

Exploring the impact of sex and offence history on moral reasoning in adults with mild intellectual disabilities.

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Doctorate in Clinical Psychology

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## Abstract

*Background:* There is a small growing body of literature exploring moral reasoning in adult male offenders with mild intellectual disabilities (ID). These offenders have demonstrated more mature moral reasoning than their non-offending counterparts. No published studies have explored this in females with ID, despite the existence of sex differences in moral reasoning being widely debated. This study aims to address this gap in the literature.

*Methods:* Using a cross-sectional 2 (Sex: Men vs Women) X 2 (Offence history: Offenders vs Non-Offenders) between-subjects design, 68 adults with mild ID from secure settings and community settings were recruited. In addition to an assessment of intellectual functioning, participants completed the Socio-Moral Reflection Measure-Short Form (SRM-SF; Gibbs, Basinger & Fuller, 1992) and the Emotional Problem Scale (EPS; Prout & Strohmer, 1991). An informant version of the EPS was also used.

*Results:* Offenders with ID demonstrated stage 2(3) reasoning, significantly higher than the stage 2 reasoning demonstrated by non-offenders. Offenders' moral reasoning was higher on six of the individual SRM-SF constructs, however differences disappeared on two constructs after controlling for Full Scale IQ. Non-offenders reasoned below stage 2 on the Law and Legal Justice constructs, where decision making driven by obeying authority and avoiding punishment was likely to have prevented them offending. No significant sex differences were found. Total SRM-SF scores were not significantly related to offence severity. A significant positive relationship was found between moral reasoning and emotional/behavioural problems, with the study partially supporting the prediction that offenders would have higher EPS scores.

*Conclusions:* Offenders, irrespective of sex, engaged in more mature moral reasoning than non-offenders, supporting previous findings. This study attempted to address methodological limitations of previous studies, such as through using a measure standardised for ID. Further research would be valuable to help develop suitable and effective interventions for this client group.



## **Chapter One- Introduction**

### **1.1 Overview of Chapter**

This chapter begins with defining intellectual disability (ID) in terms of its diagnostic criteria. It then presents data on current prevalence rates of ID within England, and briefly describes common comorbid difficulties experienced by individuals with ID and their families. The relationship between ID and offending behaviour is then explored, with prevalence rates of offending by individuals with ID at various stages of the criminal justice system discussed, including studies that draw on data from police stations, prison services and the probation service. The most commonly found types of offending behaviour amongst people with ID are then discussed and potential risk factors for offending behaviour are considered.

The chapter progresses to focus on moral reasoning, where the key theoretical approaches are considered in turn and their limitations are discussed. The relationship between moral reasoning and offending behaviour is then examined amongst the general population. Following this, the relationship between ID and moral reasoning is presented and the literature is reviewed, with a particular focus on the role of an individual's sex. The links between moral development, offending behaviour and ID are then proposed and explored, followed by a brief review of treatment intervention approaches, both for the general population who offend and the ID population who offend.

Finally, this chapter presents information regarding the development of the current research study, including the theoretical, clinical and methodological rationale for why this area requires further exploration. The chapter closes with the presentation of four research questions along with specific hypotheses.

## **1.2 Intellectual Disability**

**1.2.1 Definition.** According to the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV-TR), intellectual disability (termed as ‘mental retardation’) is defined as “significantly subaverage intellectual functioning (an IQ of approximately 70 or below) with onset before age 18 years and concurrent deficits or impairments in adaptive functioning” (DSM-IV-TR; APA, 2000, p. 39).

ID is further defined, depending on specific IQ score. An individual with an IQ between 50 - 70 would be classified with mild ID, between 35 - 50 with moderate ID, between 25 - 35 with severe ID, and any person with an IQ of below 25 would be classified with profound ID (DSM-IV-TR; APA, 2000). In addition, individuals with an IQ between 71 - 84 can be classified as having borderline intellectual functioning (DSM-IV-TR; APA, 2000).

**1.2.2 Prevalence.** It is difficult to determine precise prevalence rates of individuals with ID in England. In 2001, Valuing People, the Government white paper on ID (Department of Health, 2001) estimated that there were approximately 1.4 million people in England with ID. It estimated that 210,000 of these people had severe or profound ID, of which around 65,000 were young people and 145,000 adults. It estimated that a much larger proportion of these people, approximately 1.2 million, had mild or moderate ID.

Emerson and Hatton were commissioned in 2004 by the Department of Health to produce revised prevalence estimates, drawing on information from both local authorities and census data. They adjusted data to reflect the higher percentage of ID found within younger age groups and the lower percentage in the older adult age group, which they stated was not factored into the Valuing People estimates. Emerson and

Hatton (2008) estimated that there are 985,000 people in England who have ID, equating to approximately 2% of the population.

**1.2.3 Comorbid difficulties.** People with ID have high rates of mental health problems (O'Brien, 2002) and physical health problems (Lennox & Kerr, 1997); which can often go undetected and therefore untreated in this population (Holland, 2004). Problems that can be common within the ID population can include epilepsy (Kerr, Fraser & Felce, 1996), depression (Richards et al., 2001), anxiety (Dagnan & Jahoda, 2006) and substance misuse problems (Taggart, McLaughlin, Quinn & Milligan, 2006).

In addition, families supporting children with ID have been found to have a significantly increased risk of adverse socio-economic circumstances (Emerson & Hatton, 2005; Fujiura & Yamaki, 2000). Mothers of children with ID (Singer & Floyd, 2006), and in particular single mothers of children with ID have been found to demonstrate higher levels of depression (Olsson & Hwang, 2001) along with lower levels of self-esteem, happiness and self-efficiency than mothers of children who do not have ID (Emerson, Hatton, Llewellyn, Blacker & Graham, 2006). Mothers of children with autism have been found to be at increased risk of experiencing high levels of stress (Eisenhower, Baker & Blacher, 2005). These experiences are likely to have subsequent impact on the child with ID.

### **1.3 Intellectual Disability and Offending Behaviour**

The relationship between ID and offending behaviour is complex (Holland, 2004). Firstly, establishing clear definitions for 'ID' and 'offending' has proved problematic in research studies (Holland, Clare & Mukhopadhyay, 2002; Jones, 2007), making it difficult to identify prevalence rates, and draw comparisons between studies. Measuring offence rates and estimating prevalence is difficult in any population, due to the variation of when the data is collected within the criminal justice process. This

process is complicated further within the ID population for numerous reasons; including the judicial system route not being pursued if a guilty state of mind preceding the offence ('Mens Rea') cannot be proved, if challenging behaviour is defined as an offence, or if evidence from a victim with ID is required (Holland, 2004).

It has also been suggested that people with ID are likely to make false confessions whilst they are in police custody (Clare & Gudjonsson, 1993), are more likely to be misled by leading questions (Hayes, 1996), and are less likely to understand their rights and the criminal justice system proceedings (Baroff, Gunn & Hayes, 2004; Johnston & Halstead, 2000). In addition, individuals with ID have been found to be more likely to confess to offences, are more likely to be denied parole, and are at increased risk of being victimised whilst they are in prison (Glaser & Deane, 1999).

However, offending by those who have an IQ of below 50 has been described as rare (Simpson & Hogg, 2001), particularly in the UK. Simpson and Hogg conducted a systematic review of offenders with ID, focusing on the methodology and the prevalence rates drawn from the studies conducted. They concluded that there was not sufficient evidence from the 15 papers reviewed to suggest that offending rates are higher amongst people with ID, than the general population. However, papers that did not accurately measure or classify ID, and those that did not clearly define offence status or offence type, were excluded from the review. Although this could be said to increase the accuracy of the review, the problems with establishing such definitions (mentioned above) are commonly faced by researchers in this field, which therefore resulted in high exclusion rates from this review. A total of 42 papers out of the 73 identified initially were excluded for these reasons.

In their study of data obtained from the Office of National Statistics (ONS, 1999), Dickson, Emerson and Hatton (2005) found that adolescents with ID reported

higher rates of anti-social behaviour than their peers without ID. However, the authors reported that this difference was accounted for by the increased rates of mental health problems and social deprivation rates amongst this ID group.

**1.3.1 Prevalence.** Prevalence of offending behaviour in adults with ID is difficult to accurately determine and appears to differ, depending on where and how the sample was drawn. It has been suggested that people with ID may be over-represented in the criminal justice system (Lindsay, Law & MacLeod, 2002), however this view is not always supported. Some of the main areas where research in this area has been conducted are discussed below.

**1.3.1.1. Police.** Research suggests that illegal behaviour by people with ID occurs far more frequently than inferred by statistics obtained from police stations (Hales & Stratford, 1996). Two studies explored offences (including alleged offences) by adults in contact with their local ID services in 1995 and found that 2% of those in the Cambridge area (Lyall, Holland & Collins, 1995) and 5% in London (McNulty, Kissi-Deborah & Newsom-Davies, 1995) had previous involvement with the criminal justice system. However, people with ID not known to their local ID service were obviously not included in these statistics. Therefore these findings are likely to be an underestimation of prevalence rates (Murphy & Mason, 1999).

In another study; Gudjonsson, Clare, Rutter and Pearse (1993) found that 8.6% of the 156 suspects screened at two London police stations had a full scale IQ (FSIQ) of less than 70, placing them within the ID range. They found that a further 25.1% of the sample had a FSIQ falling between 70 and 75, placing them in the borderline ID range. However, a diagnosis of ID in this study was determined by IQ score alone, and information regarding social or adaptive functioning or development, was not obtained by the authors.

**1.3.1.2 Prison.** Typically, studies exploring the prevalence of people with ID in English prisons have found considerably lower rates than those presented by police custody studies. However these estimated rates vary considerably, and this is associated with differences in methodology, tests administered, the time point of custody, and many other factors (Holland et al., 2002). Murphy, Harnett and Holland (1995) found that no men in their study of 157 males in a London remand prison, had a FSIQ of below 70, However despite this, 21% of their sample reported either having attended a special school, or having 'reading problems or intellectual disabilities'. Therefore, a zero prevalence rate of individuals with ID may be an unfair representation of this prison population.

Fazel, Xenitidis and Powell (2008) conducted a systematic review of surveys that explored the prevalence of ID amongst general prison populations between 1988 and 2004. They compiled information on 11,969 prisoners, drawn from 10 surveys across five countries; Australia, UK, USA, New Zealand and Dubai. The majority of studies reviewed reported a prevalence of people who had a clinical diagnosis of ID between 0.5% and 1.5% of the prison population. This data was predominantly drawn from the male prisoner population (92% male).

A greater prevalence of ID was found in an English male prison by Hayes, Shackell, Mottram and Lancaster (2007). They reported that 7.1% of their randomly selected sample (140 prisoners from a population of 1400) had an IQ below 70, when measured by the Wechsler Adult Intelligence Scale-III (WAIS-III; Wechsler, 1999), and 10.1% scored below 70 when measured by the Vineland Adaptive Behaviour Scale (VABS; Sparrow, Balla & Cicchetti, 1984). However, although the authors report that these prevalence rates portray greater numbers of people with ID in prison than previous

findings suggest, they also state that only four of their participants (2.9%) met criteria for ID diagnosis, with scores <70 on both measures.

In another study, Herrington (2009) investigated the prevalence of ID amongst 185 young male prisoners (18 - 21 years old). The Kaufman Brief Intelligence Test, 2<sup>nd</sup> Edition (KBIT-2; Kaufman & Kaufman, 2004) was used to measure intelligence and the VABS-2<sup>nd</sup> Edition (Sparrow, Cicchetti & Balla, 2005) was used to measure adaptive behaviour. The KBIT-2 provides IQ composite scores, along with verbal and non-verbal scores. Herrington reported a range of composite IQ scores from 55 to 119. When both IQ and adaptive behaviours were measured, she reported that not one man scored within the ID range. However, when IQ composite scores alone were considered, Herrington found that 10% men scored an IQ of below 70, indicating significant impairment in cognitive functioning. The contrast in these findings highlights the difficulties faced when comparing studies with one-another, as different classification criterion are often used. In addition, the KBIT-2 was standardised on the US population, and not with the British population used within this study.

**1.3.1.3 Probation services.** Less research has been conducted to explore the number of people with ID who are on probation. In one study, Mason (1998) reported that 6% of a sample of 70 male offenders on probation were identified as having an IQ of below 70, together with impaired social functioning, therefore classifying them as having an ID. However, Mason and Murphy (2002) suggest that the probation service is likely to hold only a 'significant minority' of people with ID in their care.

**1.3.1.4 Summary.** As illustrated, both rates of offending amongst the ID population and prevalence rates of ID amongst the offending population differ between research studies. The classification and methodological differences between these studies, including the test administered to determine ID and the point of custody during

which the data was collected, impacts on the recorded prevalence rate (Holland et al., 2002). This in turn limits how useful any comparisons may be.

Despite these difficulties, research into adults and adolescents with ID who are involved with the criminal justice system is vast, with a multitude of studies exploring a range of other areas. Such areas include (but are not exhaustive of) exploring treatment interventions with offenders with ID, for example the effectiveness of fire-setting intervention groups (Taylor, Thorne, Robertson & Avery, 2002), and exploring attitudes of staff to offending behaviour by adults with ID, including differences in tolerance levels and what staff would report to the police (Lyall et al., 1995). Other areas include exploring people's views of individuals with ID within the criminal justice system (Cant & Standen, 2007) and the need for better staff training at all stages of the criminal justice system in how to work with, and how to best help individuals with ID (Hayes, 2007).

**1.3.2 Offence type.** There has been some research looking at the most common types of offences committed by people with ID. Day (1994) suggested that the incidence of sexual offences committed by people with ID is around four to six times higher than offences committed by the general population. Violent offences and petty crime have been identified as the most frequent offence types in ID (Barron, Hassiotis & Barnes, 2004), although these authors also suggest that sex offences and arson are commonly observed - a finding which appears consistent with findings from other studies (Cullen, 1993; Day, 1993; Lund, 1990).

However, it was previously believed that people with ID were over represented in the population who committed arson or sexual offences (e.g. Day, 1994; Walker & McCabe, 1973). Jones (2007) has described how this view was developed from studies that were based on biased samples of offenders who were sentenced to time in prison or



hospital settings. She states that as this sample was biased, these findings cannot be generalised to the larger population of ID offenders. Holland et al.'s (2002) research supports this, stating there is little evidence to suggest over-representation of ID in these specific groups.

Simpson and Hogg's systematic review (2001) explored types of offences committed by people with ID. They found some evidence to suggest that the prevalence of sexual offending, burglary and criminal damage is relatively higher in those who have borderline ID, compared to the general population. Again, it is difficult to establish whether these are in-fact the most common offences, or whether these offences are more likely to result in criminal justice service involvement.

**1.3.3 Risk factors for people with ID.** Considering the problems presented in determining accurate prevalence rates, Jones (2007) has stated that it is hard to identify defining characteristics of offenders with ID. Despite this, there has been an array of potential risk factors for offending behaviour in people with ID presented in the literature.

Low IQ during childhood has been suggested as a predictor of offending behaviour in adulthood (Farrington, 2000). Farrington has also suggested that offenders with low IQ are more likely to be from a larger family, from economically disadvantaged families, and to have experienced higher levels of parental conflict (Farrington, 2000). In addition early delinquency, social disadvantage, conduct disorder, and contact with social services have all been proposed as predictors for people with ID to have later involvement with the criminal justice system (Barron et al., 2004; Simons, 2000), along with family criminality (Winter, Holland & Collins, 1997) and unemployment (Jones, 2007). Being young (Holland et al., 2002), having a mild to

borderline ID (Cullen, 1993), and being male (Thompson, 1997) have all been identified as risk factors for increased offending behaviour in people with ID.

One study that set out to explore the typical characteristics of offenders with ID (Hogue et al., 2006) compared a sample of 212 offenders housed in three different levels of security; high secure, medium/low secure, and community offenders, using the same methodological approach. They found that adults in higher security units were significantly younger at the time of their first offence than the community based offenders. They also found that those in secure settings had more complex presentations and were increasingly likely to have co-morbid personality disorder diagnosis than community offenders.

**1.3.3.1 Emotional and behavioural risk factors.** Furthermore, the incidence of mental illness in offenders with ID has been reported as high, and this has been suggested to be a significant contributor to offending behaviour (Barron, Hassiotis & Banes, 2002). Poor coping strategies (Holland, 2004), mental health difficulties (Murphy, Holland, Fowler & Reep, 1991; Noble & Conley, 1992) and personality disorder (Reed, Russell, Xenitidis & Murphy, 2004) have all been shown to be associated with offending behaviour in people with ID.

Hall (1999) conducted research with young offenders with ID who were residing in secure units. He found a high prevalence of psychiatric disorders in this population, including behavioural disorders, mood disorders, anxiety disorders and substance misuse. Behavioural problems have also been self-reported as a common experience by offenders with ID in both childhood (Day, 1993; Winter, Holland & Collins, 1997) and adulthood (Holland, et al., 2002). In addition, a combination of both historical behavioural problems and comorbid mental health needs have been identified in the

literature as factors that increase individuals with ID's contact with the criminal justice system (Jones, 2007; Simons, 2000).

A range of disorders have been found to be prevalent amongst the ID offender population. Mood disorders are prevalent in the ID population, particularly amongst those who offend (Smith & O'Brein, 2004), including dysthymia (Day, 1990). Substance misuse is also common amongst the ID offender population, with Ashton (2002) finding 40-60% of their sample of offenders with ID aged between 18 and 25, having used cannabis. Furthermore, in their study of 61 adults with ID who had offended, Baron et al. (2004) found high rates of psychopathology (51.71%), with psychotic illness being particularly prevalent (43.3%).

Aggressive behaviour is the most common reason people with ID are admitted to hospital (Lakin, Hill, Hauber, Bruininks & Heal, 1983; Taylor, Novaco, Gillmer & Robertson, 2004). Considerably fewer studies however, have explored the characteristics and experiences of women with ID who have offended (Holland et al., 2002). Lindsay, Steele, Smith, Quinn and Allan's (2006) inspected 12 years referral information for women admitted to high-secure hospitals. They reported that the most common reasons for referral included aggression, self-mutilation and attempted suicide. However more research is required in this field, particularly in exploring the differences in risk factors for offending behaviour amongst male and females with ID.

#### **1.4 Moral Reasoning**

One psychological theory that has been proposed to attempt to explain why some people offend whilst others do not, is moral reasoning theory. Moral reasoning has been defined as "the cognitive and emotional processes occurring within a person when they are attempting to determine whether or not an event is morally right or wrong" (Langdon, Clare & Murphy, 2010).

**1.4.1 Piaget's theory of moral reasoning.** Piaget (1932), through his work exploring child development, first described moral reasoning as a developmental process where judgments are made, based on the social experiences the child has encountered. Piaget proposed that moral development occurs alongside and is dependent upon the development of logical reasoning abilities.

Piaget described how a child's cognitive reasoning develops in stages, each more complex than the last, which build over time. Infants initially enter the sensorimotor stage from birth, where learning occurs predominantly through their sensory experiences and motor skills (Palmer, 2003). At around two years, the infant progresses into the preoperational stage, where they start to learn that objects can be represented by language and images. Until about aged seven, children's thinking remains ego-centric, and they are able to solve practical, concrete problems (Slater, Hocking & Loose, 2003). At around seven years old the child enters into the concrete operational stage of development, where their thinking becomes more logical, systematic and rational, and conservation skills are learned. (Slater & Bremner, 2003). Piaget's final stage of cognitive development is the formal operations stage, which is entered into during early adolescence. The skills developed in this stage enable individuals to think abstractly, hypothesise, plan and solve more complex problems, through strategies such as the manipulation of variables.

Piaget's theory of moral reasoning suggests that moral development is therefore dependent on advancement through these logical reasoning stages. He described how children and young people engage in either heteronomous or autonomous moral reasoning. Heteronomous reasoning is based on rules that the child believes are rigid and unchangeable because they are implemented by an authority figure (e.g. parent). Piaget stated that this type of reasoning is typically engaged in by younger children.

Autonomous reasoning is typically engaged in by children from about age 10 years (Slater & Bremner, 2003). Reasoning is based on the understanding that laws and rules have been developed by people and society in general, and that when an action is judged, both an individual's intentions and the subsequent consequences should be considered. Rights and rules are no longer understood as one-way, but as reciprocal (Hart, Burock, London & Atkins, 2003), and principles of justice and fairness are fundamental. Piaget stated that in order to reach autonomous moral reasoning, an individual is required to have developed formal operational thinking ability (Palmer, 2003).

**1.4.2 Kohlberg's theory of moral reasoning.** Kohlberg (1969, 1976) set out to develop Piaget's theory of moral reasoning. Piaget's model was developed on and restricted to children and as a result, Kohlberg sought to explore the development and role of moral reasoning in adolescence and adulthood, hence hoping to broaden the theory.

Through his research Kohlberg developed his six-stage model of moral development (Table 1). The higher the stage, the more abstract and complex the decision-making and reasoning becomes. Kohlberg described how individuals initially reason at stage 1, and over time move through the stages to more complex reasoning. However, not all individuals are thought to reach stage 6 of moral development.

Kohlberg described how Preconventional reasoning (stages 1 and 2) occurs when an individual views rules as separate entities to themselves and their reasoning is egocentric. They typically make decisions based on rules, on authority figures (e.g. parent figures) and on their own needs, and are typically unaware of shared moral norms and expectations (Ashkar & Kenny, 2007). During Conventional reasoning (stages 3 and 4), individuals demonstrate reasoning based on other people, including

Table 1.

*Kohlberg's stages of moral development (1969, 1976)*

Level	Stage number	Reasoning is based on:
<b>Preconventional</b>	1	Rules, obeying authority and avoiding punishment.
	2	Egocentricity; one's own needs take priority.
<b>Conventional</b>	3	Other people's needs, prioritising personal relationships.
	4	Societal rules and keeping order.
<b>Postconventional</b>	5	The relationship between individuals and society, and understanding rules can sometimes be broken.
	6	The acquisition of self-chosen moral and ethical principles.

consideration of personal relationships and societal rules. In stage 3 reasoning, people are typically concerned with how they are being evaluated by others. Postconventional reasoning (stages 5 and 6) represents reasoning based on self-chosen ethical and moral principles, with the understanding that if their own beliefs or principles are breached, it is reasonable to break a law. Progression through these moral reasoning stages is dependent on an individual's level of cognitive development (Colby et al., 1987).

