p < .02$, BC_a 95% CI [-9.37, -2.58]. There was no significant difference between offenders and non-offenders on Hyperactivity, $F(1, 40) = 1.53$, $p = .29$, BC_a 95% CI [-8.80, 1.57], Anxiety, $F(1, 40) = 1.29$, $p = .34$, BC_a 95% CI [-10.10, 2.07], Low Self Esteem, $F(1, 40) = 4.91$, $p = .10$, BC_a 95% CI [-18.47, -.65], Distractibility, $F(1, 40) = 1.19$, $p = .31$, BC_a 95% CI [-8.33, 1.45], Withdrawal, $F(1, 40) = 3.12$, $p = .11$, BC_a 95% CI [-11.42, -.33], and Somatic Concerns, $F(1, 40) = 1.06$, $p = .30$, BC_a 95% CI [-10.88, 2.99], (Table 4).

There was a significant Sex X Offending Interaction for Anxiety, $F(1, 39) = 4.73$, $p = .04$, BC_a 95% CI [1.03, 20.37]; the MO and W Group scored lower, while the WO and M Group scored higher on Anxiety, although posthoc testing comparing the four groups did not reveal any significant differences, $p > 0.05$ (Sidak Method). The interaction for Sexual Adjustment was just significant, $F(1, 39) = 4.22$, $p = .05$, BC_a 95% CI [1.10, 7.66]; interestingly, the WO Group scored significantly higher than the M Group, $p = .04$, BC_a 95% CI [1.31, 6.60], and the W Group, $p = .02$, BC_a 95% CI [1.86, 6.90], while the differences between the MO, M and W Groups were not significant, $p > 0.05$. None of the remaining interactions were significant, $p > 0.05$.

Turning to the Externalising Scale on the BRS, offenders scored significantly higher than non-offenders, $F(1, 40) = 5.65$, $p = .03$, BC_a 95% CI [-41.51, -6.08], while there was no significant difference between men and women, $F(1, 40) = 3.06$, $p = .09$, BC_a 95% CI [-28.74, .75], nor was the interaction significant, $F(1, 39) = 1.41$, $p = .20$, BC_a 95% CI [-10.01, 47.17]. Offenders also scored significantly higher on the Internalising Scale, $F(1, 39) = 5.85$, $p = .03$, BC_a 95% CI [-42.59, -4.18], while again there was no significant difference between men and women, $F(1, 40) = 2.08$, $p = .17$, BC_a 95% CI [-25.85, 4.77], and nor was the interaction significant, $F(1, 40) = 2.45$, $p = .11$, BC_a 95% CI [-4.91, 49.61], (Table 4).

Total SRM-SF scores significantly predicted the Total Pathology scale on the SRI, $R^2 = .10$; $\beta = .32$; $B = .29$; $t = 2.71$, $p = .004$; BC_a 95% CI [.12, .47], explaining 10% of the variance. Total SRM-SF scores also significantly predicted the Internalising Behaviour scale, $R^2 = .15$; $\beta = .39$; $B = .29$; $t = 2.76$, $p = .007$; BC_a 95% CI [.09, .50], and the Externalising Behaviour scale, $R^2 = .09$; $\beta = .31$; $B = .24$; $t = 2.07$, $p = .02$; BC_a 95% CI [.05, .44], on the BRS, explaining 15% and 9% of the variance respectively.

Discussion

As predicted, the entire sample had "developmentally immature" moral reasoning abilities, but non-offenders had a greater degree of "immaturity" than did offenders. Also, as predicted, the moral reasoning scores of women and men did not differ significantly, while moral reasoning scores significantly predicted emotional and behavioural problems within the entire sample.

The finding that non-offenders had a greater degree of "immaturity" than offenders is similar to the findings of Langdon *et al.* (2010b; 2011b), who reported that non-offenders with IDs had "developmentally immature" moral reasoning, and they tended to appeal to rule-governed behaviour and avoidance of punishment more so when making moral judgements as compared to offenders on some of the constructs assessed by the SRM-SF. Interestingly, and similar to what was found in previous studies, the non-offender and offender groups both had overall moral reasoning abilities that fell within Stage 2 and Stage 2(3) (Table 1 & 2); these stages are associated with pragmatic exchanges and instrumental gain, and therefore are more likely to be associated with illegal behaviour; although Stage 2(3) represents some further decentration beyond Stage 2. However, one group had a history of offending, while the other did not, which is inconsistent with the relationship between moral reasoning and illegal behaviour. This inconsistency may be explained by the fact that the moral reasoning scores of non-offenders fell within an earlier developmental stage, namely transition Stage 2(1), on Law and Legal Justice, while the two offender groups had moral reasoning scores on these two constructs that that fell within a higher stage, namely Stage 2, and Stage 2(3) (Table 2).