**1.4.3 Criticisms of Kohlberg's theory of moral reasoning.** Kohlberg's model of moral development has been heavily criticised on the grounds that it is biased in relation to both sex (Brown, Tappan & Gilligan, 1995; Gilligan, 1982) and culture (Snarey, 1995).

**1.4.3.1 Culture criticisms.** Kohlberg believed that his moral judgement stages were universal, and were experienced across all cultures (Rest, Narvaez, Bebeau &

Thoma, 1999). Snarey (1994) reviewed studies drawn from a range of cultures to explore moral reasoning levels. Although Snarey found evidence to support the existence of stages 1 to 4 cross-culturally, they did not find evidence for postconventional reasoning in non-western cultures. This supports earlier findings by Schweder (1982), who also argued that there was weak evidence for the existence of postconventional reasoning. Snarey therefore argues that there is a need to incorporate other ways of thinking about morality other than Kohlberg's stages, including communitarian and religious ways (Rest et al., 1999).

Despite there being evidence to suggest the non-existence of postconventional reasoning cross-culturally, it is not clear whether this reasoning is not experienced by some cultures (particularly non-Western cultures), or whether it the stage-model fails to accurately measure this reasoning. This therefore may be seen as a limitation of Kohlberg's stage model approach.

**1.4.3.2 Sex criticisms.** A vast amount of research has explored moral development in relation to sex and gender. Gilligan (1982) criticised Kohlberg's model for discriminating against the moral reasoning of women. Kohlberg developed his model following numerous interviews with young males, which Gilligan claimed resulted in it being biased towards male-orientated morality. Gilligan ensured that she interviewed both sexes in her research, and as a result concluded that males and females differ in their moral judgements. She proposed that whilst women typically base their moral decisions on care and empathy related factors, men base their moral decisions on justice and fairness. She argued that women express their morality "in a different voice" (Gilligan, 1982).

Gilligan's claims were supported by Lyons (1983) who conducted open-ended interviews and demonstrated that the majority of males (79%) judged by a 'rights'

orientation, whereas females (75%) judged by a 'care' orientation. Despite such claims Lyons' research can be criticised for various reasons. Firstly, her research was conducted on a relatively small sample (N = 32). In addition, her participants spanned a considerable age range (8 - 60 years), and included only those who had received a high level of education and had a high level intelligence (Rothbart, Hanley & Albert, 1986). This biased sampling is therefore highly likely to reduce the generalisability of her claims to the greater population.

Gilligan linked her theory to Chodorow's gender theory (Chodorow, 1978); suggesting gender-related differences in identity are formed during early socialisation. Gilligan proposed that a boy's identity is developed in relation to the world, whereas a girl's identity is developed in relation to other people. As a result, Gilligan argued that Kohlberg's model automatically assigns females to a less mature stage than males, based on their tendency for care-related decision making (Gilligan, 1982). Moral decisions based on relationships and the needs of others typically fit Kohlberg's stage 3, whereas decisions based on maintaining laws and societal rules, fit within stage 4 reasoning. Gilligan therefore suggests that care-orientation is devalued by this model.

However, there remain inconsistencies within the literature investigating the existence of sex differences in moral reasoning. Gilligan's argument has received some support from the literature, with studies demonstrating that whilst females adopt a care-orientated approach, males draw on a more justice-orientated approach to decision-making, (Baumrind, 1986; Ford & Lowery, 1986; Yacker & Weinberg, 1990).

Gilligan's claims have also been disputed. Other studies have found no differences in stage scores between males and females (Friedman, Robinson & Friedman, 1987; Gregg, Gibbs & Basinger, 1994; Rest, 1979; Snarey, 1982; Walker, 1984), or in the predominance of a care or justice-orientation approach to moral



reasoning (Rothbart et al., 1986). Rothbart et al. (1986) set out to test Gilligan's hypothesis that women are more likely to base their reasoning on care and relationships, whereas males are more likely to base reasoning on justice and rights. Their findings countered Gilligan's hypotheses, demonstrating that males and females draw on both reasoning types. They therefore argued that not taking both orientations into account is a "short-coming" of any moral reasoning framework.

In addition to criticising Kohlberg's theory of moral reasoning, Gilligan (1982) also criticised the assessment of moral reasoning. She argued that the hypothetical moral dilemmas used by most measures are biased towards justice-orientation, therefore discriminate against females. As a result, Gilligan suggested that using real-life dilemmas would better serve care-oriented reasoning.

Once more, inconsistencies are shown within the literature. Research adopts a range of methods to measure moral reasoning and presents mixed findings, with some studies finding no differences between males and females when either real-life (Derry, 1989) or hypothetical dilemmas (Garrod, Beal & Shin, 1990) were administered. Walker (1984) conducted a meta-analysis which looked at 79 studies, investigating whether gender differences were detected across the 180 samples measured, using Kohlberg's Moral Judgement Interview (MJJ; Colby & Kohlberg, 1987). Walker found that the MJJ demonstrated a non-significant preference towards moral reasoning in men, concluding that this measurement tool did not demonstrate sex-bias.

Interestingly, there are some research studies that have shown females scoring at a significantly higher moral stage than males. This counters Gilligan's criticisms that the hypothetical dilemmas used in moral reasoning assessment discriminate against females (Duckett et al., 1997; Self, Safford & Shelton, 1988). Both studies made use of the Defining Issues Test (DIT; Rest, 1975), which was developed in an attempt to make

moral-reasoning assessment more standardised. The populations studied comprised nursing students and veterinarians (respectively), which may limit how reliably one can generalise these findings to the general population. People who enter into such caring professions may hold specific characteristics that impacted upon their responses to questions. In addition, both studies had considerably more participants of one sex which was likely to have skewed the findings. Replication of the studies with equal representation of men and women is therefore required to be able to validate these conclusions.

There is however some evidence that fictional and real life moral dilemmas may tug at different moral reasoning stages, with dilemmas eliciting different moral judgement (Krebs & Denton, 2005). Controversy therefore persists as to whether the moral reasoning abilities of men and women differ because of their sex.

**1.4.4 Gibbs' theory of moral reasoning.** In 1979, Gibbs revised Kohlberg's model in an attempt to overcome some of the criticisms that have been presented, including the limited evidence that supports the existence of stage 6, particularly cross-culturally (Gibbs, 1979). Gibbs removed Kohlberg's Postconventional stages (stages 5 and 6), proposing that these do not constitute a Piagetian stage of development. Gibbs stated that Piagetian stages should be potentially achieved through natural progression across all cultures.

Gibbs, Basinger and Fuller (1992) and Gibbs (2003, 2010) proposed the Sociomoral Stage theory, a four-stage model of moral reasoning. In this model the first two stages constitute what Gibbs termed 'Immature' reasoning', and the latter two stages constitute 'Mature' reasoning (See Table 2). During stage 1, moral decision making is typically based on obeying rules and 'powerful' authority figures. Physical

Table 2.

*Sociomoral Stage Theory (Gibbs et al., 1992; Gibbs 2003; 2010)*

Stage number	Title	Description of reasoning
<b>Immature reasoning:</b>		
1	Unilateral and Physicalistic	Reasoning is based on unilateral authority, particularly regarding people perceived as 'powerful'. Rules are viewed in absolute terms. Physical consequences of behaviours are considered when decision making.
2	Exchanging and Instrumental	Morality remains external to individual and superficial in nature. Reasoning is concerned with the needs of self or others. Tit-for-tat exchanges may be made to determine reasoning.
<b>Mature reasoning:</b>		
3	Mutual and Prosocial	Reasoning considers interpersonal relationships, empathy, care and expectations. Individuals are more likely to consider the consequences of violating social norms.
4	Systemic and Standard	Reasoning considers the complex social systems in which individuals live; including rights, values, responsibility to society, and an individual's conscience.

consequences such as being punished or beaten up, along with labels such as 'stealing is bad' are considered when decisions are made at this level.

Stage 2 reasoning is instrumental, based on one's own needs, where 'tit-for-tat' exchanges can be made for personal gain. For example an individual may decide to help someone out, knowing that they will owe them a favour at a later stage. Needs and advantages are also considered at this stage, such as believing that people may like you more for behaving in a certain way.

During stage 3 reasoning, moral decisions consider individuals relationships with others, where care, empathy, normative expectations and intrapersonal approval play key roles. For example an individual may base their decision on the knowledge that their action will leave them feeling proud and good about themselves, as a consequence. Stage 4 is the most mature reasoning stage, according to Gibbs' model. Reasoning at this levels typically considers the impact the decision may have on society; incorporating features such as values, rights, responsibility and their personal conscience into the decision making process.

However, despite Gibbs revising Kohlbergian theory to deal with evidence that stage 6 exists infrequently cross-culturally, and with his model having been found to demonstrate validity cross-culturally (Gibbs, Basinger, Grime & Snarey, 2007), he did not revise the theory in an attempt to remedy the criticism that it is inherently sexist, which stands as its biggest criticism.

### **1.5 Moral Reasoning and Offending Behaviour**

It has been proposed that Kohlberg's moral reasoning theory can be linked to offending behaviour at each stage of development (Palmer, 2003; Tarry & Emler, 2007). For example, Palmer suggested that offending at stage 2 reasoning would be justifiable if the individual perceives the rewards they will gain by committing an offence, as being greater than the risks they are placed under by offending. Offending at stage 3 might be justified if relationships are maintained as a consequence of committing an offence. Palmer's theory therefore justifies offending behaviour at any stage of moral development. Tarry and Emler (2007) support this concept, however they state that it is stage 2 reasoning where personal needs are prioritised, which in turn characterises delinquent and antisocial behaviour.

Despite illegal behaviour being justifiable at any stage of development, Palmer (2003) suggests that offenders are less likely than non-offenders to enter the more mature (higher) stages of moral development, which is consistent with findings in the literature (Arbuthnot, 1984; Jurkovic, 1980). Stams et al. (2006) support this claim, suggesting that offending behaviour appears more “morally acceptable at the self-centred lower stages”, which are predominantly driven by “avoidance of punishment (stage 1) or instrumental advantage (stage 2)”.

Gibbs (1993) has suggested that children who are not exposed to role-taking opportunities when they are growing up, which would enhance their ability to perspective take, will be less effective at demonstrating age-appropriate moral reasoning skills by adolescence. He suggests that such individuals may therefore remain egocentric, increasing the probability that they will engage in anti-social behaviours. The developmental delay in moral reasoning leads to distorted cognitions which an individual uses to rationalise and justify their offending behaviours (Gibbs, 2003; 2010; Palmer, 2003).

The research base exploring moral development and offending behaviours has grown in recent years. The vast majority of this research compares male adolescent offenders with adolescent non-offenders (Chandler & Moran, 1990; Palmer, 2003; Palmer & Hollin, 1996). Prevalence rates of offending behaviour are considerably higher amongst boys than girls (Snyder & Sickmund, 1999; Stams et al., 2006), which is likely to have an impact on why more research is conducted with males. However some studies do include female offenders or female non-offenders in their samples (Gavaghan, Arnold & Gibbs, 1983; Gregg et al., 1994), with Garmon, Basinger, Gregg and Gibbs (1996) proposing that young females demonstrate stage 3 reasoning at a younger age than males. Stams et al. (2006) counter this, stating differences between

moral judgement stages in young male and female offenders are observed less consistently amongst the studies included in their review.

Studies in this area typically measure moral reasoning through presenting participants with hypothetical dilemmas or questions, and recording their responses. Production measures such as the Moral Judgement Interview (MJI; Colby & Kohlberg, 1987) or the Socio-moral Reflection Measure-Short Form (SRM-SF; Gibbs et al., 1992), both commonly used in this field, require participants to provide moral justifications. Alternatively, recognition measures such as the Defining Issues Test (DIT; Rest, 1975) require participants to evaluate a list of set statements related to moral dilemmas. Scores on these measures are converted to stage scores of moral development.

Overall, young offenders have been found to typically score at a less mature stage of moral reasoning than non-offenders (Blasi, 1980; Lee & Prentice, 1988; Nelson, Smith & Dodd, 1990; Smetena, 1990; Van Vugt et al., 2011b), predominantly scoring at the preconventional level. This has been found both within studies that compared just males, and those that compared males with females. In their study, Palmer and Hollin (1998) found that the majority of young offenders (13 – 22 years old) engaged in some stage 2 moral reasoning, compared to mostly stage 3 reasoning amongst same age non-offenders. In Stam's et al. (2006) meta-analysis of moral judgement, the authors found that young offender's moral judgement was significantly lower than non-offending peers, even when gender, age, culture and intelligence were controlled. Their findings are strengthened by their extremely large sample (N = 2,316 offenders, N = 2498 non-offenders) and large effect size ( $d = .76$ ).

Ashkar and Kenny (2007) explored the moral reasoning abilities of juvenile offenders; comparing a group of sexual offenders with offenders who had not

committed sex-offences. They concluded that there were no overall differences in moral reasoning ability between the two types of offenders, which was consistent with other research (Wilson, Goodwin & Beck, 2002). However, Ashkar and Kenny (2007) did find some differences within the individual moral reasoning questions. They found that the moral reasoning stage engaged in by offenders differed in relation to the offending context; more specifically, that moral reasoning deficits were demonstrated that were offence specific. Offenders presented with more immature reasoning in the area they had offended, with more pre-conventional reasoning shown within a sexual-offence context by those who had committed sex-offences than the non-sex offenders, and vice versa for non sexual offending contexts (Ashkar & Kenny, 2007).

This study potentially highlights a limitation of stage-based models of moral development. The findings suggest that individuals can function at different stages at different times, in different contexts. This therefore suggests that moral reasoning is not fixed, and that perhaps there are environmental contributing factors that play a role.

However, in this study it cannot be established whether these moral reasoning deficits specific to offences were a cause or effect of peoples' offending behaviour. In addition, although their findings were clinically interesting, data was only presented for male juvenile offenders, and therefore generalising findings to the greater offending population should be done with caution. This is further restricted by the small sample recruited (N = 16).

The link between cognitive development and moral stage score has been well established (Colby et al., 1987), and many of the referenced studies controlled for IQ when comparing populations. However, much of the research base focuses on young people and considerably less research in this area has been conducted amongst the adult population. In one adult study, Buttell (2002) explored moral reasoning among women

who were convicted for domestic violence offences, finding that they demonstrated significantly lower levels of reasoning than non-offending adults. These findings were comparable with studies that looked at male 'batterers' (Buttell, 1999; Buttell, 2001); with both groups demonstrating moral reasoning levels of two standard deviations below those of non-offenders. Buttell (2002) likened these moral reasoning scores to those presented by institutionalised juvenile offenders.

DeWolfe, Jackson and Winterberger (1988) compared moral reasoning and moral character in incarcerated adult males and females. The authors found that male offenders scored at a more mature level of moral reasoning than female offenders. When reflecting on their findings, the authors suggested that females may have been disadvantaged in their responses to the justice-orientation dilemmas, presented by the Sociomoral Reflection Measure (SRM; Gibbs & Widaman, 1982). Contrasting results however were presented by Gregg et al. (1994). They demonstrated that both female groups (offender and non-offender) engaged in more mature moral reasoning than did their male peers, whilst controlling for IQ and age.

As briefly discussed, there are limitations of using a stage-based model of moral development, especially when considering the different stages of reasoning engaged in by different offending contexts. Ashkar and Kenny (2007) identified offence-specific deficits in reasoning which proposes that moral reasoning is not as fixed as theory proposes, and may in-fact be influenced somewhat by external and environmental factors. However, despite these criticisms, stage theories of moral reasoning offer a pragmatic approach to measuring and understanding an individual's general level of moral development.

Despite the link between moral reasoning and offending behaviour being firmly established and widely researched, considerably less is known about moral development



in people with ID. Van Vugt et al. (2011a) suggest that the cognitive impairment experienced amongst people with ID reduces their moral development abilities, which in turn exacerbates their risk for engaging in delinquent behaviour.

### **1.6 Moral Reasoning and Intellectual Disabilities**

Within the general population, research into moral reasoning has found significant positive relationships between the IQ of children and their level of moral development (Hoffman, 1977). In addition, higher intelligence, higher level of education received, and subsequently a greater level of abstract reasoning have been linked to more mature stages of moral reasoning (Colby, Kohlberg, Gibbs & Lieberman, 1983). Despite these links between intelligence and moral development, considerably less is known about moral development within the ID population. Furthermore, the cognitive developmental approaches of moral reasoning; as proposed by Piaget, Kohlberg and Gibbs, did not consider individuals with ID in their theoretical development.

To explore how much and what is known about the moral development of people with ID, Langdon et al. (2010a) conducted a systematic literature review within this field. Due to the quality of this review, how recently it was conducted and the similarity of area being explored, a new systematic literature review to mirror their findings will not be presented within this research project. However, Langdon et al.'s (2010a) review of the literature will be discussed, particularly in relation to the sex of participants involved in the studies, which is a key focus of the current research study. Following this, papers published within this field since Langdon et al.'s (2010a) review will be presented and critiqued.

Langdon et al. (2010a) used a wide selection of search terms in their systematic review of the literature. This increased the inclusion of papers in their study, as it

accounted for the changing terminology of ‘intellectual disability’ both cross-culturally and throughout history. This is essential as the terminology has changed considerably over the last 200 years, including terms such as ‘mental disability’, ‘mental handicap’, ‘mental subnormality’ and ‘mental retardation’ (Schalock et al., 2007). If this review had narrowed the search criteria then it would have restricted its findings to a small proportion of the available literature.

The review identified 20 papers that explored moral reasoning in people with ID. The majority of studies (N = 16) comprised children and adolescent participants alone, making it difficult to generalise findings to adult populations. In their discussion, Langdon et al. (2010a) highlight the difficulty in drawing reliable or valid conclusions from, or making comparisons between studies, due to the varied measures of moral reasoning used. Typically unstandardised measurement tools were administered, which emphasises the importance of drawing any themes or interpreting findings with caution.

However, although mindful of the potential limitations regarding reliability of the findings and the difficulties faced comparing the studies; several themes were observed. Overall, Langdon et al. (2010a) concluded that the papers from this review demonstrated that moral development of children, adolescents and adults with ID, typically develops at a slower rate than their peers (e.g. Foye & Simeonsson, 1979; Lind & Smith, 1984). This was observed when participants were matched to peers by chronological age. People with ID therefore scored at less mature stages of moral reasoning than people without ID; reflecting their developmental level. However these differences were found to disappear once participants were matched on ‘mental age’, which emphasises the important role of cognitive ability within moral development. The authors of this review also concluded that moral reasoning is linked to behaviour amongst people with ID (Langdon et al., 2010a).

All but one of the studies reviewed, Grant, Boucher, Riggs & Grayson (2005), were conducted between 1941 and 1985, with the majority of papers published in the 1970s and 1980s. Langdon et al. (2010a), usefully points out that much of this research was conducted prior to key theoretical developments within the field of moral reasoning and makes links to the social context at this time. This highlights the need for more current research within this field, to enable a more accurate understanding of moral development in people with ID in the 21<sup>st</sup> century.

**1.6.1 Sex differences.** The papers featuring in Langdon et al.'s (2010a) review that included both males and females in their study were retrieved for further inspection, to explore whether potential differences existed between the sexes. Of the 20 papers reviewed by Langdon et al. (2010a), two papers were excluded from further review for recruiting only females (Abel, 1941; Miller, Zunoff & Stephens, 1974) and an additional three papers for recruiting only males (Kahn, 1976; 1983; 1985). The 15 remaining papers comprised both males and females in their sample (See Table 3). These papers will be presented and discussed in terms of the role sex played in their study, and regarding whether they found sex differences in the moral reasoning of people with ID.

In three of the reviewed studies (Bender, 1980; Gargiulo & Sulick, 1978; Grant et al., 2005), no mention of sex was made in any stage of the paper. Gargiulo and Sulick (1978) recruited a large sample of participants in their study (N = 135). They compared young people between six and 16 years old who did not have ID, with individuals who had an IQ between 50 - 80, and with individuals who had an IQ between 25 – 50.

Significant differences were found in the moral reasoning abilities between the groups. However, this study was limited by not providing more expansive information

Table 3.

*A summary of studies that recruited both male and female individuals with IDs*

Study	Sample size	Number of males	Number of females	Groups	Groups matched on sex?	Measures used	Were sex differences measured?	Were sex differences observed?
Bender (1980)	42	NR	NR	<ol style="list-style-type: none"> <li>1. Children of average intelligence (<i>M</i> age = 94.7 months)</li> <li>2. Children in “educable mentally retarded” classes (<i>M</i> age = 117.7m; <i>M</i> IQ = 62)</li> <li>3. Children in “trainable mentally retarded” classes (<i>M</i> age = 192.4m; <i>M</i> IQ = 40.7)</li> </ol>	No	1. Unstandardised moral stories	No	No
Blakey (1973)	40	20	20	<ol style="list-style-type: none"> <li>1. Adults with ID (Med age = 26y; <i>M</i> MA = 6y)</li> <li>2. Children with no-ID (Med age = 6y)</li> </ol>	Yes	1. Unstandardised moral stories	Yes	No significant sex differences were found in moral judgement. Sex differences were found in the rates of punishment advocated.

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Boehm (1967)	67	39	28	1. Adolescents with ID ( <i>M</i> age = 18y; <i>M</i> IQ = 61)	N/A	1. Modified Piagetian moral stories	Yes	No significant sex differences found.
Foye & Simeonsson (1979)	60	30	30	1. Children with no-ID ( <i>M</i> age = 77.5m; <i>M</i> IQ = 107) 2. Adolescents with mild ID ( <i>M</i> age = 171.65m; <i>M</i> IQ = 61.15) 3. Adults with moderate ID ( <i>M</i> age = 316.35m; <i>M</i> IQ = 55.5)	Yes	1. Unstandardised moral stories	No	No
Gargiulo (1984)	94	50	44	1. Children with ID ( <i>M</i> age = 10.1y; <i>M</i> IQ = 62.58) 2. Children with no-ID ( <i>M</i> age = 6.5y; <i>M</i> IQ = 109.38)	No	1. Matching Familiar Figures test 2. Unstandardised moral judgement stories	Yes	No significant sex differences found between moral judgement of girls and boys.