As suggested previously by Langdon *et al*. (2010b), it is apparent that the moral reasoning of the non-offender groups on the Law and Legal Justice constructs reflects more of the earlier moral developmental stages which are associated with rule governed behaviour and avoidance of punishment, thus inherently reducing the probability of criminal behaviour. For the offender groups, their moral reasoning can be more characterised by justifications which involve pragmatic advantages, needs, and deals or exchanges more definitively on the Law and Legal Justice constructs, thus increasing the probability of criminal offending.

It is worth nothing that Langdon et al. (2011b) reported that the moral stage on the Law constructs amongst men with IDs who were not offenders fell clearly within Stage 1, while it fell within Stage 2(1) for Legal Justice. In an earlier study, Langdon *et al*. (2010b) also reported that the moral stage of a different group of men with IDs who were non-offenders fell within Stage 2(1) on these two constructs, which is the same as that found within the current study. These differences may be associated with the use of convenience sampling within the current and previous two studies, but what seems to be emerging is that non-offenders with IDs, across both sexes, appear to have moral reasoning within the Law and Legal Justice constructs that reflect some avoidance of punishment and rule governing behaviour, which may reduce the probability of illegal behaviour.

Turning to consider the differences between men and women, there were no differences between the groups on moral reasoning, and although some studies have reported a difference (e.g. Crandall, *et al.*, 1999), the current findings are consistent with many empirical studies that have refuted the existence of such a difference (e.g. Gregg, *et al.*, 1994). However, there were some differences between men and women on the measures of emotional and behavioural problems, but these differences were not apparent using the SRI, which is a self-report measure. The BRS, which was rated by carers and staff, indicated that women with IDs had higher levels of both verbal and physical aggression.

Offenders also had higher levels of psychopathology compared to non-offenders, which was evident from both the staff and self-report measures of emotional and behavioural problems. This was evident across all subscales on the SRI, while on some subscales of BRS there were no differences between offenders

and non-offenders. Also on the BRS, women with IDs and a history of criminal offending had higher levels of inappropriate sexual behaviour than men and women from the community, but not higher than offenders who are men; offenders who are men did not have higher levels of inappropriate sexual behaviour than men and women from the community. Inappropriate sexual behaviour, as assessed within the BRS includes preoccupation with sexual matters, inappropriate sexualised language and sexual overtures, along with aggressive sexual behaviour. It has been previously reported that women with IDs who are offenders may have difficulties with sexual relationships (Lindsay, *et al.*, 2006).

One of the assumptions underlying moral development theory is that moral reasoning relates to behaviour, and while there is robust evidence that there is a relationship between moral reasoning and criminal offending amongst young offenders (Stams, *et al.*, 2006), and evidence to suggest the same amongst men with IDs (Langdon, *et al.*, 2011b), there is no evidence that moral reasoning relates to emotional and behavioural problems in people with IDs. The finding that moral reasoning predicts emotional and behavioural problem within the current study is of importance, although the amount of variance explained was relatively small, varying from 9 to 15%. However, the linear and positive relationship was significant and does indicate that moral reasoning predicts emotional and behavioural problems amongst people with IDs, although direct causality cannot be inferred from the current study.

There are some problems with this study that are important to outline. Firstly, a convenience sampling method was used, which may have introduced some bias. Secondly, there were some difficulties with the response rate from staff and carers

who were asked to complete the BRS. Some of the differences between the groups within the BRS may have reached statistical significance with a larger sample size, which does tend to limit the conclusions that can be drawn as a consequence; with a larger sample, some of the differences between men and women with a history of criminal offending may have become further apparent. Finally, it is important to note that moral reasoning or moral judgement is one of many factors that relate to an individual's propensity to engage in criminal offending behaviours. The developmental model presented by Loeber, Wim, Slot and Stouthamer (2006) captures many additional risk and protective factors that impact upon the probability that delinquency will emerge. However, many social factors, that are known to relate to criminal offending behaviour, also relate to moral development.

In summary, it is relevant to clinicians and practitioners that men and women with IDs who are offenders have similar moral reasoning abilities, as do men and women with IDs who are not offenders, and this predicts emotional and behaviour problems. There is some tentative evidence that clinical interventions for offenders with IDs that attempt to address moral developmental "delays" may potentially be effective with this population (Langdon, Murphy, Clare, Palmer, & Rees, 2013), although this intervention has not been tested with women with IDs who are offenders, and definitive trials are needed to determine effectiveness. Further work in this area is needed, and interventions that aim to address a moral developmental "delay", which is related to criminal offending behaviour amongst men and women with IDs, and theoretically grounded, could be beneficial in further reducing recidivism amongst this population.

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Table 1

The relationship between scores on the Sociomoral Reflection Measure – Short Form (SRM-SF) and moral stages.