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Gargiulo & Sulick (1978)	135	NR	NR	<ol style="list-style-type: none"> <li>1. Children/ adolescents with no-ID (age 6 - 16)</li> <li>2. "Educational mentally retarded" children/ adolescents (age 6-16; IQ 50 – 80)</li> <li>3. "Trainable mentally retarded" children/ adolescents (age 6- 16; IQ 25 – 50)</li> </ol>	No	1. Unstandardised moral judgment stories	No	No
Grant, Boucher, Riggs & Grayson (2005)	56	NR	NR	<ol style="list-style-type: none"> <li>1. Children with Autism (<i>M</i> age = 146.4m; <i>M</i> VIQ = 74.18)</li> <li>2. Children with mild ID (<i>M</i> age = 153.8m; <i>M</i> VIQ = 66.65)</li> <li>3. Children with no-ID (<i>M</i> age = 100.85m; <i>M</i> VIQ = 99.45)</li> </ol>	No	1. Six stories based on Piagetian stories	No	No
Jackson & Haines (1982)	96	48	48	<ol style="list-style-type: none"> <li>1. Children with ID (<i>M</i> age = 12.2y)</li> <li>2. Children with no-ID (<i>M</i> age = 7.1y)</li> </ol>	Yes	1. Self report measure - stealing situations are presented. Asked what they "would do" and "should do"	Yes	No significant sex differences found in the moral judgement "should do" responses.

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Lind & Smith (1984)	112	NR	NR	<ol style="list-style-type: none"> <li>1. "Educable mentally retarded" children</li> <li>2. Average children (M MA of both groups 5-9y)</li> </ol>	Yes	<ol style="list-style-type: none"> <li>1. Stanford-Binet Intelligence scale</li> <li>2. Slosson Intelligence test</li> <li>3. Modified Piagetian Moral Stories</li> <li>4. Marble Pull Apparatus</li> </ol>	No	No
Mahaney & Stephens (1974)	150	NR	NR	<ol style="list-style-type: none"> <li>1. Children/ adolescents with no-ID (3 age groups; 6-10, 10-14, 14-18)</li> <li>2. Children/ adolescents with ID (3 age groups; 6-10, 10-14, 14-18)</li> </ol>	NR	<ol style="list-style-type: none"> <li>1. Moral stories</li> </ol>	No	No
Moore & Stephens (1974)	150	NR	NR	<ol style="list-style-type: none"> <li>1. Children/ adolescents with no-ID (3 age groups; 6-10, 10-14, 14-18)</li> <li>2. Children/ adolescents with ID (3 age groups; 6-10, 10-14, 14-18)</li> </ol>	NR	<ol style="list-style-type: none"> <li>1. Behaviour of participants were observed to assess moral conduct</li> </ol>	No	No

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Ozbek & Forehand (1973)	32	11	21	1. Child/ adolescents with ID ( <i>M</i> age = 155.3m; <i>M</i> MA = 88.6m; <i>M</i> IQ = 58.9)	NA	1. Missouri Children's Behaviour Checklist 2. Piagetian Stories	Yes	No differences found between sexes.
Petrovich (1982)	170	94	76	1. 9 year olds 2. 11 year olds 3. 13 year olds 4. 15 year olds 5. 17 year olds Males <i>M</i> IQ = 64.88 Females <i>M</i> IQ = 66.43	No	1. Children asked to make judgements on their behaviour. These were classified into themes (good acts or bad acts). Responses were categorised and trends identified.	Yes	No significant sex differences were found for the good/ bad category responses.
Sigman, Ungerer & Russell (1983)	20	10	10	1. <i>M</i> age = 16.2y, <i>M</i> MA = 11.3y, <i>M</i> IQ = 70.2	Equal number	1. Kohlberg's Moral Judgement stories	No	No

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Taylor & Achenbach (1975)	60	31	29	<ol style="list-style-type: none"> <li>1. "Low" MA. Children with no-ID (<i>M</i> age = 75m; <i>M</i> IQ = 104)</li> <li>2. "Low" MA. Children with ID (<i>M</i> age = 121m; <i>M</i> IQ = 76)</li> <li>3. "Middle" MA. Children with no-ID (<i>M</i> age = 79m; <i>M</i> IQ = 115)</li> <li>4. "Middle" MA. Children with ID (<i>M</i> age = 138m; <i>M</i> IQ = 76)</li> <li>5. "High" MA. Children with no-ID (<i>M</i> age = 96m; <i>M</i> IQ = 113)</li> <li>6. "High" MA. Children with ID (<i>M</i> age = 150m; <i>M</i> IQ = 79)</li> </ol>	No	<ol style="list-style-type: none"> <li>1. Piagetian tasks</li> <li>2. Peabody Picture Vocabulary Test</li> <li>3. Role taking within game play</li> <li>4. Moral judgement stories</li> </ol>	Yes	No significant sex differences found in moral judgement.
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*Note.* NR = Not recorded; *M* age = Mean age; *M* IQ = Mean IQ score; Med age = Median age; *M* MA = Mean mental age; *M* VIQ = Mean verbal IQ score, *M* age = Mental age.

on the sample, making it difficult to generalise the findings to other groups with any confidence.

Bender (1980) compared three groups of children and adolescents on their level of moral judgement, whereas Grant et al. (2005), the most recent published study in this review, compared children without ID, children with mild ID and children with autism on moral reasoning. These groups were matched on 'mental age'. The authors found that the group without ID, although younger, performed better than the other two groups. They also found that the justification for their responses by the group with autism were not as good as responses from either of the other two groups.

In these studies total sample sizes were presented, however the individual numbers of males and females were not, and groups were not matched on sex. This therefore leaves the reader questioning the proportions of males and females in these studies. Apart from age and IQ, no demographic information was provided and therefore it is not possible to determine how representative these participants were of the general ID population.

Two further papers (Mahaney & Stephens, 1974; Moore & Stephens, 1974) fail to provide information on how many males and females were recruited in their studies. The same sample of children and adolescents were used in these two longitudinal studies, which set out to explore the moral development and conduct of young people with ID. Longitudinal studies exploring moral development in ID are rare and these studies revealed some interesting findings, including the observed development of both moral reasoning and moral conduct amongst the ID groups, although these differences were not as marked as in the non-ID groups. These studies failed to break down the findings into girls and boys which would have been clinically interesting and relevant.

Although the Langdon et al. (2010a) review stated that these studies were matched for sex, the reader is left uncertain as the papers do not specify this.

The final paper that did not specify the number of boys and girls within the sample was a study conducted by Lind and Smith (1984). They compared children with ID with children with no ID, reporting that both groups had a mean ‘mental age’ of between five and nine years old. This paper does however report that the groups were matched on sex, which infers that they had equal proportions of boys and girls within the two groups. By matching groups on sex, it strengthens the study as reduces the likelihood of sex impacting on the findings.

The six papers discussed do not contribute in any way to our understanding of the role of sex in moral reasoning within the ID population. These papers fail to specify the numbers of males and females they recruited in their studies, and do not break analysis down to explore potential sex differences in moral reasoning abilities. Sex or gender is not mentioned within any these papers, apart from one (Moore & Stephens, 1974) where the discussion mentioned that five people had committed “acts of misconduct” which was broken down into ‘girls’ and ‘males’. In addition, all of these papers used unstandardised measures of moral reasoning, so the findings in general should be interpreted with caution.

One paper in this review; Foye & Simeonsson (1979) provided information regarding the number of males and females in the study, yet did not make any reference to sex or measure potential sex differences in its analysis. Foye & Simeonsson used unstandardised moral stories to measure moral judgement in three groups; children without ID, adolescents with mild ID and adults with moderate ID, finding no significant differences between the groups overall. Groups were matched on sex, meaning equal proportions featured across the groups. Once more, without specific

analysis to explore potential sex differences in moral judgement, little can be learnt from this study regarding the role of sex in moral development within the ID population.

The final paper that did not measure sex differences in moral reasoning was by Sigman, Ungerer & Russell (1983). Their study comprised one group of adolescents so matching could not occur, however they included an equal number of males and females within the group. Despite the limitation of the small sample size (N = 20) and being unable to contribute to the debate on whether there are sex differences in moral reasoning, this was the only paper in review that administered a standardised measure of moral reasoning; Kohlberg's moral judgment stories. However, these have not been validated for the ID population.

One final criticism of this study is in regards to the sample. The mean IQ documented was 70.2, which infers a proportion of the population fell outside of the diagnostic criteria for ID. It states in the paper that seven participants had an IQ score between 70 – 80, with an additional three participants had an IQ score between 80 – 90, which is significantly higher than the '70' cut-off criteria to diagnose ID. This limits the value in comparing these findings with other studies.

Five papers in the review provided information on the numbers of males and females, and measured sex differences in their study, yet did not match groups on sex. Two of these however were made up of a single group, so matching could not occur, yet they had unequal proportions of males and females (Boehm, 1967; Ozbek & Forehand, 1973). Boehm's (1967) study found no sex differences amongst the moral judgement of adolescents with ID. The effect of sex on moral judgement was one variable that the authors set out to explore, however they made no hypothesis, and did not provide a rationale for why they were exploring this.

Ozbek and Forehand (1973) was the final single-group study included in this review that looked at moral reasoning in children and adolescents with ID. They reported finding no differences in moral reasoning between males and females, however the sample size was small (N = 32), and comprised unequal numbers of males (N = 11) and females (N = 21). In addition, some of the data was reported missing for five of the participants, yet the authors failed to state the sex of these participants. The gender gap could have therefore been widened considerably as a result (e.g. 6 males vs. 21 females) or narrowed (16 vs. 21), which would have an impact on the interpretation of the findings. This lack of information is a flaw of the study.

The three studies which measured sex differences in moral reasoning but did not match groups on sex, were conducted by Gargiulo (1984), Taylor and Achenbach (1975), and Petrovich (1982). Gargiulo (1984) compared children with ID with children with no ID, matched on 'mental age'. Despite an uneven number of males and females being included in the study, these were equal across the groups (25 boys and 22 girls in each group). No significant differences in moral judgement were found between the groups, or between girls and boys. Exploring sex differences was not an aim of the study, was not linked to any proposed theory, and was not supported by hypotheses.

Taylor and Achenbach (1975) set out to explore moral reasoning in relation to age and 'mental age'; matching groups of 'low mental age', 'middle mental age' and 'high mental age'. They found a significant relationship between moral reasoning and mental age. Although not matched, numbers of boys and girls were roughly equal across the group; with between four and six boys and girls in each of the groups. No significant differences were found in the moral judgement of boys and girls. However, the sample size was fairly small (N = 60) to be divided across six groups, comprising both sexes.

Petrovich (1982) conducted a cross-sectional qualitative study exploring moral development amongst children with ID. She recruited males and females across five age groups from schools for children and adolescents with ID. There were unequal numbers of boys and girls in each group, with 94 males in total compared to 76 females. This was a limitation of the study as it makes it harder to make useful sex or age-group comparisons.

In this study, children were interviewed and asked to provide justifications for their past behaviours. Themes of responses were identified for 'good acts' and 'bad acts' and categories were created. Sex comparisons were then made in terms of the frequency of responses in each category. Although significant gender differences were not found, girls stated that "helping others" was the reason for their behaviour (58%) more often than boys (44%). Despite a higher proportion of females giving "helping others" as a justification for their behaviour, this was the most popular response by both sexes. Petrovich did not make links between her findings and moral development theory, or make sex-related hypotheses when she set out to conduct her research. The qualitative method of measuring moral responses makes it impossible to compare her findings accurately to those of other papers.

All of the five papers described used unstandardised forms of measurement. Four of the studies administered unstandardised moral stories; the other asked questions about behaviours and scored these qualitatively. A larger number of each sex in each group would have increased our confidence in their findings.

The final two papers to be reviewed detailed the numbers of males and females in their study, had the methodological strength of matching their groups on sex, and measured sex differences in their analysis. These studies should therefore, in theory,

provide the most useful information when exploring sex differences in the moral reasoning of people with ID.

Blakey (1973) compared adults with IDs, with children who did not have ID's, matching them on sex and 'mental age'. The author set out to explore potential sex-differences in moral judgment as one aim of the study. However no hypothesis or rationale for exploring this was presented. Blakey (1973) did not find significant differences in the moral reasoning abilities between adults with ID and non-ID children, or between males and females. The author describes how females tended to advocate punishments of greater severity than males, but proposes that this may be as a consequence of depicting male characters in the moral story for all participants, rather than altering it to match the sex of the respondent. The unstandardised stories administered in the study reduces the reliability and validity of the findings presented.

Jackson & Haines (1982) compare children with ID to children with no-ID to explore differences in their moral judgement. Groups were matched on sex, 'mental age' and socio-economic status. They compared responses on eight hypothetical dilemmas where children were presented with a temptation to steal, and asked to state what they "would do" and "should do". The authors found no significant sex differences in moral judgement, the "should do" responses. However the non-ID group resisted stealing significantly more often than the ID population, which was suggested to be due to an age-sex interaction effect, where the younger non-ID girls resisted stealing more often than older girls with ID. This finding was not explored in relation to moral reasoning theory.

In summary, the 15 studies reviewed that included both male and female participants in their studies, comprised varying levels of information regarding sex; from five studies that do not specify numbers, do not match groups or report sex-

differences, to two studies that report all of these factors. All but one study (Sigman et al., 1983) employ unstandardised forms of measurement of moral reasoning, therefore the validity and reliability of such measures is unknown, limiting the usefulness of its findings. Only two of the reviewed studies (Blakey, 1973; Foye & Simeonsson, 1979) included adults in their samples, and in both cases the adults with ID were compared only to children without ID.

Therefore despite no significant sex differences being observed in these studies that explored moral reasoning in the ID population, it is unclear how accurate this is. Measurement tools were typically not standardised, many studies had small or uneven samples, and over half of the studies neglected to explore sex and potential differences at all. Furthermore with studies being restricted to children and adolescents, findings cannot be generalised to the adult ID population.

Exploring sex differences and moral reasoning abilities within the adult ID population remains under-researched, and more studies are therefore required that include both males and females in their samples, and make gender comparisons.

### **1.7 Moral Development, Offending Behaviour and Intellectual Disability.**

As discussed, the relationship between cognitive and moral development has clearly been established in the literature. Links between moral reasoning and anti-social behaviour have also been identified (Blasi et al., 1980; Nelson et al., 1990; Stams et al., 2006). In addition, the relationship between cognitive development and anti-social behaviour has been established, with low IQ being identified as a key risk factor for delinquent behaviour in adolescents (Farrington, 2005), both in young males (Koenen, Caspi, Moffitt, Rijdsdijk & Taylor, 2006; Seguin, Pihl, Harden, Tremblay & Boulrice, 1995) and females (White, Moffitt & Silva, 1989). Therefore expanding our understanding of the roles that moral reasoning and anti-social behaviour play within



the ID population may have important clinical implications, and potentially inform subsequent treatment interventions for this client group. Van Vugt et al. (2011a) have highlighted the importance of exploring moral development in offenders with ID, to determine whether methods of enhancing it, work effectively.

There have been very few papers published on moral development within the ID population since Langdon et al.'s 2010 review; emphasising the need for ongoing research in this area. Two further papers in this field have been identified, both of which were published exploring moral development in offenders with ID. These papers will be discussed below. Only one additional paper was downloaded for further review, however was excluded as moral reasoning was not explored, just mentioned (Lindsay et al, 2011).

Van Vugt et al. (2011a) investigated moral judgment within juvenile sex offenders, comparing sex offenders with ID to sex offenders without ID. From their research, they concluded that adolescents with ID typically demonstrated stage 2 reasoning, whereas adolescents who did not have ID demonstrated more transitional stage 2/3 moral reasoning. The author's report that individuals with ID made decisions based on "instrumental and pragmatic reciprocity" as opposed to the consideration of relationships, demonstrated by the higher reasoning stage engaged in by the non-ID group. This confirmed the researcher's hypothesis that the ID population would demonstrate lower stage reasoning than the non-ID population.

One criticism of this study however is in regards to the participant sample. The authors defined their ID group as any person with an IQ between 50 – 85, with their sample having a mean FSIQ score of 72. Therefore this combines both people with 'mild' ID (between 50 - 70) and 'borderline' IQ (71-84; DSM-IV-TR, APA, 2000),

which would make it difficult to accurately compare their findings with those of other studies, and to generalise these findings to the ID population.

A strength of this study lies in the selection of the Socio-Moral Reflection Measure-Short Form (SRM-SF; Gibbs et al., 1992) to measure moral reasoning abilities. This measure has been demonstrated to have good psychometric properties when administered to people with ID (Langdon, Murphy, Clare & Palmer, 2010). Alongside the 11 questions standardly asked in this measure, Van Vugt et al. (2011a) supplemented it with additional questions. They asked participants a further four questions with a sexual content (although this is slightly confusing as five questions are presented in their appendix), such as “How important is it that rapists are being punished?”, and four questions regarding their own victim for example, “How important is it to tell the truth about the sex offence you committed?” The paper does not however provide information on how these questions were developed, or whether they were piloted prior to administration.

In terms of psychometric properties, the authors of this paper present internal consistency levels of  $\alpha = .59$  for the additional questions with sexual content, and  $\alpha = .63$  for the additional questions focusing on their victim. However, Cronbach’s values of between  $\alpha = .7$  and  $\alpha = .8$  are generally viewed as ‘acceptable’ values for internal consistency within research (Field, 2009), with higher values being preferable. The values presented in Van Vugt et al.’s (2011a) paper therefore do not reach acceptable levels of reliability. Furthermore, values for test-retest reliability are not presented. It is therefore difficult to determine the usefulness of data collected from these additional questions.

The other paper that explored moral reasoning within the ID population was published by Langdon, Murphy, Clare, Steverson and Palmer (Langdon, et al., 2011b).

The authors recruited four groups of adults; people with ID who had committed criminal offences, people without ID who had offended, people with ID who had no offence history and people without ID who had no offence history. Groups were compared on moral reasoning stage, distorted cognitions and empathy.

The study comprised 80 participants, all of whom were over 18 years old, and male. The authors reported not including women in their study due to potential differences in the way women make moral decisions. However no elaboration was given as to how or why men and women reason differently. Providing clearer rationale as to why males alone were selected for recruitment would have strengthened this paper.

Langdon et al. (2011b) did not detect any significant differences in empathy scores between the offenders and non-offenders with ID. Both of the non-ID groups scored significantly higher on empathy than the ID-offender group, and the non-ID group who had not offended scored significantly higher empathy scores than the ID group who had not offended. Regarding cognitive distortions, both offender groups were found to engage in significantly higher levels of cognitive distortions than their comparable non-offender group. Both ID groups engaged in higher levels of cognitive distortions than the non-ID groups, with males with ID who had offended, engaging in the highest levels.

Notably, a strength of this study was the authors choice of moral reasoning measure; the SRM-SF (Gibbs et al., 1992). By using this measure, Langdon et al. (2011b) found that both non-ID groups demonstrated more mature reasoning (stage 3) than both ID groups (stage 2). These differences in moral reasoning stages remained when both spoken language and intelligence were controlled for (Langdon et al., 2011b).

The SRM-SF comprises 11 questions which measure seven constructs; Contract, Truth, Affiliation, Life, Property, Law, and Legal Justice. The 'Contract' construct is measured by the first three questions, which explore individual's views about the importance of keeping promises to people (e.g. to friends or strangers). Question four explores individual's justifications for telling the truth, and is the only question to represent the 'Truth' construct. The 'Affiliation' construct explores an individual's justifications for helping other people, particularly helping parents and helping friends. Questions five and six measure this construct. Questions seven and eight represent the 'Life' construct and ask individuals to justify their views on the importance of saving a stranger's life if they had the opportunity, and on living when someone doesn't want to. 'Life' can be conceptualised as being of value for the individual, for others, for society, or for God (Gibbs et al., 1992).

The 'Property' construct comprises question nine, which explores people's opinions regarding the importance of not stealing from others. Question 10 enquires about the importance of obeying the law, representing the 'Law' construct. Both of these constructs focus on the general functions that laws serve and the potential consequences that may arise from law-breaking for the individual, for others and for society. The final construct, 'Legal Justice' is addressed by question 11, which asks the individual about the importance of law-breakers being sent to jail by judges. Once again, the responses typically concern the impact on the individual, others and society.

Despite both of the ID groups reasoning at stage 2 in the Langdon et al. (2011b) study, scores differed across several of the constructs. The authors found that both offenders and non-offenders reasoned at earlier developmental stages for the Property, Law and Legal Justice constructs, than the remaining four constructs. Langdon et al. (2011b) found that whilst offenders demonstrated stage 2 reasoning across these

constructs, basing decisions on exchanges, their own needs, preferences and advantages, non-offenders with ID demonstrated stage 1(2) reasoning for Property, stage 1 for Law, and stage 2(1) for the Legal Justice construct. The non-offenders with ID typically made their decisions based on authority, rules and avoiding punishment (Langdon et al., 2011b), and scored considerably lower on these three constructs than the remaining four constructs. Both of non-ID groups scored predominantly at stage 3 for these constructs. The offender group without ID did however score stage 2 reasoning for the Property construct alone.

It has been suggested that men with ID who have an offence history have a similar developmental delay in moral reasoning as young offenders (Langdon et al., in press). This therefore has potential clinical implications regarding suitable interventions for the ID population, as considerably more research has been conducted with young offenders and exploring interventions that are effective.

In their study, Langdon et al. (2011b) helpfully linked their findings from the male ID group who had offended (stage 2 reasoning), to the literature on young offenders and their tendency to reason at stage 2, particularly regarding the Law, Legal Justice and Property constructs. Scores have been found to be lower in these three constructs in the non-ID literature (e.g. Gibbs, 2010; Palmer & Hollin, 1998), with Gibbs proposing that the greatest delay in moral reasoning is found within the Law domain (Gibbs, 2010). He described how non-offending youths typically reason at a more advanced level, concerned with the potential impact on society and loss of trust, than delinquent youths. Gibbs described how delinquents' responses tend to be shaped by their concern for getting caught and going to prison, therefore illustrating significantly less developed reasoning.

Palmer and Hollin (1998) also compared young offenders with non-offenders and found that moral reasoning was less developed on constructs relating to offending behaviour (Property and Law) for both offenders and non-offenders, with offenders typically scoring lower. The remaining four constructs (Contract, Life, Truth and Affiliation) have not been directly linked to offending behaviour in the literature.

In addition to the SRM-SF's sound psychometric properties both within the ID and non-ID populations, Langdon et al's (2011b) paper presents excellent interrater reliability ( $r = .99$ ). This value was calculated using 19% of the questionnaires that were randomly scored by two raters. No information is provided however as to how this random sample was selected.

Recent research that has explored moral reasoning and anti-social behaviour has suggested that their relationship is moderated by intelligence; forming an inverted 'U' shape curve (Langdon et al., 2010a; Langdon et al., 2010b; Langdon, Clare & Murphy, 2011a). These authors have suggested that non-offenders with ID are more likely to demonstrate immature reasoning, typically making decisions based on rules and authority. Therefore the lowest levels of moral reasoning may protect against offending behaviour.

Alternatively, people with ID who engage in offending behaviour typically have slightly higher IQ, and their reasoning is based on egocentric decision making (their own needs) (Langdon et al., 2011a). They have also suggested that those who do not have an ID demonstrate moral development at more mature stages and therefore as a result, engage in less egocentric thinking and lower rates of offending behaviour. In summary, higher and lower levels of moral reasoning have been associated with lower rates of offending behaviour (Langdon et al., 2011a).

There has therefore been some recent research interest exploring moral reasoning in the ID offender field, but this research tends to be limited to the male population (Langdon et al., 2011b). Gilligan (1982) presented an argument that Kohlberg's theory of moral development was inherently sexist, for not giving enough focus to relationships and care-based reasoning within it. The debate regarding the existence of sex differences in moral reasoning has not been explored within the ID forensic population. In-fact very little remains known about moral reasoning in the female ID forensic population, with no clear rationale as to why this client group remains so under-researched.

### **1.8 Treatment Approaches.**

As it has been suggested that male adults with ID who offend have similar moral development to young offenders, intervention programmes used with young offenders that have been based on moral development theories need to be considered for their effectiveness.

**1.8.1 Treatment approaches within the general offender population.** As previously discussed, moral reasoning abilities of offenders have typically been found to be less mature developmentally, than in adults who do not offend. The development of intervention programmes to enhance moral reasoning abilities of offenders is therefore justified, despite links between moral behaviour and moral ability not being empirically evidenced (Ashkar & Kenny, 2007).

Cognitive-developmental theory proposes that moral reasoning can be enhanced through moral discussion groups (Kohlberg & Mayer, 1972), particularly through discussion with people at a more mature moral development stage (Taylor & Walker, 1997). Approaches to enhance moral reasoning abilities aim to encourage exposure to the higher moral reasoning stages. This in turn, helps to enable adaptation to higher

order reasoning, which Kohlberg stated people have a preference for given the opportunity (Kohlberg, 1984).

Group based interventions are often used with both juvenile and adult offenders to encourage discussion of moral issues. These have been explored within the literature to observe whether there is an increase of moral reasoning levels in those who engage in this type of intervention. Moral education programmes have been shown to be effective in boosting moral reasoning scores (MacPhail, 1989; Rest & Navarez, 1994; Schlaefli, Rest & Thoma, 1985), which in turn has been found to reduce offending behaviour (Blasi, 1980; Little, Robinson, Burnette & Swan, 1999; MacPhail, 1989). In addition, Rosenkoetter, Landman and Masak (1980) found that the moral reasoning stage of young offenders increased following group discussion of moral issues and dilemmas.

Gibbs, Arnold, Ahlborn and Cheeseman (1984) delivered a weekly intervention programme with 60 incarcerated juvenile offenders, aged between 14 and 18 years-old. The eight week programme encouraged group discussion about sociomoral dilemmas. Participants were either allocated to a consensus dilemma discussion group who had to reach a “best decision” agreement with one-another, a non-consensus dilemma discussion group who did not have to reach a shared agreement but discussed the dilemma, or a ‘no discussion group’. Participants in the latter group did not meet for discussion, but completed pre-testing and post-testing at the same time points. Gibbs et al. (1984) found that 87.5% of participants in the consensus and non-consensus groups who scored stage 2 reasoning on the SRM (Gibbs & Widaman, 1982) completed prior to intervention, had an increase in moral reasoning scores following intervention, to stage 3 reasoning. This was in comparison to 14.3% of people in the non-discussion group who initially scored at stage 2 reasoning, whose scores increased to stage 3 reasoning post-intervention testing.



A study by Arbuthnot (1984), measured the effects of two moral-education programmes on enhancing moral reasoning abilities. Both programmes, one modelled on the cognitive-developmental approach and the other on a critical-reasoning approach, were administered to prisoners over an 11-week period. Compared to a control sample, both groups showed significant increases in their moral reasoning scores. There were no significant differences found between the two types of intervention groups. Palmer (2003) has described how group based interventions attempt to enhance moral reasoning abilities, predominantly through social-perspective taking to challenge the egocentric thinking that shapes immature reasoning, along with exposing individuals to moral dilemmas at higher stages of development. This may explain the increases of moral reasoning ability demonstrated by participants of each intervention group in Arbuthnot's study (1984), compared to the control participants who did not access either intervention.

Similar findings however are not consistently identified within the literature. Other studies have found no significant improvements in moral development, following group intervention (Buttell, 2003; Copeland & Parish, 1979). Research into programmes that aim to boost moral reasoning have also been found to be ineffective in reducing offending behaviour (Niles, 1986).

In another study, Claypoole, Moody and Peace (2000) investigated whether moral dilemma discussions proved an effective group intervention for male and female juvenile offenders. They delivered 10 group sessions of moral reasoning discussion, measuring an individual's moral reasoning ability using the DIT (Rest, 1975). Claypoole et al. (2000) concluded that these discussion groups were useful in improving an individual's behaviour, but that as a stand-alone intervention they were not successful in enhancing moral reasoning of offenders. Female offenders were found to

display significantly higher rates of moral reasoning than their male peers, both before and after the group.

Through their research, Ashkar and Kenny (2007) demonstrated that an offender's moral reasoning ability differed depending on the offending context, with individuals displaying offence-specific deficits. They proposed that for interventions to be successful in reducing reoffending rates through enhancing moral reasoning abilities, these offence-specific deficits need to be targeted.

However, delivering offence specific interventions may have limitations. It may be less feasible and less cost-effective for services to offer a range of offence-specific interventions. Such programmes may also have to be run less frequently to be able to achieve enough group members who have committed a specific offence (e.g. fire-setters) and who are ready to start their treatment programme, than interventions that could be administered to individuals with all types of offence histories. Delivering group interventions that can include a greater number of participants may therefore have benefits in being more practical and cost-effective.

**1.8.2 Treatment approaches within the ID offender population.** Despite potential intervention programmes and their effectiveness in enhancing moral reasoning abilities being researched within the general offender population, considerably less is known about this area within the ID population.

However, recently Langdon, Murphy, Clare, Palmer and Rees (in press) evaluated one such treatment intervention amongst adults with ID. They demonstrated that an adapted version of the 'Equipping Youth to Help One Another' programme (EQUIP) was a promising treatment for male offenders with intellectual and other developmental disabilities.

The EQUIP programme was originally developed as a multi-modal programme to enhance moral development through encouraging perspective taking (within a group setting), reducing cognitive distortions and building social skills (Gibbs, Potter & Goldstein, 1995; Gibbs, Potter, Barriga & Liao, 1996; Potter, Gibbs & Goldstein, 2001). The programme uses moral dilemma discussions, social skills training and anger control techniques to encourage behaviour change among the group attendees. Within the male juvenile population, the EQUIP programme was found to positively influence post-release behaviours (Gibbs, Potter, Goldstein & Brendtro, 1996). This type of multi-modal group which addresses several aspects for intervention may therefore achieve greater benefits for those who attend, than groups that focus on moral discussion alone.

Langdon et al. (in press) demonstrated that the adapted EQUIP programme led to improvements in participant's moral reasoning abilities, increased some aspects of problem solving abilities, and reduced cognitive distortions, all of which were desirable effects. According to some research, although benefits have been observed in the young offender populations following administration of this programme, for example in reducing cognitive distortions; benefits in boosting moral reasoning have not been observed (Nas, Brugman & Koops, 2005). The results observed by Langdon et al. (in press), and the gains made by their participants appear promising for the ID population, and this programme has been suggested as a suitable first treatment for this client group.

However Langdon's study is not without criticisms. Being a single-case series study, causality of the findings could not be established. In addition, the sample size was small ( $N = 7$ ) so it is difficult to predict if these effects would have been repeated in a larger population. Four of the participants had a diagnosis of Asperger Syndrome, and their FSIQ was  $> 70$ ; with the FSIQ of one participant as high as 111. The remaining three participants had no Autistic Spectrum Disorder, but had a FSIQ of  $< 70$ . No

information was provided about any potential difficulties that may have been encountered in adapting and delivering the intervention to individuals with different needs and cognitive abilities, a flaw of the study. As only three of the participants in the group had mild ID, only their moral reasoning abilities and subsequent changes post-intervention have relevance to the current research project. Two of the three participants demonstrated an increase in moral reasoning stages, and one stayed consistently at the transitional stage 3(2) reasoning.

A control group of participants with which to draw comparisons would have been useful, and would have strengthened the reader's confidence in their findings. Without a control group it is not clear whether these gains would have been made regardless, as the result of living in a busy inpatient environment with lots of opportunities to perspective take and problem solve.

Group-based treatments in general for this client group do however have the added benefit of encouraging perspective-taking and developing skills in this area. This may as a consequence, enhance the moral reasoning skills of participants, irrespective of the focus of the group treatment.

## **1.9 Development of the Research Study**

**1.9.1 Theoretical and clinical rationale.** Women in contact with the criminal justice system have been found to present with both different circumstances and different needs to men. Evidence suggests that women commit far fewer violent crimes than men (Bloom, Chesney-Lind & Owen, 1994), and that when violent crimes are committed, they are far less likely to be towards the general public (Phillips & Harm, 1998). Chesney-Lind and Bloom (1997) have suggested that substance misuse, abuse and poverty are the most common precipitators of crime in females. In response to some of the differences between men and women who offend, Bloom and Covington (1998)

suggested that effective gender-specific programmes and interventions may be helpful to address women's needs. Furthermore, studies have recommended that treatment programmes should take gender roles and female socialisation into account (Beckman, 1994), along with the general context of women's lives (Abbot & Kerr, 1995).

Women are typically under-researched in the forensic field, which is often justified by researchers as due to the smaller number of women in contact with the criminal justice system. However, Bloom and Covington (1998) suggest that despite the smaller proportion of females within the criminal justice system, these women often have been or later become "extensive users of the system". It is therefore vital that women who offend are not excluded from research or intervention-based programmes on the basis of their sex alone.

Regarding interventions for offenders, the evidence to support treatment approaches that enhance moral reasoning abilities whilst reducing reoffending behaviour within the general offender population, remains mixed. The literature presents some studies which demonstrate increased moral reasoning abilities (e.g. Schlaefli et al., 1985), others which observe reductions in re-offending rates (MacPhail, 1989), whilst some present limited effects of such intervention programmes (e.g. Copeland & Parish, 1979). There is however, a small amount of emerging evidence to demonstrate that psychological interventions which incorporate moral development theory may be effective for the ID population. Expanding research in this area is therefore important as may have key implications for subsequent treatment interventions.

Although the findings presented by Langdon et al. (in press) appear promising for the ID population, their small study was restricted to the male population. It would be clinically valuable therefore to understand and explore whether sex differences exist

in the moral decision-making of people with ID. This would enable treatment interventions based on moral development theory for offenders to be tailored to suit the need of either sex, in-line with recommendations made by Beckman (1994) and Abbot and Kerr (1995), depending on whether sex-differences are detected. It is crucial to expand our knowledge about the role of moral reasoning within people with ID, especially within the female population where little is known. This will enable care packages and potential interventions to be properly considered, and treatment tailored to an individual's needs.

The current study aimed to address the need for further research into moral reasoning abilities within the ID population, comparing adults who had offended with adults who had not offended. It aimed to include both men and women in the sample and to draw comparisons, exploring whether sex differences exist within either community or forensic groups. Women in contact with the criminal justice system remain under-researched in general with regards to their moral reasoning abilities. Despite some advances in the research base and in our understanding of the moral reasoning abilities of male ID offenders, there are no published studies that explore this within women. This remains a deficit in the literature which requires addressing in order to help inform subsequent treatment.

As discussed in Section 1.3.3.1 above, a number of factors place individuals with ID at risk of offending behaviour. These factors include emotional and behavioural difficulties, such as mental health difficulties (Murphy et al., 1991), poor coping strategies (Holland, 2004), substance misuse (Ashton, 2002) and aggression (Taylor et al., 2004). Along with higher levels of emotional and behavioural problems found in offenders with ID, the moral reasoning abilities of offenders with ID have been shown to be more mature developmentally than non-offenders with ID. It was therefore also of

interest, to explore the role of emotional and behavioural difficulties further, especially in relation to moral development, given the literature on moral reasoning and offending in individuals with ID.

Finally, much of the research that has explored moral reasoning within the ID population was conducted a considerable time ago, predominantly in the 1970s and 1980s. Current research in this field is therefore essential in order to compliment and build on what is already known.

**1.9.2 Methodological rationale.** Several methodological limitations have been identified in previous studies, which in particular make it difficult to draw comparisons between their findings. The current study attempts to address these methodological limitations. These will be discussed below in turn.

Many of the studies exploring moral reasoning within the ID population have used unstandardised measures of assessment (Langdon et al., 2010a), which creates problems in the interpretation of findings in terms of their reliability and validity. As a result of this observation from their review of literature, Langdon et al. (2010b) set out to explore the psychometric properties of two measures of moral reasoning. They focused on the Moral Theme Inventory (MTI; Narvaez, Gleason, Mitchell & Bentley, 1999), a recognition measure, and the SRM-SF (Gibbs et al., 1992) a production measure of moral reasoning. The authors found that the SRM-SF demonstrated overall 'satisfactory' properties both for men with and without ID. This proved to be a better measure of moral reasoning than the MTI, which demonstrated poor test-retest reliability. By administering this psychometrically sound measure within the current research project, it overcomes the common methodological flaw of many existing studies in moral reasoning, particularly of those studies within the ID field.

A further methodological criticism of previous research within the ID population concerns the population recruited and how ID is defined. It is clear that ID is not always defined by adherence to DSM-IV guidelines, with many studies including participants with IQ scores in the borderline range (71-84) (e.g. Barron et al., 2004; Van Vugt et al., 2011a). With studies using different definitions of ID, careful consideration is required when making references or generalisations to the wider ID population, and when findings are compared across different research studies. By administering a formal measure of IQ and strictly adhering to the cut-off scores presented by the DSM-IV for mild ID (DSM-IV-TR; APA, 2000) and excluding those who do not meet criteria, this research project addresses this common methodological flaw.

An additional limitation of much of the research into the ID field, highlighted by Langdon et al. (2010a) in their review of the literature, is the failure of many studies to fully describe and provide information on the participant sample recruited. Once more, this makes it difficult to accurately draw conclusions and apply said findings to the ID population.

The participants recruited for the current research project are described in detail, with comprehensive information provided on both the inclusion and exclusion criteria and the rationale for these, providing the reader with a clear picture of who took part in the study.

Finally, both men and women are included in the current study. This removes the flaw of some studies in failing to reasonably justify why their research was only conducted on one sex, predominantly males. It also enables members of both sexes to have an opportunity to partake in research, ensuring that an individual is not excluded on the basis of their sex alone.



**1.9.3 Summary.** Controversy persists regarding whether significant gender differences exist in moral reasoning. Research has suggested that changes in moral reasoning stages can be stimulated by encouraging discussions about structured moral dilemmas, both amongst children (Blatt & Kohlberg, 1975) and adults (Self, Baldwin & Wolinsky, 1992). The potential for raising moral stage-scores has implications for clinical practice and prospective intervention programmes, and therefore understanding more about possible sex differences may inform how such interventions are delivered. Understanding more about the moral development amongst male and female adults within the ID forensic population, where relatively little is known, is essential to enable potential interventions to be considered.

**1.9.4 Research questions and hypotheses.** The current study aims to investigate moral reasoning abilities of adults with ID, taking into consideration an individual's sex and offence history. The research questions addressed by the study and the specific hypotheses made for each of these, are presented below:

**Research question 1:** Are there significant differences in moral reasoning scores between men and women with mild ID who have offended, compared to men and women with mild ID who have no offence history?

- **Hypothesis A:** It is hypothesised that overall, offenders will have higher moral reasoning scores than non-offenders.
- **Hypothesis B:** It is hypothesised that there will be no significant differences between men and women in moral reasoning scores.

**Research question 2:** Are there significant differences in any of the moral reasoning construct scores between the groups?

- **Hypothesis C:** It is hypothesised that the offender groups will have higher scores on the Property construct on the SRM-SF than the non-offenders.
- **Hypothesis D:** It is hypothesised that the offender groups will have higher scores on the Law construct on the SRM-SF than the non-offenders.
- **Hypothesis E:** It is hypothesised that the offender groups will have higher scores on the Legal Justice construct on the SRM-SF than the non-offenders.

**Research question 3:** Is there a relationship between moral reasoning stage and offence severity?

- **Hypothesis F:** It is hypothesised that moral reasoning stage and offence severity will be positively correlated.

**Research question 4:** Is there a relationship between moral reasoning stage and emotional and behavioural problems?

- **Hypothesis G:** It is hypothesised that the offender groups will score higher in emotional and behavioural problems than the non-offenders.
- **Hypothesis H:** It is hypothesised that there will be a positive correlation between moral reasoning stage and level of emotional and behavioural problems experienced.

## **Chapter Two- Method**

### **2.1 Overview of Chapter**

This chapter presents the methodology used within the study. It begins by describing the design of the study, the participants recruited and the inclusion and exclusion criteria that were adhered to during recruitment. It then provides detailed information on the measures used, including their psychometric properties and the procedures that were followed. Ethical issues are considered, and a description of the data analysis is presented. The chapter is concluded with inter-rater reliability calculations and tests of normality.

### **2.2 Study Design**

To address the first two research questions, a 2 (Sex: Men vs Women) X 2 (Offence history: Offenders vs Non-Offenders) cross-sectional between-subjects descriptive design was used. The main effects and interactions were examined.

To address the latter two research questions, a correlational design was used. The relationships between moral reasoning and offence severity, and moral reasoning and emotional and behavioural problems were explored. A correlational design was appropriate due to the exploratory nature of this study, to investigate whether relationships between the variables existed. Measures were completed at one time point.

### **2.3 Participants**

Participants were adults with mild IDs who resided in Suffolk or Norfolk. Participants were allocated to one of four groups depending on their sex and whether they had a history of offending or not. Group 1 were men and Group 2 were women, all of whom had a documented history of criminal offending. These participants were recruited from medium and low-secure NHS and independent hospitals. Participants

were detained under the Mental Health Act 1983 (amended 2007), under civil and criminal sections. These participants had committed at least one offence which was dealt with by a Crown Court in England and were subsequently sentenced to custody within a secure hospital or were later transferred from prison to hospital under Section 47/49 (Mental Health Act; 1983, 2007).

Group 3 consisted of men and Group 4 women, who had no known history of arrests, cautions or convictions. These participants were recruited from NHS Community Learning Disability (LD) teams and independent day services. Clinicians and day-service managers were initially asked to identify and nominate only participants who had no known forensic history, and to confirm this with them when introducing the study. This was double-checked when the researcher first met the potential participant, and featured as a question in the demographic information.

**2.3.1 Inclusion criteria.** Participants from all four groups were required to meet the following criteria:

- Mild ID; with a FSIQ between 50 – 70, associated difficulties with adaptive behaviour and onset before age 18 (American Psychiatric Association, 2000). FSIQ was measured within this study, whereas adaptive behaviour difficulties were assumed if the individual accessed local ID services, as this is typically a requisite.
- 18 years old or over.
- Sufficient English language skills to complete the measures.

**2.3.2 Exclusion criteria.** Participants were excluded from the study if they met any of the following criteria:

- Any participant who had a FSIQ of above 70 or below 50.
- Any person who lacked mental capacity to consent to take part in the study.

- Any participant in either community group (Group 3 or 4) with a known offence history or who reported having a history of arrests, cautions or convictions during the initial meeting. Such participants were excluded from the study as may have contaminated the findings.
- Any person with a formal Autistic Spectrum Disorder (ASD) diagnosis was excluded. This was due to the associated difficulties someone with ASD may experience with social perspective taking, which would have in turn, impacted on the assessment of moral reasoning.

**2.3.3 Power.** A sample size calculation was based on data drawn from a recent study that compared offenders and non-offenders with ID (Langdon et al., 2011b), when controlling for FSIQ. Determining  $\eta^2$  establishes the proportion of variance accounted for by the main effects, interaction and error in ANOVA studies (Tabachnick & Fidell, 2001). Derived from the Langdon et al. (2011b) paper, partial  $\eta^2 = 0.147$  (between-group effect divided by total amount of variance in the data), which converts to  $f = .415$ . Therefore, to adopt a 2 X 2 between-subjects ANOVA, achieving a power of 0.80 at the 5% significant level, based on an effect size of  $f = .415$ ; a total sample size of 68 participants was required.

For the correlational design, an effect size of  $d = .76$  was drawn from a meta-analysis by Stams et al. (2006) that explored moral judgement, which equates to  $r = .36$ . To achieve power of 0.80 at the 5% significance level, a sample of 47 participants was required. Therefore to enable both parts of the analysis to be conducted, 68 participants were required for this study; each of the four groups comprising 17 individuals.