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

Table 2.

M score and SD for the Sociomoral Reflection Measure – Short Form

SRM-SF: *M* (SD)	MO Group (n = 17)	WO Group (n = 17)	M Group (n = 17)	W Group (n = 17)
Total Score	236.29 (27.70)	235.06 (19.50)	196.71 (21.87)	193.65 (28.67)
Contract	238.24 (31.60)	244.12 (21.20)	201.96 (31.12)	194.61 (44.38)
Truth	225.00 (60.55)	214.70 (49.26)	188.24 (51.63)	178.13 (54.68)
Affiliation	257.06 (40.39)	257.35 (32.79)	222.06 (40.39)	235.35 (40.56)
Life	239.71 (39.59)	245.59 (54.66)	220.31 (35.61)	189.06 (43.25)
Property	232.40 (46.57)	221.90 (40.70)	181.30 (57.37)	176.50 (56.23)
Law	206.30 (62.92)	200.00 (36.51)	171.90 (48.20)	162.50 (38.73)
Legal Justice	226.50 (61.54)	225.00 (54.60)	150.00 (51.89)	162.50 (61.91)

Note. M = Mean; SD = Standard Deviation*;* MO Group = Men Offenders; WO Group = Women Offenders; M Group = Men Non-Offenders; W Group = Women Non-Offenders

Table 3

M score and SD for the subscales and Total Pathology score of the Emotional Problems Scale – Self Report Inventory

EPS-SRI: *M* (SD)	MO Group (n = 17)	WO Group (n = 17)	M Group (n = 17)	W Group (n = 17)
Total Pathology	61.41 (30.67)	58.00 (25.82)	34.71 (20.02)	41.82 (29.63)
Positive Impression	5.88 (3.81)	6.29 (2.85)	7.41 (2.60)	7.88 (2.76)
Thought/ Behaviour Disorder	8.24 (6.57)	7.53 (5.66)	3.71 (3.46)	5.53 (4.65)
Impulse Control	15.00 (7.37)	15.41 (7.85)	8.76 (6.08)	11.53 (6.28)
Anxiety	14.47 (5.92)	13.88 (5.37)	11.18 (4.23)	10.76 (8.00)
Depression	14.65 (9.14)	13.24 (7.00)	6.06 (5.66)	8.59 (8.57)
Low Self-esteem	9.06 (5.02)	7.94 (4.41)	5.00 (3.86)	5.41 (4.57)

Note. M = Mean; SD = Standard Deviation*;* MO Group = Men Offenders; WO Group = Women Offenders; M Group = Men Non-Offenders; W Group = Women Non-Offenders

Table 4

M score and SD for the subscales and the Externalising and Internalising score of the Emotional Problems Scale – Behaviour Rating Scale

EPS-BRS: *M* (SD)	MO Group (n = 10)	WO Group (n = 17)	M Group (n = 6)	W Group (n = 11)
Externalising Behaviour Problem	34.90 (24.30)	56.24 (28.37)	27.00 (18.71)	29.91 (21.23)
Internalising Behaviour Problem	32.60 (27.54)	52.76 (23.86)	30.33 (13.74)	28.18 (22.19)
Physical Aggression	4.20 (4.10)	10.18 (8.92)	1.17 (1.17)	3.00 (2.10)
Verbal Aggression	6.60 (5.62)	11.29 (6.49)	3.17 (4.12)	5.55 (5.54)
Non-compliance	15.80 (11.70)	21.41 (9.67)	11.83 (8.18)	12.27 (8.82)
Hyperactivity	8.30 (6.17)	13.35 (6.50)	10.83 (6.34)	9.09 (6.70)
Depression	9.70 (9.01)	16.65 (6.84)	5.33 (3.50)	6.00 (6.96)
Anxiety	10.40 (9.63)	15.53 (7.02)	15.50 (7.50)	10.09 (7.60)
Self-esteem	12.50 (10.46)	20.59 (11.35)	9.50 (5.75)	12.09 (11.05)
Thought/ Behaviour Disorder	13.30 (9.70)	20.47 (11.94)	11.33 (10.78)	13.55 (7.26)
Sexual Maladjustment	1.00 (2.83)	4.53 (5.71)	0.67 (1.21)	0.27 (.91)
Distractibility	9.80 (6.89)	13.82 (6.65)	14.33 (9.93)	14.33 (9.93)
Withdrawal	7.90 (8.76)	12.65 (7.03)	8.67 (10.58)	8.67 (10.58)
Somatic Concerns	7.50 (9.00)	13.59 (8.61)	10.00 (10.18)	10.00 (10.18)

Note. M = Mean; SD = Standard Deviation*;* MO Group = Men Offenders; WO Group = Women Offenders; M Group = Men Non-Offenders; W Group = Women Non-Offenders