**2.3.4 Participant demographics.** Sixty-eight people with a diagnosis of mild ID and an average age of 35.68 years participated in the study. Half of the participants were women, and half were men, recruited evenly from the community and forensic secure

services. The majority of the sample were White British (94%). Living with family members was the most common place of residence for the community sample, followed by living independently and then supported living.

A large proportion of the sample (N = 65) classified themselves as single. One non-offender female was cohabiting, and two offender females described themselves as separated or divorced. Nine participants of the 68 recruited were parents. Of these, only one resided in the community, whereas eight were from offender groups.

The vast majority of participants attended ‘special school’ education. FSIQ scores ranged from 50 to 70, covering the full spectrum of mild ID. From the total sample, 31 people reported having a serious physical health problem and 30 participants reported having a mental health problem. Within the forensic population, the number of offences committed ranged from one to 35, and the number of months spent in secure services ranged from two to 544 months. Demographic information is displayed in Table 4 and Table 5.

Table 4.

*Demographic information for the total participant sample (mean and range scores).*

Demographic information	Range	Mean (SD)
Age	20 - 66	35.68 (12.58)
FSIQ	50 - 70	59.90 (5.73)
Number of offences (offender population)	1 - 35	6.74 (7.70)
Number of months in secure services (offender population)	2 - 544	131.06 (160.96)

Table 5.

*Demographic information for the total participant sample (frequencies and proportions).*

Demographic information	N (%)
Sex	
Men	34 (50%)
Women	34 (50%)
Ethnicity	
White British	64 (94%)
White Irish	2 (3%)
White/ Black Caribbean	1 (1.5%)
Black Caribbean	1 (1.5%)
Living Status	
Secure services	34 (50 %)
With family	20 (29.4%)
Independently	9 (13.2%)
Supported living	5 (7.4%)
Marital status	
Single	65 (95.5%)
Cohabiting	1 (1.5%)
Separated/Divorced	2 (3%)
Parental status	
Parent	9 (13%)
No children	59 (87%)
School attended	
Special school	56 (82.4%)
Mainstream	9 (13.2%)
Other	3 (4.4%)
Physical health problem	
Yes	31 (46%)
No	37 (54%)
Mental health problem	
Yes	30 (44%)
No	38 (56%)

### **2.3.5 Recruitment.**

*2.3.5.1 Participants from the community.* Psychology leads from Community LD Services across Suffolk and Norfolk were contacted by the researcher who explained the research project and the rationale behind the study. These clinical psychologists were provided with a 'Recruitment information sheet' (Appendix A) which contained information about the study, together with the inclusion and exclusion criteria. Psychologists who expressed interest in supporting the study were asked to pass this information on to fellow clinicians.

Interested clinicians were asked to identify potential participants who met inclusion criteria from their community teams, and to provide them with an 'Introductory handout' (Appendix B) about the study. Clinicians were requested not to pass information sheets on to people in the community with known forensic histories.

The introductory handout advised participants to inform their staff member if they were interested in taking part in the study. Clinicians were asked to contact the researcher with the contact details of any interested person. The researcher then contacted the individual by telephone, introduced herself and arranged a convenient time and location to meet with them to discuss the study and provide further information (Appendix C). The participant was given the option of where they wanted the meeting to be held; at the local LD team community building, their day-service or their home.

Day service managers were approached in the same manner; the study and rationale were explained and the recruitment information sheet (Appendix A) provided. Day-service staff were also asked to identify and approach people who appeared to meet the study's inclusion criteria. Day-service staff did not have knowledge of, or access to, any FSIQ scores of their members. Therefore any participant recruited from day-



services, following informed consent (Appendix D), had their FSIQ assessed at the start of the testing session, to explore whether they met inclusion criteria. All willing participants recruited from day services completed the study at the day service centre, at a date and time when they would have routinely attended.

**2.3.5.2 Participants from forensic settings.** Regarding the forensic sample, psychology leads for medium and low secure hospitals in Suffolk and Norfolk were contacted and provided with the 'Recruitment information sheet' (Appendix E). They were asked to identify potential participants who met the study inclusion criteria. These inpatients were given the initial information sheet (Appendix F) by staff, and anyone who was interested in participating in the study was asked to inform a staff member. Staff were asked to notify the clinical lead, who contacted the researcher to inform them that there were people who were interested in finding out more about the study. The researcher then arranged to visit the hospital ward, met with interested participants and explained the study further (Appendix G). With participants who wished to take part in the study, informed consent (Appendix D) was obtained and the measures were completed.

## **2.4 Measures**

**2.4.1 Demographic information.** Demographic information was sought from participants. This information comprised sex, age, ethnicity, marital status, living residence and type of school attended. Information regarding the presence of any physical or mental health difficulties and whether they had a history of arrests, cautions or convictions was collected directly from participants.

**2.4.2 Wechsler abbreviated scale of intelligence.** If it was not possible to obtain a recent reliable score from an existing measure of participants' FSIQ, then the Wechsler Abbreviated Scale of Intelligence (WASI; Wechsler, 1999) was administered.

A 'recent' score was deemed as a FSIQ score that was measured within the last five years by either the WASI, the Wechsler Adult Intelligence Scale - 3rd Edition (WAIS-III; Wechsler, 1997), or the Wechsler Adult Intelligence Scale – 4th Edition (WAIS-IV; Wechsler, 2008). This was crucial to ensure that participants' FSIQ fell within the mild range of ID, therefore meeting inclusion criteria for the study.

The WASI is an abbreviated version of the WAIS-III (Wechsler, 1997). The WAIS-III comprises of 14 subtests, whereas an individual's general level of intellectual functioning (FSIQ) can be measured by the WASI using a two subtest or four subtest version.

As far as possible, this study used the four-subtest version of the WASI. The four subtests measure both fluid and crystallized intelligence, verbal knowledge and non-verbal reasoning (Kaufman & Lichtenberger, 1999). The four subtest WASI takes approximately 30 minutes to complete and can be administered to people between six and 90 years-old. It therefore provides a quick measure of general intellectual functioning, which Goldstein, Beers and Hersen (2003) suggest is important for research purposes where a more extensive IQ battery may not be necessary or feasible. The WASI can be scored immediately which enabled the researcher to establish right away whether someone met inclusion criteria for the study. This in turn reduced the amount of time that people who fell outside the inclusion criteria spent engaging in the study.

Alongside the FSIQ score, two further scores are obtained. The Verbal IQ (VIQ) is determined by scores on two subtests; Vocabulary and Similarities. The Vocabulary task asks participants the meaning of a selection of words (e.g. "What is a shoe?"), measuring word knowledge and verbal concept formation. The Similarities task requires participants to explain how two words are similar to one another, for example "In what

way are a COW and a BEAR alike?” This task measures concept formation and verbal reasoning. Both of these subtests present questions and require responses vocally.

The Performance IQ (PIQ) measures non-verbal reasoning abilities and consists of the Block Design and Matrix Reasoning tasks. Block Design requires the participant to copy patterns (first modelled, then from a two-dimensional diagram) using three dimensional coloured blocks, within a specific time limit. This test measures nonverbal concept formation, visual-motor skills, visual-spatial skills and visual-motor coordination. The Matrix Reasoning task requires participants to select the missing piece from a pattern that is presented, from a selection of five choices. This task measures abstract reasoning skills and visual processing.

On six occasions during this study, the two-subtest version of the WASI was used. The two-subtest version comprises the Vocabulary (verbal) and Matrix Reasoning (non-verbal) tasks, and yields only the FSIQ score. The authors of this measure do however suggest that it is a useful screening instrument of an individual’s general cognitive functioning. The two-subtest version was used with six non-offender participants (four women and two men) who had cerebral palsy. These participants had no, or limited use of their hands. The Block Design task requires manipulation of 3D blocks against a stopwatch, and was therefore deemed unsuitable. By using the two-subtest WASI to screen FSIQ, it removed the chance of people capable of engaging with the rest of the study from being excluded due to physical disability alone.

The WASI has been described as demonstrating “outstanding” psychometric properties (Stano, 2004). Reliabilities have been reported as generally quite high; with an average reliability coefficient for the FSIQ of  $r = .98$ , and test-retest reliability of  $r = .92$  for the FSIQ four-subtest version and  $r = .88$  for FSIQ two-subtest (Kaufman & Lichtenberger, 2005). Interrater reliability for the WASI has been reported as  $r = .98$  for

the Vocabulary subtest and  $r = .99$  for the Similarities subtest. The WASI has been demonstrated to have good internal consistency reliability coefficients;  $r = .96$  for both VIQ and PIQ,  $r = .89$  for FSIQ four-subtest, and  $r = .96$  for FSIQ two-subtest (Kaufman & Lichtenberger, 2005).

The WASI has also been demonstrated to have good concurrent validity, correlating strongly with overall FSIQ scores from the WAIS-III ( $r = .92$ ; Garland, 2005). However not all papers support these claims, with Axelrod (2002) stating that the WASI does not consistently provide accurate predictions of WAIS-III scores. Axelrod (2002) suggests that caution should be applied when precise estimates of WAIS-III scores are required. Nevertheless, it was felt that the WASI was an appropriate tool to screen FSIQ for the purpose of this research study.

**2.4.3 Socio-moral reflection measure-short form.** The Socio-Moral Reflection Measure-Short Form (SRM-SF; Gibbs et al., 1992) is a production measure of moral reasoning. It was administered to every participant who met the study inclusion criteria.

The SRM-SF asks participants questions which aim to elicit moral reasoning; for example it asks questions about the importance of saving lives and the importance of keeping promises (e.g. “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 friends?” and “How important is it for people not to take things that belong to other people?”). Participants are asked to select from three choices whether they believe each dilemma is “very important”, “important” or “not important”, and to state their reasons for their choice.

The SRM-SF takes around 20 minutes to administer and comprises 11 questions, of which, seven answers are required to reliably score the measure. It measures seven constructs; Contract, Truth, Affiliation, Life, Property, Law, and Legal Justice. In this study the SRM-SF was conducted as an interview to reduce the need for reading and

writing skills, therefore making it more accessible for the ID client group. Exact participant wording was recorded on the response sheets.

On this measure, participant’s responses are assigned a rating that reflects a moral stage score in-line with Gibbs’s Socio-moral reasoning theory. After responses are scored, a summary score representing participants overall level of moral reasoning is calculated, and stage scores are generated for each of the seven constructs. Finally, the summary score is multiplied by 100, generating scores between 100 and 400. This score represents an individual’s global-stage score; for example scores between 175 - 225 represent Stage 2 reasoning. Scores and their corresponding moral stages are presented in Table 6.

Table 6.

*Sociomoral Reflection Measure – Short Form (SRM-SF) scores and the equivalent moral stage.*

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

The SRM-SF has good test-retest reliability ( $r = .88$ ) and excellent internal consistency ( $r = .92$ ; Gibbs et al., 1992), along with excellent interrater reliability ( $r > .9$ ). It has been shown to be a reliable measure for both the ID and non-ID populations within the UK (Langdon, et al. 2010b), hence its selection for this study. Acceptable levels of concurrent validity have been shown between the MJI (Colby & Kohlberg, 1987) and the SRM-SF ( $r = .69, p < .0001$ ; Gibbs et al., 1992). The SRM-SF has also demonstrated good convergent validity, correlated with age ( $r = .66$ ), and good discriminant validity by showing no correlation with a measure of social desirability (Gibbs et al., 1992).

The scoring process of the SRM-SF is self-taught. Gibbs et al. (1992) suggest that this process requires a minimum of 30 hours training, completed over a four to eight week period. The principal author of this research project exceeded the recommended number of training hours prior to scoring the response sheets.

**2.4.3.1 Interrater reliability.** Thirty percent of the questionnaires in this study ( $N = 20$ ) were randomly selected and second-rated by an expert rater, in-line with Gibbs' et al. (1992) recommendations, to ensure interrater reliability of  $r \geq .80$ . An interrater reliability score of  $r = .99$  ( $p < .001$ ) was achieved in this study. The expert rater had considerable experience using and scoring this measure.

**2.4.4 Emotional problem scale.** The Emotional Problem Scale (EPS) was developed to assess problems in individuals with mild to borderline ID (Prout & Strohmer, 1991). It assesses both emotional problems (e.g. depression) and behavioural problems (e.g. aggression). The EPS consists of two parts.

**2.4.4.1 Emotional problem scale self-report inventory (EPS-SRI).** The Self-Report Inventory (SRI) is a 147-item measure completed by the participant, requiring a 'yes' or 'no' response to statements about thoughts, feelings and actions, such as;

“Nobody really understands me” and “I like myself”. These statements were read aloud to participants who responded verbally.

The EPS-SRI comprises six subscales; positive impression, thought/behaviour disorder, impulse control, anxiety, low self-esteem and depression. By summing these subscales (apart from ‘Positive Impression’), a Total Pathology score is obtained. High total pathology scores on the EPS-SRI represent problems and difficulties experienced across a range of emotional and behavioural areas.

The EPS-SRI has demonstrated good internal consistency, with alpha coefficients ranging between  $r = .77$  and  $r = .96$ , and a mean score of  $r = .86$  (Prout & Strohmer, 1991). Test-retest reliability has been demonstrated to range from  $r = .65$  to  $r = .92$  (mean = 0.83), amongst a sample of participants whose average FSIQ was 69.

**2.4.4.2 Emotional problem scale behaviour rating scale (EPS-BRS).** The Behaviour Rating Scale (BRS) is 135-item measure, which explores behaviours exhibited over the previous month. The BRS is completed by someone familiar to the participant, for example their named nurse, a support worker or family member. The selected person is asked to rate how frequently the participant engages in particular behaviours (e.g. “How often do they complain of being tired?”). Responses are scored on a four-point Likert scale, representing the responses “almost never”, “rarely”, “occasionally” or “often”.

The EPS-BRS comprises 12 subscales. These are thought/behaviour disorder, verbal aggression, physical aggression, sexual maladjustment, non-compliance, hyperactivity, distractibility, anxiety, somatic concerns, withdrawal, depression and low self-esteem. The ‘Externalising Behaviour Problems’ score is calculated by summing four of the subscales (physical aggression, verbal aggression, non-compliance and

hyperactivity). People who typically act out their feelings tend to score high externalising behaviour problem scores.

Summing three subscales form the 'Internalising Behaviour Problems' score (depression, anxiety and self-esteem). People who score highly on the internalising behaviour problem scale are reported to often experience high levels of mental health problems.

The EPS-BRS subscales have excellent internal consistency, with alpha coefficients ranging between  $r = .90$  and  $r = .97$ , with a mean of  $r = .93$  (Prout & Strohmmer, 1991). Interrater reliability for the EPS-BRS varies between  $r = .26$  and  $r = .96$ , with a mean of  $r = .84$ . Only one subscale however (sexual maladjustment), fell below a reliability coefficient  $r = .79$  (scoring  $r = .29$ ).

Convergent and discriminant validity has been examined previously by correlating scores on the EPS-BRS and the EPS-SRI. Correlations between behaviour ratings and self-report ratings were found to be small to modest (Prout & Strohmmer, 1991). However, differences in correlations such as this have been suggested to reflect differences in informant perspectives and self-report perspectives, as opposed to inadequacies in measurement (Achenbach, McConaughy & Howell, 1987). This measure was selected as it has been suggested to be a useful outcome measure of emotional and behavioural difficulties often experienced in forensic settings (Hogue et al., 2007).

**2.4.5 Offence-related information.** Every participant was asked whether they had ever been charged, cautioned or convicted of a criminal offence. Anyone in the community sample who reported having a criminal history was excluded from the study. Information regarding convictions, in terms of frequency and offence-type, was sought from the offender participants directly. With their consent, this information was



clarified and on occasions expanded through talking to staff or referencing their case-files.

Following all of the data being collected, offences were ranked in terms of severity, in line with Francis, Soothill and Dittrichs' (2001) findings. They looked at a series of 7,443 offenders convicted in 1973, who were followed up until 1994. These offenders attended a total of 31,135 court appearances over the 19 year period (Soothill, Francis, Ackerley & Sanderson, 2000). Using this data, Francis et al. (2001) used paired-comparisons to devise ranks and scores that represent offence seriousness; for example a conviction of 'murder', 'manslaughter' or 'attempted murder' was ranked as the most serious type of offence, 'rape' was ranked as the second most serious offence and so on.

A list of the top 20 most serious offences according to Francis' et al., (2001) paired-comparisons method is presented in the appendices (Appendix H). This current study ranked participants by their most severe conviction, in ascending order, according to Francis' et al.'s (2001) scores.

## **2.5 Procedure**

**2.5.1 Recruitment and initial contact.** As described, local LD community teams, day services and secure services were approached by the researcher and the study was explained. Staff identified potential participants who were provided with an initial information sheet (Appendix B for non-offender groups, Appendix F for offender groups). Interested individuals informed their staff members and consented to their details being passed on to the researcher. The researcher then arranged with the participant themselves (non-offender group) or with staff (both for day services and offender group), a convenient time to visit the participant to provide more detailed information about the study (Appendix C for non-offenders, Appendix G for offenders).

For the non-offender participants, if they appeared to meet inclusion criteria and expressed interest in participating in the study, a second appointment was made with them to carry out the assessment. If however they requested to complete the study straight after the initial meeting, this was facilitated. These appointments were conducted within the day-service centre, community team building or at the participant's home; in-line with the Trusts lone-working policy. Inpatient appointments for the offender groups were conducted within the ward setting. For these participants the testing session was either arranged for a separate day, or run straight from the initial meeting, depending on the participant's preference and availability.

Before the initial contact session, a file search was completed by a clinician within that service, to explore whether an IQ assessment had been completed within the last five years for interested participants. If no recent FSIQ score was documented then the WASI was added to the assessment session.

**2.5.2 Testing session.** The information sheets, consent form and the questionnaires were read aloud to participants and their responses were recorded by the researcher. Therefore reading and writing skills were not a requirement of the study, widening the inclusion criteria.

At the start of the testing session the study information was read to the participant (Appendix C for non-offenders, Appendix G for offenders) and any questions were answered. Participants were then asked to sign a consent form (Appendix D). They were informed of their right to withdraw and that participating in, or withdrawal from the study would not affect their routine treatment.

For participants who required their FSIQ to be assessed, the WASI was conducted at the start of the session and scored immediately after. This determined whether participants met the inclusion criteria. If they did not fall within the mild ID

range, they were thanked and then excluded from the study. If they met inclusion criteria, demographic information and offence related information were collected, and the SRM-SF and EPS-SRI administered. Participants detained under the Mental Health Act were asked to only talk to the researcher about crimes that were known to staff. They were informed that confidentiality could not be maintained if an undisclosed offence was disclosed to the researcher.

The assessment took around one hour to complete. This time was reduced if the WASI was not required. Whilst the researcher conducted the assessment session with the offenders, an available staff member who knew the participant well, (ideally their key worker), was given the EPS-BRS to complete. If staff were not available, this measure was left for their key-worker to complete and post back to the researcher.

For the non-offenders (community groups), if the participant was accompanied by a carer or family member to the appointment, or the appointment was in their home environment where a carer or family member was present, they were asked to complete the scale at the same time. More typically, when the participant attended the assessment alone, they were provided with the measure, along with a carer information sheet (Appendix I), carer consent form (Appendix J) and a stamped addressed envelope to return to the researcher. Permission for a carer or family member to complete this measure featured in the participants consent form.

At the end of the session, participants were given the opportunity to ask any questions, were thanked for their time and provided with a debrief sheet about the study (Appendix K for non-offenders, Appendix L for offenders). Every participant, including those who were deemed not to meet inclusion criteria but who had requested to partake in the study, were given a £5 shopping voucher to thank them for their time. Participants were given the choice of two local supermarkets for their shopping voucher. A brief

explanation of how to use this voucher was given to the non-offender participants. In contrast, the voucher was shown to the offender groups so that they could see the gift, and then passed on to staff to be put with the participants finances for safe keeping.

To ensure confidentiality, when possible, measures were administered with only the participant and researcher present. There were several occasions however when a carer or staff member was present. Four participants in the community had a 1-to-1 carer who remained with them at all times, and who was therefore present with them during the testing session. The carer was asked not to verbally input to the study, and instead, once consent was gained from the participant, they were given the EPS-BRS to complete at the same time.

Three male participants from the offender group were forbidden from being present with a single female according to their risk management plans. Therefore for these participants, an additional member of the psychology department sat in their sessions with the researcher. It was made clear to the participant that their responses would not be recorded in their clinical files, or affect their routine treatment.

## **2.6 Ethical Issues**

A favourable ethical approval was obtained from Essex Research Ethics Committee (see Appendix M). Three Research and Development (R&D) committees approved the study; Norfolk (Appendix N), Hertfordshire (Appendix O) and Suffolk (Appendix P). In addition, one independent hospital group, and two non-NHS day services reviewed the study and gave management permission to recruit from their organisations (Appendix Q, Appendix R & Appendix S, respectively). Notification of the study end was provided to the ethics committee on completion (Appendix T). The key ethical considerations for conducting this research project are discussed in turn.

**2.6.1 Consent.** Consent was sought from participants prior to the study (Appendix D). An information sheet describing the research objectives and the procedures was verbally explained to participants, to ensure that consent was informed (Appendices C & G). In addition, participants were asked to consent to the researcher speaking to staff (regarding offence information and to clarify whether they had previously had an IQ assessment) and to consent to the researcher accessing their case notes (if in a clinical setting) to enable clarification of offence-related information. If participants chose not to consent to the study after discussing the information sheet, they were thanked for their time and the study ended.

Participants were also asked to consent to a carer completing a questionnaire about them (the EPS-BRS). They selected this carer (or family member). Carers were provided with an information sheet explaining the study (Appendix I) and were asked to sign a consent form prior to completing the measure (Appendix J).

Participants' information sheets contained pictorial cues to ensure accessible information was provided. These were written in accordance with guidelines produced by the Department of Health (2010). The consent form was written in simple language and participants understanding of all points was checked verbally whilst the form was being completed. Participants were informed of their right to withdraw from the research at any time, and that partaking in or withdrawal from the study would not affect their routine treatment.

Standard practice guidelines require participants to initial each statement made on a consent form to indicate that they have consented to it. However to simplify this procedure and increase its accessibility for the ID population, it was felt that a tick-box format would be more suitable, in-line with previous thesis projects (e.g. Rees, 2009).

**2.6.2 Confidentiality.** Participants were ensured anonymity. Their responses on the measures were not recorded in their clinical records. However it was made clear from the outset, and explicitly stated on both the information sheet and consent form that confidentiality would be broken if the researcher felt someone was at risk following a disclosure. Participants were told that if this did occur then the need to pass this information on would be discussed with them first.

Within the offender groups, participants were requested to only provide information about offences that were known to staff. They were informed that confidentiality may not be maintained if an unknown offence was disclosed at any point during the study. Participants were advised that should this occur, they would be reminded that confidentiality would be broken, and that this new information would be shared with an appropriate clinician.

In accordance with the Data Protection Act (1998), data will be stored in a locked achieve room at the university after project completion for a five year period. During the project, data was locked in a filing cabinet. Data was anonymised with identification codes, which were stored on an encrypted memory stick and no paper copy was held. No information was stored in a way that made it personally identifiable. Consent forms were locked separately to the completed data as they had participants' names on.

**2.6.3 Distress.** Each participant was asked how they felt and whether they had any questions at the session's end. They were provided with a debrief sheet (Appendices K & L), thanking them for participating and providing them with recommendations of who to contact if they felt worried or distressed. It also detailed the researchers and supervisors contact information if participants had further questions or

concerns after study completion. The information differed slightly with who to contact depending on whether they were part of the offender or non-offender groups.

The study was not designed to cause distress to the participants. However, if a participant started to become restless or show signs of distress during the study, they were asked how they were feeling, and they were given the opportunity to take a break from the study, or to stop. In these incidences, the researcher offered to approach an available familiar staff member or carer to speak to the participant about how they were feeling. The participant would have then been given the option of whether to continue the study or not.

Two participants from the offender groups requested a break from the study however this was due to a scheduled cigarette or drink break, rather than feeling too distressed. One offender participant stopped the study half way through as a medical professional entered the ward that she had been waiting to see, however she requested that the researcher waited and continued the study immediately afterwards. Only one offender participant became tearful during the study, due to an unrelated event, and was given the option of stopping or taking a break. He requested a break and to see his primary nurse. After 10 minutes his mood improved and he asked to continue the study. No community participants requested a break, or asked to talk to staff during, or immediately after the study.

**2.6.4 Risk management.** A suitable room was used to interview all participants within secure services, and staff were informed of the researcher's whereabouts within the ward setting. The researcher adhered to any local security procedures, and carried a radio or alarm when it was required. The researcher sought advice from the lead nurse on the ward regarding whether specific risk assessments required reading prior to

meeting with individual participants. Staff were asked to assess the participant's mood prior to the session, to reduce potential risks to the researcher.

In the community if a participant requested a home visit appointment, the Trusts lone-working policy was adhered to. Information regarding participants name, address, and appointment times were provided to local LD teams, with arrangements to contact the on-call clinician once the appointment was complete. This procedure helped to minimise potential risks. However, whenever possible, sessions were arranged at day-service centres and the local LD team buildings, to further reduce the potential risks of lone working.

Non-offender participants were provided with a stamped addressed envelope to pass onto a carer, to return the EPS-BRI to the researcher. These were sent to the University of East Anglia for the researcher to collect, as opposed to using a personal address.

## **2.7 Data Preparation and Analysis**

**2.7.1 Data preparation.** The raw data was inputted into a Predictive Analytics Software Version 18 (PASW v.18) spreadsheet for analysis. Firstly, data were checked for missing data.

A full dataset for demographic information was obtained, including FSIQ scores for all of the participants. Regarding the SRM-SF, only one individual question was not answered by one participant. There were multiple responses given by participants that did not meet the scoring criteria, and these were replaced on the database with '999'. However, every participant provided enough scorable responses ( $\geq 7$  answers out of 11) to enable a total SRM-SF score and global stage score to be calculated.

Regarding the EPS, a full dataset for the EPS-SRI measure was obtained. However, for the informant respondent measure (EPS-BRS,) 24 questionnaires were not



returned. This missing data was scored as '999' on the database. Of these missing questionnaires, seven were from the male offender group, six were from the female non-offender group and 11 from the male non-offender group. The overall response rate for the EPS-BRS was 65%.

**2.7.2 Interrater reliability.** Thirty percent of the questionnaires in this study (N = 20) were second-rated by an expert rater. PASW was used to randomly select five participant numbers from each of the four groups, so that each group was equally represented. The second-rater was blind to participant group and sex. Rating scores were entered into a separate database for the 20 selected participants by both the researcher and second-rater. Interrater reliability was computed for the first 10 of the randomly selected questionnaires, and scored  $r = .80$  ( $p < .001$ ). This only marginally met Gibbs' et al. (1992) recommendations of requiring an interrater reliability of  $r \geq .80$ . Therefore, the researcher and expert rater discussed in length the moral reasoning stage of each individual question on the 10 questionnaires, and looked for inconsistencies in scoring. Three words in particular, 'upset', 'hurt' and 'feel' were scored by the researcher at too low a level. These were typically scored at stage 1/2 or stage 2, rather than stage 2/3 which was a more accurate representation of the stage score. These inconsistencies were corrected on the first 10 questionnaires, and interrater reliability was recalculated at  $r = .99$  ( $p < .001$ ), using an intra-class correlation.

The remaining 58 questionnaires were then re-rated by the researcher to correct these inconsistencies, particularly looking for the use of the words 'upset', 'hurt' and 'feel' in the participant responses, to ensure these were scored correctly. The second 10 questionnaires were then second-rated by the expert rater. Interrater reliability was then computed for these 10 randomly selected questionnaires, and scored  $r = .99$  ( $p < .001$ ).

**2.7.3 Data analysis.** Data analysis was undertaken by various methods.

Demographic data was explored using descriptive statistics, and tests of normality were conducted on raw data.

**2.7.3.1. Tests of normality.** Firstly, histograms were inspected visually to examine normal distribution. Following this, the Kolmogorov-Smirnov test (K-S test) was used to explore whether the distributions of scores significantly differed from a normal distribution. Several of the variables were not normally distributed. FSIQ of participants was significantly non-normal;  $D(68) = 0.16, p < .001$ . A histogram illustrating the distribution of FSIQ is presented in Appendix U.

The total SRM-SF score was normally distributed;  $D(68) = 0.07, p > .05$ . However in terms of the individual constructs, none of the scores were normally distributed; Contract,  $D(52) = 0.17, p < .001$ ; Truth,  $D(52) = 0.17, p < .001$ ; Affiliation,  $D(52) = 0.25, p < .001$ ; Life,  $D(52) = 0.22, p < .001$ , Property,  $D(52) = 0.18, p < .001$ , Law,  $D(52) = 0.25, p < .001$  and Legal Justice,  $D(52) = 0.16, p < .01$ .

In terms of the EPS-SRI, the Total Pathology score data were normally distributed,  $D(68) = 0.08, p > .05$ , along with the subscales, positive impression,  $D(68) = 0.10, p > .05$ , and anxiety,  $D(68) = 0.10, p > .05$ . The remaining four subscales however; low self-esteem,  $D(68) = 0.12, p < .05$ , depression,  $D(68) = 0.13, p < .01$ , thought/behaviour disorder,  $D(68) = 0.15, p < .001$  and impulse control,  $D(68) = 0.13, p < .01$ , were significantly non-normal. Finally, regarding the EPS-BRS, the Externalising Behaviour Problem score data were normally distributed,  $D(44) = 0.10, p > .05$ , whereas the Internalising Behaviour Problem score data were significantly non-normal,  $D(44) = 0.15, p < .05$ .

**2.7.3.2 Analysis.** As not all of the data were normally distributed, bootstrapping was used to achieve a more robust estimate of the mean, standard error and confidence

intervals, which were less susceptible to errors. It treats the sample as a population; a participant is drawn, the score (e.g. mean) is recorded, and it is replaced into the sample. In this study this procedure was performed 5000 times, providing a histogram of bootstrapped mean scores. From these, standard error scores, confidence intervals and tests of significance can then be computed (Field, 2009). Bootstrapping is regarded as a robust alternative method when parametric assumptions are in doubt, particularly if the sample is not overly large (Preacher, Rucker & Hayes, 2007), hence its selection for use in this research study.

ANCOVA was then used to address the first two research questions, to test for differences within the calculated means of the SRM-SF and individual constructs. Main effects and interactions were examined. Bootstrap parameter estimates were determined, with bias corrected and accelerated (BCa) confidence intervals which adjust for bias and skewness in the distribution.. The  $F$  statistics presented were calculated using the original dataset, whereas the significance levels and the 95% BCa confidence intervals were calculated through the bootstrapping procedure. When the confidence interval did not include the value zero in its range then it was deemed a significant finding;  $p < .05$ .

The latter two research questions, exploring the relationship between moral reasoning and offence severity, and exploring the relationship between moral reasoning and emotional and behavioural problems, were addressed using Spearman's correlation coefficient, as data were non-parametric. ANOVA was also used to partially address Question 4, comparing the emotional and behavioural problems of offenders and non-offenders.

**2.7.3.3 Homogeneity of variance.** To test homogeneity of variance of the regression slopes, Levene's test of Equality of Error Variances was used. Variances were equal across the four groups;  $F(3, 64) = 1.41, p > .05$ , therefore homogeneity of

variance was assumed. There was no significant effect of sex on SRM-SF total score, after controlling for FSIQ;  $F(1, 60) = 1.26, p > .05$  (BCa 95% CI = -5.50 to 1.65). There was no significant effect of offence history on SRM-SF total score, after controlling for FSIQ;  $F(1, 60) = 1.32, p > .05$  (BCa 95% CI = -2.81 to 11.64). In addition there was no significant interaction effect between sex and offence history on SRM-SF total score, after controlling for FSIQ;  $F(1, 60) = 0.00, p > .05$  (BCa 95% CI = -7.96 to 4.73). These were all desirable effects.

Regarding the EPS, the variances of the total pathology score (EPS-SRI) were equal for the four participant groups;  $F(3, 64) = 1.28, p > .05$ . Therefore homogeneity of variance was assumed. For the externalising behaviours score (EPS-BRS), the variances were also equal for the four groups;  $F(3, 64) = 1.26, p > .05$ , therefore homogeneity of variance was assumed. Finally for the internalising behaviour score (EPS-IRS), the variances were equal across the four groups;  $F(3, 64) = .44, p > .05$ , so homogeneity of variance was assumed.

## Chapter Three- Results

### 3.1 Overview of Chapter

This chapter presents the analysis and results from this study. It begins by exploring demographic information, and making comparisons between the groups. The study hypotheses are then addressed in turn. Moral reasoning scores are inspected to see whether significant differences exist between the four participant groups, exploring the effect of sex, offence history, and the interaction between the two. In a similar manner, individual constructs from the SRM-SF are then inspected. The chapter moves on to explore the relationship between total moral reasoning score and offence severity. It then explores the relationship between moral reasoning and the presence of emotional or behavioural problems. The chapter ends with a summary of the findings.

### 3.2 Descriptive Statistics.

Descriptive statistics were used to explore the demographic information of the overall sample, and to investigate whether there were significant differences between the four groups. These are discussed in turn.

**3.2.1 Age.** One-way ANOVA was used to compare the mean age of each participant group. No significant differences were found between the four groups on their mean age;  $F(3, 64) = 0.88, p > .05$  (Table 7).

**3.2.2 Full scale IQ.** One-way ANOVA was used to compare the mean FSIQ of each group, and found a significant difference between them;  $F(3, 64) = 5.823, p = .001$ . Post hoc testing revealed that the male offenders had significantly higher FSIQ scores than the female non-offenders ( $p < .05$ ; 95% CI = 1.71 to 11.11). The female offenders also had significantly higher FSIQ scores than the non-offender females

Table 7.

*Descriptive statistics for men and women from both offender and non-offender groups.*

	<b>Offender Male (OM) n = 17</b>		<b>Offender Female (OF) n = 17</b>		<b>Non-offender Male (NOM) n = 17</b>		<b>Non-offender Female (NOF) n = 17</b>		<b>Post-hoc Tests</b>
	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	<i>M</i>	<i>(SD)</i>	
Age (Years)	35.82	(14.20)	34.12	(12.29)	39.65	(12.87)	33.12	(10.88)	<i>NS</i>
FSIQ	61.94	(4.55)	62.00	(5.65)	60.12	(6.17)	55.53	(4.16)	<i>OM &gt; NOF*</i> <i>OF &gt; NOF*</i>
Offence severity	16.41	(9.05)	16.59	(9.37)	-	-	-	-	<i>NS</i>
	<i>n</i>	<i>(%)</i>	<i>n</i>	<i>(%)</i>	<i>n</i>	<i>(%)</i>	<i>n</i>	<i>(%)</i>	
Physical problems									
-Yes	6	(8.8)	9	(13.2)	8	(11.8)	8	(11.8)	<i>NS</i>
- No	11	(16.2)	8	(11.8)	9	(13.2)	9	(13.2)	
Mental health problems									
-Yes	12	(17.6)	12	(17.6)	4	(5.9)	2	(2.9)	<i>O &gt; NO ***</i>
- No	5	(7.4)	5	(7.4)	13	(19.1)	15	(22.1)	

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ , *NS* = Non-significant

( $p < .05$ ; 95% CI = 1.77 to 11.17). Differences between the other groups were not significant (Table 7).

**3.2.3 Offence severity.** Offences were ranked in terms of severity. To explore whether there were significant differences between the severity ranks obtained by men and women, the Mann-Whitney test was used. Offence severity ranks did not differ significantly between men and women;  $U = 126.50$ ,  $z = -0.06$ ,  $p > .05$  (Table 7).

**3.2.4 Physical and mental health difficulties.** Pearson's Chi-square test was used to explore whether there were significant differences between the four groups in the prevalence of physical or mental health difficulties. No significant differences were found between the groups regarding the presence of serious physical health problems;  $\chi^2(3) = 1.126$ ,  $p > .05$ . There was however a significant difference between groups on the presence of mental health problems;  $\chi^2(3) = 19.804$ ,  $p < .001$ . Offenders self-reported more mental health problems than non-offenders (Table 7).

**3.2.5 Summary.** Comparing the four groups on demographic information found significant differences in two areas; FSIQ and mental health problems reported. Age did not differ significantly between the groups, nor did offence severity between male and female offenders.

### **3.3 Research Question One**

The first research question asked whether there were significant differences in moral reasoning between men and women with ID who had offended, compared to men and women with ID who had not offended. Two hypotheses were made. These are addressed below.

**3.3.1 Hypothesis A: Offenders will have higher moral reasoning scores than non offenders.** Initially, the correlation between the SRM-SF total score and FSIQ was inspected, using Spearman's rho correlation coefficient as data were not normally

distributed. Total SRM-SF score was significantly positively related to participants FSIQ ( $r_s = .41, p < .001$ ). Therefore, individuals with higher FSIQ scores yielded higher total scores on the SRM-SF. Analysis will therefore be presented twice, firstly using the original scores obtained (using ANOVA), and then whilst controlling for FSIQ (using ANCOVA).

**3.3.1.1 Total moral reasoning score.** Total scores on the SRM-SF were significantly different between offenders and non-offenders;  $F(1, 64) = 45.45, p < .001$  (BCa 95% CI = -58.31 to -25.53; Table 8), with offenders scoring higher than non-offenders.

**3.3.1.2 Total moral reasoning score: Controlling for intellectual functioning.** A significant difference was found between offenders and non-offenders on total SRM-SF score, whilst controlling for FSIQ;  $F(1, 63) = 32.12, p < .001$  (BCa 95% CI = -51.23 to -19.73). Offenders mean scores fell within stage 2(3) reasoning, whereas mean scores for non-offenders fell within stage 2.

**3.3.2 Hypothesis B: There will be no significant differences between men and women in moral reasoning scores.**

**3.3.2.1 Total moral reasoning score.** There was no significant difference found between the moral reasoning scores of men and women  $F(1, 64) = 0.13, p > .05$  (BCa 95% CI = -14.64 to 18.07; Table 8), nor was the interaction between sex and offence history significant;  $F(1, 64) = 0.02, p > .05$  (BCa 95% CI = -20.54 to 24.16; Table 9).

**3.3.2.2 Total moral reasoning score: Controlling for intellectual functioning.** Once FSIQ was controlled, there remained no significant differences between men and women on total moral reasoning scores;  $F(1, 63) = 0.00, p > .05$  (BCa 95% CI = -14.44 to 18.04). Both sexes' scores fell within stage 2 reasoning. No significant interaction



Table 8.

*Comparing offenders with non-offenders, and men with women on the mean (x100) and standard error scores on the SRM-SF*

SRM-SF: Mean x100 (SE)	Offender Group (n = 34)	Non-Offender Group (n = 34)	Men (n = 34)	Women (n = 34)
Total score	235.68*** (4.10)	195.18 (4.36)	216.50 (4.32)	214.35 (4.16)
Contract	241.18*** (4.60)	198.28 (6.50)	220.10 (5.40)	219.36 (5.90)
Truth	219.70* (9.50)	183.30 (9.20)	206.10 (9.70)	197.00 (8.90)
Affiliation	257.35 (5.30)	228.68 (7.00)	239.71 (6.00)	246.32 (6.30)
Life	242.65** (8.20)	204.69 (7.20)	230.30 (6.50)	218.18 (8.90)
Property	227.30** (7.40)	178.80 (9.70)	207.60 (8.90)	198.50 (8.50)
Law	203.10** (9.10)	167.20 (7.60)	189.10 (9.80)	181.20 (6.60)
Legal Justice	225.80** (10.40)	156.70 (10.50)	191.90 (10.30)	191.70 (10.60)

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 9.

*Comparing the four groups on the mean (x100) and standard error scores on the SRM-SF*

SRM-SF: Mean x100 (SE)	Offender Male (n = 17)	Offender Female (n = 17)	Non-offender Male (n = 17)	Non-offender Female (n = 17)
Total score	236.29 (6.70)	235.06 (4.77)	196.71 (5.29)	193.65 (6.85)
Contract	238.24 (7.60)	244.12 (5.10)	202.96 (7.50)	194.61 (10.50)
Truth	225.00 (15.00)	214.70 (11.60)	188.20 (12.40)	178.10 (13.60)
Affiliation	257.35 (7.00)	257.35 (8.00)	222.06 (9.80)	235.29 (9.80)
Life	239.71 (9.60)	245.59 (13.30)	220.31 (8.80)	189.06 (11.60)
Property	232.40 (11.00)	221.90 (10.10)	181.30 (14.10)	176.50 (13.50)
Law	206.30 (15.80)	200.00 (9.00)	171.90 (12.00)	162.50 (9.50)
Legal Justice	226.50 (14.90)	225.00 (14.50)	150.00 (13.80)	162.50 (15.40)

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Table 10.

*Comparing offenders with non-offenders, and men with women on adjusted mean (x100) and adjusted standard error scores on the SRM-SF(controlling for FSIQ)*

SRM-SF: Mean x100 (SE)	Offender Group (n = 34)	Non-Offender Group (n = 34)	Men (n = 34)	Women (n = 34)
Total score	233.51*** (4.21)	197.35 (4.40)	215.31 (4.32)	215.54 (4.10)
Contract	241.10*** (4.50)	198.40 (6.60)	220.00 (5.30)	219.40 (5.90)
Truth	216.40 (10.00)	186.70 (9.50)	204.70 (9.90)	198.40 (8.90)
Affiliation	253.70 (5.60)	232.40 (6.90)	237.70 (6.00)	248.30 (6.10)
Life	238.10* (8.00)	209.50 (7.50)	227.50 (6.40)	220.10 (9.00)
Property	229.30** (7.60)	176.80 (9.60)	207.90 (9.10)	198.10 (8.60)
Law	199.70 (9.30)	170.60 (8.80)	187.60 (9.60)	182.80 (7.00)
Legal Justice	223.10* (10.80)	158.80 (11.40)	187.20 (10.50)	194.60 (11.00)

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

between sex and offence history on the total SRM-SF score was found, once FSIQ was controlled;  $F(1, 63) = 0.06, p > .05$  (BCa 95% CI = -25.26 to 18.80; Table 10).

**3.3.3 Summary.** Overall, offenders with ID demonstrated significantly higher moral reasoning scores; stage 2(3), than non-offenders; stage 2. No significant differences were found between men and women, nor was the interaction between sex and offence history significant. Findings remained once FSIQ was controlled. Therefore both Hypothesis A; that offenders would have higher moral reasoning scores than non-offenders, and Hypothesis B; that there would be no significant sex differences, were supported.

### **3.4 Research Question Two**

The second research question asked whether there were significant differences between the groups on the moral reasoning construct scores. Based on previous literature, specific hypotheses were made regarding the Property, Law and Legal Justice constructs. It was predicted that offenders would have significantly higher scores on the Property (Hypothesis C), Law (Hypothesis D) and Legal Justice constructs (Hypothesis E) than non-offenders. No specific hypotheses were made regarding the remaining four constructs, as these have not been directly linked to offending behaviour in the literature. However, they were explored for potential differences.

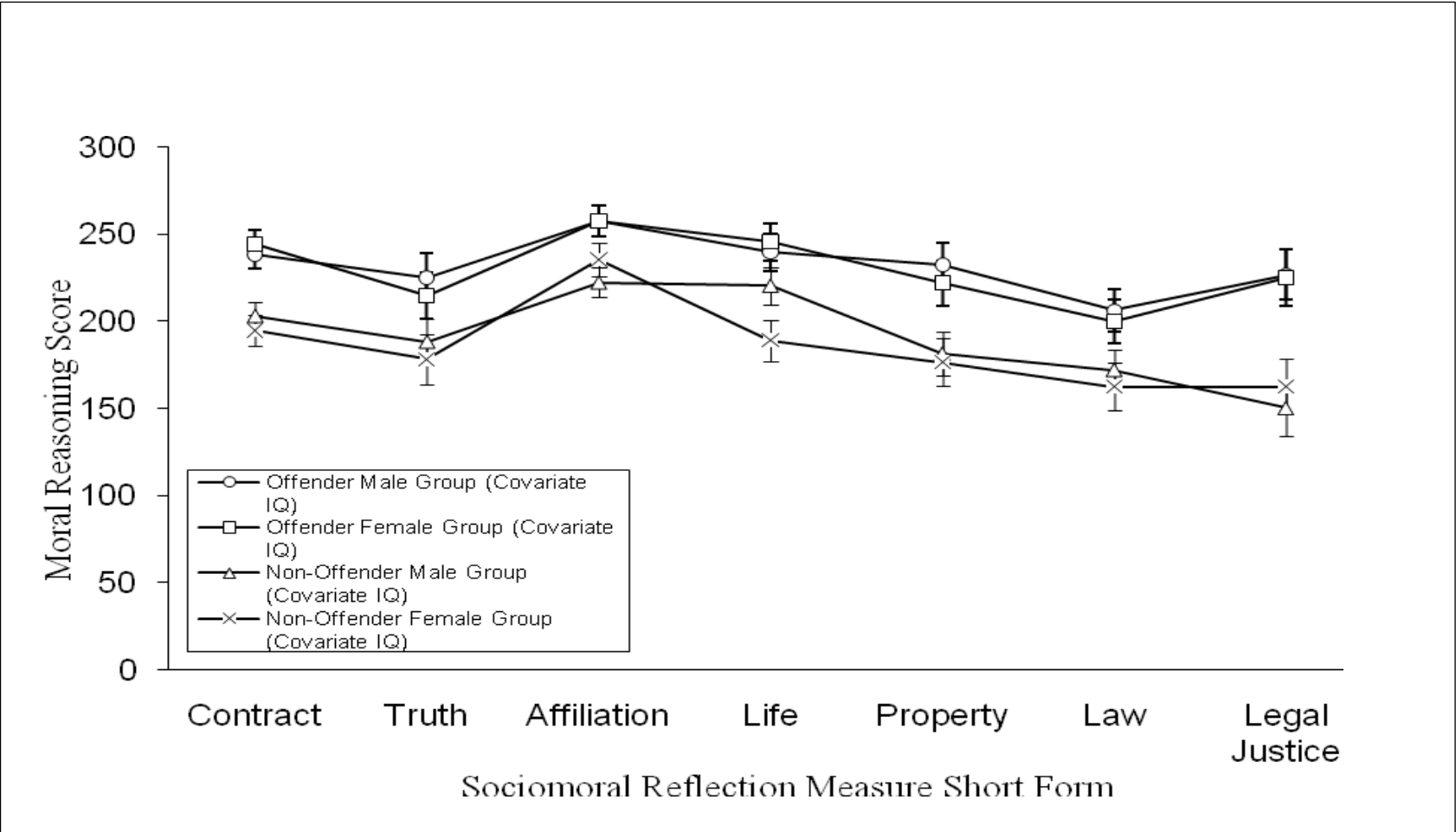
The scores for the seven constructs are discussed in turn, firstly for the three constructs where hypotheses were made, and then for the remaining four constructs. For each construct, analysis is presented using the original data and then with FSIQ controlled. A summary of findings is presented and specific hypotheses are addressed. Bootstrapping was applied once more to 5000 samples, using BCa confidence intervals, at the 95% level.

**3.4.1 Hypothesis C: The offender groups will have higher scores on the Property construct than the non-offenders.** A significant difference was found between offenders and non-offenders mean scores on the Property construct;  $F(1, 62) = 14.92, p < .01$  (BCa 95% CI = -0.78 to -0.11). Offenders had higher scores (stage 2(3) reasoning) than non-offenders (stage 2 reasoning; Table 8). There were no significant sex differences;  $F(1, 62) = 0.37, p > .05$  (BCa 95% CI = -0.19 to 0.39) nor was the interaction between sex and offence history significant;  $F(1, 62) = 0.05, p > .05$  (BCa 95% CI = -0.51 to 0.40; Table 9).

Once FSIQ was controlled, a significant difference remained between offenders and non-offenders scores on the Property construct;  $F(1, 61) = 14.99, p < .01$  (BCa 95% CI = -0.87 to -0.16; Table 10). Offenders had higher scores (stage 2(3) reasoning) than non-offenders (stage 2 reasoning). No significant differences were found between men and women;  $F(1, 61) = 0.59, p > .05$  (BCa 95% CI = -0.20 to 0.41), nor was the interaction between sex and offence history on this construct significant;  $F(1, 61) = 0.00, p > .05$  (BCa 95% CI = -0.48 to 0.47). Figure 1 presents the adjusted mean scores for this construct.

**3.4.2 Hypothesis D: The offender groups will have higher scores on the Law construct than the non-offenders.** A significant difference was found between offenders and non-offenders scores on the Law construct;  $F(1, 60) = 9.07, p < .01$  (BCa 95% CI = -0.65 to -0.10), with offenders having higher scores (stage 2) than non-offenders (stage 2(1); Table 8). No significant differences were found between men and women;  $F(1, 60) = 0.43, p > .05$  (BCa 95% CI = -0.29 to 0.43), nor was the interaction between sex and offence history significant;  $F(1, 60) = 0.02, p > .05$  (BCa 95% CI = -0.42 to 0.47; Table 9).

Figure 1. Adjusted means across the Sociomoral Reflection Measure-Short Form constructs, controlling for intelligence.



However, once FSIQ was controlled, there was no longer a significant difference between offenders and non-offenders on this construct;  $F(1, 59) = 4.67, p > .05$  (BCa 95% CI = -0.56 to 0.04; Table 10). Differences remained non-significant for sex;  $F(1, 59) = 0.15, p > .05$  (BCa 95% CI = -0.28 to 0.45) and for the interaction between sex and offence history;  $F(1, 59) = 0.03, p > .05$  (BCa 95% CI = -0.50 to 0.37). Figure 1 illustrates adjusted mean scores.

**3.4.3 Hypothesis E: The offender groups will have higher scores on the Legal Justice construct than the non-offenders.** A significant difference was found between offenders and non-offenders on their Legal Justice scores;  $F(1, 57) = 21.72, p < .01$  (BCa 95% CI = -1.04 to -0.21; Table 8). Offenders had higher scores on this construct (stage 2(3) reasoning) than non-offenders (stage 2(1) reasoning). There was no significant difference between men and women;  $F(1, 57) = 0.14, p > .05$  (BCa 95% CI = -0.37 to 0.41). The interaction between sex and offence history on this construct was non-significant;  $F(1, 57) = 0.22, p > .05$  (BCa 95% CI = -0.73 to 0.45; Table 9).

With FSIQ controlled, significant differences remained between offenders and non-offenders;  $F(1, 56) = 0.00, p < .05$  (BCa 95% CI = -0.95 to -0.13), however offenders now reasoned at stage 2 and non-offenders at stage 2(1). Sex;  $F(1, 56) = 0.24, p > .05$  (BCa 95% CI = -0.37 to 0.41) and the interaction between sex and offence history,  $F(1, 56) = 0.14, p > .05$  (BCa 95% CI = -0.73 to 0.34) remained non-significant. Once again, adjusted means are presented in Figure 1.

#### **3.4.4 Exploring other construct differences.**

**3.4.4.1. Contract.** A significant difference was found between offenders and non-offenders on their Contract scores;  $F(1, 64) = 28.52, p < .001$  (BCa 95% CI = -0.73 to -0.28), with offenders having higher scores than non-offenders (Table 8). No significant differences were found between men and women on this construct;  $F(1, 64)$

= 0.01,  $p > .05$  (BCa 95% CI = -0.23 to 0.13). The interaction between sex and offence history was also non-significant;  $F(1, 64) = 0.68, p > .05$  (BCa 95% CI = -0.19 to 0.46; Table 9).

After controlling for FSIQ, a significant difference between offenders and non-offenders contract scores was found;  $F(1, 63) = 23.77, p < .001$  (BCa 95% CI = -0.73 to -0.27; Table 10). Offenders had higher scores (stage 2(3) reasoning) than non-offenders (stage 2). No significant differences between men and women;  $F(1, 63) = 0.01, p > .05$  (BCa 95% CI = -0.24 to 0.13) or interaction between sex and offence history were found;  $F(1, 63) = 0.61, p > .05$  (BCa 95% CI = -0.19 to 0.46). Figure 1 presents the adjusted mean scores.

**3.4.4.2 Truth.** A significant difference was found between offenders and non-offenders scores on the Truth construct;  $F(1, 62) = 7.58, p < .05$  (BCa 95% CI = -0.73 to -0.03), with offenders having higher scores than non-offenders (Table 8). There were no significant differences between men and women's scores;  $F(1, 62) = 0.59, p > .05$  (BCa 95% CI = -0.25 to 0.47). The interaction between sex and offence history was also non-significant;  $F(1, 62) = 0.00, p > .05$  (BCa 95% CI = -0.52 to 0.51; Table 9).

Once FSIQ was controlled, there was no longer a significant difference between offenders and non-offenders in their mean Truth score;  $F(1, 61) = 4.27, p > .05$  (BCa 95% CI = -0.63 to 0.09). Findings remained non-significant between men and women's scores;  $F(1, 61) = 0.22, p > .05$  (BCa 95% CI = -0.25 to 0.47), and regarding the interaction between sex and offence history;  $F(1, 61) = 0.07, p > .05$  (BCa 95% CI = -0.57 to 0.43). Adjusted mean scores are presented in Figure 1.

**3.4.4.3 Affiliation.** No significant differences were found between men and women on their Affiliation scores;  $F(1, 64) = 0.57, p > .05$  (BCa 95% CI = -0.21 to 0.22; Table 8). There was also no significant difference found between offenders and



non-offenders on this construct;  $F(1, 64) = 10.77, p > .05$  (BCa 95% CI = -0.47 to 0.03). Finally, the interaction between sex and offence history on the Affiliation construct score was non-significant;  $F(1, 64) = 0.57, p > .05$  (BCa 95% CI = -0.48 to 0.21; Table 9).

Similar findings were found once FSIQ was controlled. No significant differences were found between sex;  $F(1, 63) = 1.49, p > .05$  (BCa 95% CI = -0.20 to 0.21) or offence history;  $F(1, 63) = 5.35, p > .05$  (BCa 95% CI = -0.39 to 0.15) nor was the interaction between sex and offence history significant;  $F(1, 63) = 1.51, p > .05$  (BCa 95% CI = -0.57 to 0.15; Table 10). Figure 1 presents adjusted mean scores.

**3.4.4.4 Life.** A significant difference was found between offenders and non-offenders' Life scores;  $F(1, 62) = 11.84, p < .01$  (BCa 95% CI = -0.91 to -0.23; Table 8), with offenders having higher scores (stage 2(3) reasoning) than non-offenders (stage 2 reasoning). There were no significant differences between men and women;  $F(1, 62) = 1.32, p > .05$  (BCa 95% CI = -0.37 to 0.25; Table 8), nor was the interaction between sex and offence history on this construct significant;  $F(1, 62) = 2.83, p > .05$  (BCa 95% CI = -0.08 to 0.83; Table 9).

Once FSIQ was controlled, a significant difference was found between offenders and non-offenders scores;  $F(1, 61) = 6.15, p < .05$  (BCa 95% CI = -0.74 to -0.12), with offenders having higher scores (stage 2(3) reasoning) than non-offenders (stage 2; Table 10). No significant differences were found between the sexes;  $F(1, 61) = 0.45, p > .05$  (BCa 95% CI = -0.36 to 0.25), nor was the interaction between sex and offence history significant;  $F(1, 61) = 1.42, p > .05$  (BCa 95% CI = -0.16 to 0.69). Adjusted means are displayed in Figure 1.

**3.4.5 Summary of construct findings.** The second research question set out to explore whether there were significant differences between the groups, among any of

the individual construct scores. No significant differences were found between men and women, and the interaction between sex and offence history was not significant on any of the construct scores. Offenders however had significantly higher moral reasoning scores than non-offenders in six of the individual constructs; Contract, Truth, Life, Property, Law and Legal Justice. Offenders demonstrated stage 2(3) reasoning in the Contract, Life and Property constructs, compared to stage 2 reasoning demonstrated by non-offenders. Offenders also demonstrated stage 2(3) reasoning in the Legal Justice construct, compared to the non-offenders stage 2(1) reasoning. In the Law and Truth constructs, offenders demonstrated stage 2 reasoning whereas non-offenders demonstrated stages 2(1), and 2, respectively.

However as there was a positive relationship between intelligence and moral reasoning, illustrated both by this study and in the literature, controlling for intelligence was crucial. This allowed the analysis to partial out the effect of FSIQ on the SRM-SF. After FSIQ was controlled, only four constructs remained significantly different; Contract, Life, Property and Legal Justice. Offenders typically demonstrated stage 2(3) reasoning on the Contract, Life and Property constructs, whereas non-offenders demonstrated stage 2 reasoning. On the Legal Justice construct, offenders demonstrated stage 2 reasoning whereas non-offenders demonstrated stage 2(1) reasoning.

Specific hypotheses regarding the Property (Hypothesis C), Law (Hypothesis D) and Legal Justice (Hypothesis E) constructs were made, predicting that offenders would have significantly higher scores than non-offenders. Hypothesis C and Hypothesis E were therefore supported, with offenders demonstrating significantly higher scores than non-offenders once FSIQ was controlled. No significant differences were found between the groups on the Law construct once FSIQ was controlled. Therefore Hypothesis D (Law) was not supported.

Without controlling FSIQ, offenders had significantly higher moral reasoning scores on the Law construct (stage 2), than non-offenders (stage 2(1) reasoning). However, by not controlling for intelligence, differences within the Law construct were likely to have been accounted for by differences in FSIQ.

### **3.5 Research Question Three**

The third research question asked whether there was a relationship between moral reasoning and offence severity.

**3.5.1 Hypothesis F: Moral reasoning stage and offence severity will be positively correlated.** As data were non-parametric and ranked, Spearman's correlation coefficient was used to investigate this relationship. Two participants were excluded from analysis as their offences could not be scored according to Francis' et al., (2001) paired-comparisons method (Appendix H). No significant relationship was found between total moral reasoning score and offence severity;  $r_s = -.28, p > .05$ . Therefore Hypothesis F was not supported.

As offence severity rankings were not significantly different across men and women, sex was not likely to have impacted on the finding that moral reasoning score and offence severity were not significantly related.

### **3.6 Research Question Four**

The final research question set out to examine the relationship between moral reasoning score, and the presence of emotional and behavioural problems. Two hypotheses were made (Hypothesis G & H), which are addressed in turn.

To explore the relationship between the total SRM-SF score and emotional and behavioural problems, three separate scores from the EPS were used. The 'Total Pathology' score was used from the EPS-SRI, along with the 'Externalising Behaviour Problems' score and the 'Internalising Behaviour Problems' score from the EPS-BRS.

Mean scores for the individual subscales on the EPS-SRI and the EPS-BRS are presented in Table 11 and Table 12, respectively.

**3.6.1 Hypothesis G: Offender groups will score higher in emotional and behavioural problems than non-offenders.** ANOVA was used to compare the emotional and behavioural problem mean scores. Once again, bootstrapping with 5000 samples was used, and BCa confidence intervals calculated at the 95% level. Regarding the EPS-SRI, no significant differences were found between men and women on their total pathology score;  $F(1, 64) = 0.08, p > .05$  (BCa 95% CI = -16.17 to 22.99; Table 13). There were also no significant differences found between offenders and

Table 11.

*Mean and standard deviation scores on the EPS-SRI for the four study groups*

EPS-SRI: Mean (SD)	Offender Male (n = 17)	Offender Female (n = 17)	Non-offender Male (n = 17)	Non-offender Female (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)

Table 12.

*Mean and standard deviation scores on the EPS-BRS for the four study groups*

EPS-BRS: Mean (SD)	Offender Male (n = 10)	Offender Female (n = 17)	Non-offender Male (n = 6)	Non-offender Female (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 (0.91)
Distractibility	9.80 (6.89)	13.82 (6.65)	14.33 (9.93)	12.36 (7.46)
Withdrawal	7.90 (8.76)	12.65 (7.03)	8.67 (10.58)	6.36 (4.50)
Somatic Concerns	7.50 (9.00)	13.59 (8.61)	10.00 (10.18)	8.27 (7.51)

non-offenders on their total pathology score;  $F(1, 64) = 10.83, p > .05$  (BCa 95% CI = -34.86 to 2.27), nor was the interaction between sex and offence history significant;  $F(1, 64) = 0.65, p > .05$  (BCa 95% CI = -35.55 to 15.32).

Regarding the EPS-BRS, a significant difference was found between men and women on the externalising behaviour problem score;  $F(1, 40) = 2.31, p < .05$  (BCa 95% CI = -40.20 to -2.31; Table 13), with women scoring higher than men. There was also a significant difference between offenders and non-offenders on their externalising behaviour problem score;  $F(1, 40) = 4.60, p < .01$  (BCa 95% CI = -43.44 to -8.80), with offenders scoring higher than non-offenders. The interaction between sex and offence history on this score was not significant;  $F(1, 40) = 1.33, p > .05$  (BCa 95% CI = -9.89 to 47.49). However, only 44 participant's data was available for this measure.

Table 13.

*Comparing offenders with non-offenders, and men with women on the mean and standard deviation scores on the EPS*

EPS: Mean (SD)	Offender Group n = 34	Non-Offender Group n = 34	Men n = 34	Women n = 34
Total Pathology	59.71 (27.97)	38.26 (25.16)	48.06 (28.88)	49.91 (28.57)
Externalising Behaviour Problem	48.33 (28.46)**	28.88 (19.83)	31.94 (22.06)	45.89 (28.56)*
Internalising Behaviour Problem	45.30 (26.67)**	28.94 (19.18)	31.75 (22.79)	43.11 (25.87)*

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

For the internalising behaviour problem score, a significant difference was found between men and women;  $F(1, 40) = 1.43, p < .05$  (BCa 95% CI = -38.64 to -0.43; Table 13), with women scoring higher than men. A significant difference was also found between offenders and non-offenders;  $F(1, 40) = 3.18, p < .01$  (BCa 95% CI = -40.60 to -6.89), with offenders scoring significantly higher than non-offenders. Finally, the interaction between sex and offence history on participants' internalising behaviour problem score was non-significant;  $F(1, 40) = 2.19, p > .05$  (BCa 95% CI = -5.48 to 48.01). Once more, it must be noted that only 44 participant's data was available for this measure, so caution must be applied when interpreting these findings.

**3.6.2 Hypothesis H: Moral reasoning stage and the level of emotional and behavioural problems experienced will be positively correlated.** Pearson's Correlation coefficient was used to measure the correlations between the total SRM-SF and the total pathology, and externalising behaviour problems as data were normally distributed. Spearman's rho was used to measure correlations between total SRM-SF and internalising behaviour problems score as data were non-normally distributed. Data was available for 68 participants total pathology scores, however only 44 participants had externalising and internalising behaviour problems scores. Scores will be discussed in turn.

**3.6.2.1 Total pathology.** A significant positive relationship was found between total pathology score and total moral reasoning score,  $r = .32, p < .01$ . Therefore the higher a participant's total pathology score on the self reported EPS-SRI, the higher their SRM-SF score.

**3.6.2.2 Externalising behaviour problems.** A significant positive relationship was found between participants' externalising behaviour problem scores and total moral

reasoning scores,  $r = .31, p < .05$ . Therefore the higher a participant's externalising score on the informant based EPS-BRS, the higher their SRM-SF score.

**3.6.2.3 Internalising behaviour problems.** A significant positive relationship was found between participants' internalising behaviour problem scores and total moral reasoning scores,  $r_s = .36, p < .01$ . Therefore the higher a participant's internalising score, the higher their SRM-SF score.

**3.6.2.4 Additional findings.** A significant relationship was found between the total pathology score, and both the externalising ( $r = .26, p < .05$ ) and internalising behaviour problem scores ( $r_s = .36, p < .01$ ). Therefore, high total pathology scores obtained on the self-report measure were positively correlated with high internalising or externalising scores obtained on the informant-completed measure.

The relationship between externalising and internalising behaviour problem scores was highly significant. Therefore, participant's who scored highly on one scale, scored highly on the other scale;  $r_s = .71, p < .001$ .

**3.6.3 Emotional and behavioural problems summary.** It was hypothesised that offenders would have higher levels of emotional and behavioural problems than the non-offenders (Hypothesis G). The descriptive data at the start of this chapter demonstrated that offenders self-reported significantly more mental health problems than non-offenders;  $\chi^2(3) = 19.804, p < .001$ . Nevertheless, no significant differences were found between offenders and non-offenders on their total pathology score.

There was however, a significant difference between offenders and non-offenders on both their internalising behaviour score and externalising behaviour problem scores. Offenders scored higher rates than non-offenders on both scales. Therefore, Hypothesis G was partially supported. However, the participant numbers



varied between these, so caution needs to be applied when interpreting the internalising and externalising score findings.

It was also hypothesised that moral reasoning and the level of emotional and behavioural problems would be positively correlated (Hypothesis H). This was demonstrated through significant positive relationships found between the total moral reasoning score and participant's total pathology, externalising behaviour problem, and internalising behaviour problem score. Hypothesis H was therefore supported.

### **3.7 Summary of Findings**

Once FSIQ was controlled, offenders with ID were found to have significantly higher total moral reasoning scores than non-offenders, with offender's typically demonstrating stage 2(3) and non-offenders demonstrating stage 2 reasoning. Hypothesis A was therefore supported. No significant differences were found between men and women, nor was the interaction between sex and offence history significant. Hypothesis B was therefore not supported.

Regarding the individual SRM-SF constructs, no significant sex differences were found, nor was the interaction between sex and offence history significant. Offenders however had significantly higher moral reasoning scores than non-offenders in six constructs; Contract, Truth, Life, Property, Law and Legal Justice. Once FSIQ was controlled, four constructs remained significantly different; Contract, Life, Property and Legal Justice, with offenders reasoning at stage 2(3) compared to non-offenders stage 2 reasoning in the Contract, Life and Property constructs. Regarding Legal Justice, offenders demonstrated stage 2 reasoning, whereas non-offenders reasoned at stage 2(1). Therefore, once FSIQ was controlled, Hypothesis C (Property) and Hypothesis E (Legal Justice) were supported; however Hypothesis D (Law) was not supported.

In relation to Hypothesis F, no significant relationship was found between total moral reasoning score and offence severity. Hypothesis F was therefore not supported. Offenders scored significantly higher than non-offenders in their levels of internalising and externalising behavioural problems. In contrast, no significant differences were found between offenders and non-offenders in their total pathology scores. This resulted in Hypothesis G being partially supported. Finally, a positive relationship was found between moral reasoning score and level of emotional and behavioural problems experienced, providing support for Hypothesis H.

## Chapter Four – Discussion

### 4.1 Overview of Chapter

The following chapter initially examines the findings from the study in relation to the specified research questions and hypotheses, and links these to the literature. Theoretical and clinical implications of the study are presented in turn, followed by a methodological critique of the study. Suggestions for future research studies are then presented and the chapter is closed with an overall study summary.

### 4.2 Summary of Study Hypotheses and Results.

The research questions and the subsequent study hypotheses will be considered in turn, in relation to the study's findings.

**4.2.1 Research question one.** Are there significant differences in moral reasoning scores between men and women with mild ID who have offended, compared to men and women with mild ID who have no offence history?

**4.2.1.1 Hypothesis A: *Offenders will have higher moral reasoning scores than non-offenders.*** Based on previous research, this study predicted that adults with ID who had a history of offending would have higher scores on a measure of moral reasoning than adults with ID and no history of offending. Statistical analysis provided support for this hypothesis, finding offenders had significantly higher moral reasoning scores than non-offenders, placing them at a more mature level. On average, offenders demonstrated stage 2(3) reasoning whereas non-offenders demonstrated stage 2 reasoning. These significant moral reasoning differences remained once FSIQ was controlled, therefore differences were not accounted for by intelligence.

This finding from the current study supports previous research in this area by Langdon et al. (2011b). However, although Langdon et al. (2011b) found that offenders had higher moral reasoning scores than non offenders, both groups demonstrated stage 2

reasoning. Offenders' scores fell on average, at the top end of stage 2, with non-offenders scoring at the lower end of this range. The current research study however demonstrated that offenders showed stage 2(3) reasoning, whereas non-offenders reasoned at stage 2.

Langdon et al. (2011a) proposed that the relationship between moral reasoning and anti-social behaviour is moderated by intelligence, forming an inverted 'U' shape. They suggested that non-offenders with ID are more likely to demonstrate immature levels of moral reasoning, typically making decisions based on authority and rules. This therefore predicts that the lowest levels of moral reasoning act as a protective factor against offending behaviour. Stage 2 reasoning, which is typically characterised by egocentric thinking and concerned with meeting one's own needs, has therefore been suggested to result in increased levels of disruptive (Langdon et al., 2011a) and delinquent behaviour (Blasi, 1980). However it was stage 2 reasoning that the non-offenders in the current research study evidenced reasoning at.

In this study, offenders on average reasoned at stage 2(3), where responses blend aspects of stage 2 and stage 3 reasoning. This transitional stage reasoning typically represents perspective taking that is instrumentally oriented, less pragmatic and is hypothetical in nature, for example "your friend would help you". It does not demonstrate the truly mutual, interpersonal perspective that stage 3 reasoning does (Gibbs et al., 1992). It is also at this stage that someone's conscience is first considered. However conscience is seen as external to the individual and as an annoyance, for example if you steal then "your conscience would bother you".

It is not until stage 3 reasoning that moral reasoning is based on maintaining relationships rather than egocentricity, which Langdon et al. (2011a) linked to a reduction in offending behaviour. Regarding the inverted 'U' shape curve presented by

Langdon et al. (2011a) to illustrate the relationship between moral reasoning and offending behaviour (moderated by intelligence), it could be hypothesised that the transitional stage 2(3) may in-fact feature at the peak of this curve as it represents the middle stage of moral development, and therefore may result in the highest levels of illegal behaviour.

An alternative hypothesis to be considered, however, could be that the offender population may have received some type of group-intervention since being in custody. As a consequence this may have enhanced an individual's moral reasoning abilities, through building their skills in perspective taking. Moral reasoning would need to be assessed prior to the individual receiving any treatment intervention to gain a clear understanding of whether it had had an impact. Only recruiting people who had not received any intervention prior to the study would be near impossible to implement, and beyond the scope of this study. However, treatment exposure could have been documented in the study and whilst it would not have been possible to have controlled for this, it may have helped to account for potential group differences.

Despite findings being slightly different to Langdon et al.'s (2011b) findings regarding moral stages observed, both studies found that offenders demonstrated significantly more mature reasoning than the non-offenders. In a more recent study by Langdon et al. (in press), individuals levels of moral reasoning were measured before and after administration of the EQUIP programme. Of the seven male participants, only three had diagnosed mild ID, so their findings alone were reflected upon. Two participants demonstrated stage 2(3) reasoning before the intervention programme, of which, one increased to stage 3(2), and the other to stage 3 reasoning. The third participant demonstrated stage 3 reasoning both before and after the 12-week group.

Finally, both the current study and that of Langdon et al. (2011b) used convenience sampling to recruit participants. The slight observed differences in stages may have therefore been the result of differences within the samples. Overall, the findings of the current study are similar to those of Langdon et al.'s (in press) study, and support previous findings by Langdon et al. (2011b), with offenders engaging in more mature moral reasoning than non-offenders. Hypothesis A was therefore accepted.

**4.2.1.2 Hypothesis B: *There will be no significant differences between men and women in moral reasoning scores.*** Following a review of the literature, it was predicted that no significant differences between men and women in their level of moral reasoning would be found in this study. Sex differences in moral reasoning abilities have long been debated, with Gilligan (1982) criticising early models of moral reasoning (e.g. Kohlberg, 1976) for discriminating against women. Gilligan stated that women tend to adopt a 'care-oriented' approach to decision making, compared to the 'justice oriented' approach adopted by men. She argued that using stage models automatically assigned women to a less mature level of moral reasoning, as a result of their care-orientation.

Gilligan's claims have received some support by the literature (e.g. Ford & Lowery, 1986; Yacker & Weinberg, 1990), but have also been contested (e.g. Rothbart et al., 1986; Walker, 1984). Other studies (e.g. Duckett et al., 1997; Self et al., 1988) have countered her research, finding women reasoning at more mature levels of moral development than men. Exploration of sex differences in moral reasoning within the ID literature also failed to evidence significant differences, however due to limitations, findings should be interpreted cautiously. As previously described, many of these studies failed to use moral reasoning measures that were standardised for the ID population. They typically recruited small samples and did not match their study

groups. There was no basis therefore for the researcher to make specific hypotheses regarding sex differences in moral reasoning, in this study.

Statistical analysis within the current study found no significant differences between men and women with ID in their level of moral reasoning. This finding remained once FSIQ was controlled, and was irrespective of whether individuals had a history of offending or not. It therefore provides support for the argument that clear sex differences do not exist in moral reasoning abilities, countering Gilligan's claims (Gilligan, 1982). Hypothesis B was therefore accepted.

**4.2.2 Research question two:** Are there significant differences in any of the moral reasoning construct scores between the groups?

**4.2.2.1 Hypothesis C:** *The offender groups will have higher scores on the Property construct than the non-offenders.* In line with the research carried out on adult males with ID (Langdon et al., 2011b), it was predicted that offenders would have higher scores on the Property construct than non-offenders. Langdon et al. (2011b) found that male offenders demonstrated stage 2 reasoning on this construct, whereas non-offenders demonstrated stage 1(2). The latter group were therefore concerned more with avoiding punishment and obeying authority.

This hypothesis was supported by the current study, with offenders having significantly higher scores than non-offenders on this construct. However, in contrast to findings by Langdon et al. (2011b), offenders in this study demonstrated stage 2(3) reasoning, whereas non-offenders demonstrated stage 2 reasoning; reasoning dominated by exchanging and instrumental reciprocity.

When the stage score ranges are inspected (see Table 6), it can be seen that stage 2 scores range between 175 and 225. In the current study, the adjusted mean score for the offender group on the Property construct was 229.30, which was reasonably close to

the top end of stage 2 cut-off (Table 10). In addition, the mean score for non-offenders was 176.80, close to the bottom end of stage 2. Although these findings for the Property construct were therefore higher than those found by Langdon et al. (2011b), they were consistent with the overall moral reasoning stage scores found by this study, illustrated in research question one. Once again, although specific stages of moral reasoning were not identical to those found by Langdon et al. (2011b), both studies found that the offenders demonstrated significantly more mature moral reasoning than the non-offenders, once FSIQ was controlled. Hypothesis C was therefore supported.

**4.2.2.2 Hypothesis D: *The offender groups will have higher scores on the Law construct than the non-offenders.*** Once again, from drawing on the research by Langdon et al., (2011b), it was hypothesised that offenders would score higher on the Law construct than the non-offenders. In Langdon's study (2011b), offenders reasoned at stage 2, whereas non-offenders reasoned at stage 1. In the current study, offenders mean score on the Law construct fell within stage 2 reasoning, whereas non-offenders reasoned at stage 2(1). Differences, despite disappearing once FSIQ was controlled, were quite large between the groups, with offenders scoring a mean of 199.7, compared to the non-offenders mean score of 170.6 (Table 10).

The non-offenders lower levels of moral reasoning in this construct, stage 2(1), may have been driven by individuals wanting to obey authority figures, the law and avoiding punishment, resulting in the absence of any offending behaviours. Interestingly, the offenders in this study demonstrated their greatest delay in moral reasoning in this construct, which supports Gibbs' finding among young offenders (Gibbs, 2010). However, as scores were not significantly different between the groups, Hypothesis D was not supported.



**4.2.2.3 Hypothesis E: The offender groups will have higher scores on the Legal Justice construct than the non-offenders.** Drawing again on Langdon et al.'s research (2011b), it was predicted that offenders would demonstrate more mature moral reasoning in the Legal Justice construct than non-offenders. The offenders in their study demonstrated stage 2 reasoning, whereas the non-offenders demonstrated stage 2(1) reasoning.

The findings from the current research study supported this hypothesis, with offenders reasoning at a more mature level, stage 2, than non-offenders (stage 2(1); Table 10), and were comparable to those of Langdon et al.'s (2011b) study. The non-offenders demonstrated lower levels of moral reasoning in this construct, which once again, may have been driven by wanting to avoid punishment and obey authority, resulting in the absence of offending behaviours.

A closer look at how the three offenders reasoned on this construct (pre-treatment) in Langdon et al.'s study (in press), revealed that two men scored 250, placing them just into the 3(2) range, whereas the third demonstrated stage 2 reasoning. Post-treatment, these men demonstrated stage 2, stage 3 and stage 3(2) reasoning, respectively. These scores are higher than the average scores presented by Langdon et al. (2011b). Scores in the current study on this construct were therefore reasonably consistent with the literature, and support Langdon et al.'s (2011b) finding that offenders demonstrate more mature reasoning than non-offenders. As a result Hypothesis E was supported.

**4.2.2.4 Additional findings.** No specific hypotheses were made regarding the remaining four constructs; Contract, Truth, Affiliation and Life, as significant differences between the groups in the study by Langdon et al. (2011b) had not been as pronounced as on the three constructs discussed above. Furthermore, these constructs

were not linked to offending behaviour in the literature, so played less of a focus in the current study.

Although specific hypotheses were not made, findings were still inspected in the current study. After controlling for FSIQ, offenders were found to have more mature moral reasoning scores than non-offenders in the Contract and Life constructs. In both constructs, offenders engaged in stage 2(3) reasoning, whereas non-offenders engaged in stage 2 reasoning. No significant differences were found between groups on the remaining two constructs.

Similar findings were identified in the Langdon et al. (2011b) study. They too found significant differences between offenders and non-offenders in the Contract and Life constructs, but not the Truth or Affiliation constructs. In both of the significantly different constructs, offenders demonstrated more mature stage 2(3) reasoning, than the stage 2 reasoning demonstrated by non-offenders. The findings from the current research study therefore support previous findings by Langdon, increasing the reader's confidence in both studies.

**4.2.3 Research question three:** Is there a relationship between moral reasoning stage and offence severity?

**4.2.3.1 Hypothesis F: Moral reasoning stage and offence severity will be positively correlated.** This hypothesis was made as previous research had indicated that moral reasoning tended to be higher in adults with ID who had offended, than non-offenders with ID (Langdon et al., 2011b). Palmer (2003) suggested that offending behaviour can be justified at any stage of moral development. Although justifiable at any stage, antisocial behaviour has been typically characterised by stage 2 reasoning, where people prioritise their own needs (Palmer, 2003; Tarry & Emler, 2007). It was therefore hypothesised in the current study that an individual who commits a more

severe offence, may require slightly more enhanced skills to justify their behaviour, therefore demonstrating a more mature level of moral reasoning. In contrast, an offender who committed a less severe offence would require less cognitive skill to justify their behaviour, and therefore could feature at a less mature stage of moral development.

Statistical analysis did not reveal a significant relationship between total moral reasoning score and offence severity in the current study. As a consequence, this hypothesis was not supported. It is possible however that statistical significance was not picked up due to an inadequate sample size. As documented in the method section, to achieve an appropriate level of power, 47 participants were required for correlational analysis. For this research question only offenders could be included, as it involved the severity of their offence. This therefore immediately reduced the sample by half, resulting in 34 participants' data being available for analysis. A further two participants were excluded as their offences could not be scored according to Francis' et al., (2001) paired-comparisons method (Appendix H). Although Hypothesis F was therefore not supported, this finding needs to be interpreted cautiously due to the sample size not being large enough for appropriate statistical analysis.

Irrespective of the sample size, it is possible that offence severity and moral reasoning score are not in-fact linked, and that offending can be justified at any stage, regardless of the offence nature. Langdon et al., (2011b) recorded information on participants' offences and ranked them in order of severity. They compared offence severity of the ID-offenders with the comparison-offenders (non-ID), finding no significant differences. However they did not analyse the data further or explore the relationship with moral development. No research studies have looked at the impact of offence severity on the moral reasoning abilities of adults with ID, so it is difficult to draw inferences from the findings of the current study, to this area.

There may have also been limitations in establishing offence severity in this study. A severity score was allocated using data drawn from Francis' et al.'s (2001) study. They looked at offenders who received convictions for pairs of offences at one time point, and examined how judges deemed the severity of each offence (e.g. the tariff length given for each offence). However this method may have been flawed if the offender had previous convictions for one of the pair and not the other, as this may have influenced the ratings the judge gave. It is not clear therefore how satisfactory this method was at determining offence severity in the current sample.

**4.2.4 Research question four:** Is there a relationship between moral reasoning stage and emotional and behavioural problems?

**4.2.4.1 Hypothesis G: *Offender groups will score higher in emotional and behavioural problems than non-offenders.*** There is a wealth of literature that links emotional and behavioural difficulties to offending behaviour. Poor coping strategies (Holland, 2004) and mental health difficulties (Murphy et al., 1991) have been suggested to predict later involvement with the criminal justice system. Similarly, rates of mental illness in offenders with ID have been reported as high, which Barron et al. (2002) suggests act as a significant contributor to offending behaviour. It was therefore hypothesised that offenders would score higher levels of emotional and behavioural problems than non-offenders.

The descriptive data demonstrated that offenders self-reported significantly more mental health problems than non-offenders, which considering the literature above, was expected. However this information was self-reported, and inspection into types and prevalence rates of different mental health difficulties was not reported.

Three scores from the EPS were used to look at emotional and behaviour problems; the total pathology score (EPS-SRI), and the externalising and internalising

behaviour problem scores (EPS-BRS). The internalising behaviour score was significantly higher in offenders than non-offenders. This finding was expected, as it incorporates scores from the depression, anxiety and self-esteem subscales. As previously stated, rates of mental health difficulties are typically higher in offender populations than non-offenders (Barron et al., 2002), which was supported by the self-reported demographic information in the current study.

Offenders were also found to score significantly higher on the externalising behaviour problem score than non-offenders, again a finding that was expected. Individuals who act out their feelings tend to have high externalising behaviour problem scores. It was no surprise therefore that offenders scored significantly higher on this scale, as it is often some type of 'acting-out' that resulted in their offending and subsequent detainment. Acting out in terms of aggression, self-mutilation or attempted suicide, have been identified as common reasons why women are referred to secure hospitals (Lindsay et al., 2006). Therefore, as predicted, externalising scores were markedly higher amongst the offender groups.

Interestingly, women scored significantly higher rates of both internalising and externalising behaviour problems than men, which may reflect the findings of Lindsay et al. presented above (2006). It could be that the women generally expressed higher rates of these behaviours, or alternatively, it could be due to differences in scoring. An informant was asked to rate the participants on these scales, however these informants changed each time. Therefore, two informants may have rated the same behaviour quite differently. From this study's findings, it is impossible to establish the true cause of why women scored higher than men.

It must be noted that for the internalising and externalising scores, analysis was conducted on a small sample. The power calculation presented in the method section

illustrated that 68 participants were required to achieve sufficient power. However for these two scales, only data for 44 participants was received. Sufficient power was therefore not achieved, so these findings should be interpreted cautiously.

No significant differences were found between the four groups on total pathology scores. Further inspection of the findings (Table 13) revealed that the offenders scored considerably higher than non-offenders on this scale, however this difference remained non-significant. Men and women's scores on this scale were comparable, with little difference between them. Findings from this scale are stronger as a full data-set was available, which enabled sufficient power to be achieved.

However this data relied on self-reported information which may have reflected the type of day or mood state that the participant was having, at the time of completion. To minimise risk, the offenders were 'mood assessed' by a nurse prior to engaging in the study. It was unlikely therefore that they would have participated had they been in a negative mood state. This self-report measure may therefore have captured some 'false positive' scores amongst these participants, rather than reflect their general feelings on an average day. Self-reported data can also be affected by participants aiming to please the experimenter by responding with what they believe is the desired answer, limiting the usefulness of such data.

Hypothesis G was therefore partially supported, with offenders scoring higher on externalising and internalising problem scores than non-offenders. However significant differences were not detected on the self-reported total pathology scores. Caution needs to be applied when interpreting these findings due to the small number of participants who had data available.

***4.2.4.2 Hypothesis H: Moral reasoning stage and the level of emotional and behavioural problems experienced will be positively correlated.*** Based on the literature

presented to support Hypothesis G, it was hypothesised that emotional and behavioural problems (using total pathology, externalising, and internalising behaviour problems scores), would be positively correlated with total SRM-SF scores.

A significant positive relationship was found between participants' total pathology score and total SRM-SF score, between participants' externalising behaviour problem score and total SRM-SF score, and between participants' internalising behaviour problem score and total SRM-SF score. Therefore scoring highly on the EPS was associated with greater moral maturity. This was predicted, as offenders with ID have been shown to have greater moral maturity than non-offenders with ID (Langdon et al., 2011a; 2011b), and offenders have been found to express higher levels of emotional (Barron et al. 2002) and behavioural problems, such as aggression (Taylor, Novaco, Gillmer & Thorne, 2002) than non-offenders. Hypothesis H was therefore supported.

However, 47 participants were required to achieve sufficient power for correlational design. This was achieved for the total pathology score as a full EPS-SRI data set was obtained (N = 68). However, only 44 participants had completed EPS-BRS data, falling just below the required number. Therefore the correlations between moral reasoning score and both the internalising and externalising behaviour scores, need to be interpreted with caution.

The relationship between the total pathology score, and both externalising and internalising behaviour problem scores, were positively correlated. Externalising and internalising scores were highly correlated with one another. These scores were desirable, and expected, however were once again let down by the sample size.

### **4.3 Theoretical Implications.**

The following section will present a general discussion of the main theoretical implications of the current research study. As discussed, a clear link between cognitive and moral development has been established in the literature, with individuals who demonstrate advanced development in one typically demonstrating advanced skills in the other. Despite this, less research into moral development has been conducted amongst the ID population, and much of the existing research in this field focuses on children and adolescents with ID.

A relationship between moral reasoning and anti-social behaviour has also been established in the literature (e.g. Nelson et al., 1990; Stams et al., 2006), with offenders in the general population typically demonstrating less mature moral development than non-offenders. Low IQ has also been identified as a risk factor for offending behaviour (Koenen et al., 2006; White et al., 1989), in both males and females. Therefore there was a clear theoretical rationale to investigate and understand more about the roles that moral reasoning and anti-social behaviour play within the ID population, where less is known.

Langdon et al. (2011b) recently explored the impact of moral development and offence history on adults with ID. However his research was restricted to men. Therefore the findings from the current study have substantial theoretical implications, as no published research has looked at the impact of sex and offence history, on the moral development of adults with ID. Including adult women in this study, along with recruiting a male sample to compare the women to, was both clinically interesting and theoretically exciting, as has not previously been researched.

Several important theoretical implications require discussion. Firstly the current study supports the use of the SRM-SF measure with the ID population. Langdon et al.



(2010b) recommended its use with adults with ID following their exploration of its psychometric properties, which they found to be satisfactory when used with men with ID. The questions were read out loud to participants in the current study, and often required repetition to ensure they were adequately heard and understood. All of the participants gave scorable responses to at least seven questions, which was a requirement in order to be included in the analysis. Therefore no participant failed to provide enough scorable responses to warrant exclusion. This supports the use of this measure with people with ID. They clearly understood it well enough to enable it to be used correctly and accurately.

There was one question however that was excluded from analysis more often than the other 10 questions. The question “How important is it to live, even if that person doesn’t want to?” caused the most confusion, or was answered, but the participants’ response was not scorable. This was also found by Langdon et al. (2010b). It may be useful therefore if this question could be re-phrased in a revised version of the SRM-SF, to ensure a greater number of people understand what they are being asked.

The second theoretically important finding from this study is the difference between offenders and non-offenders in their moral reasoning abilities. These should be considered in relation to Langdon et al.’s (2010b; 2011b) recent research studies. Using Gibbs’ Sociomoral Stage Theory of moral development (Gibbs et al., 1992), the current study found offenders had significantly higher moral reasoning than non-offenders. Offenders with ID typically scored at the transitional stage 2(3) of reasoning, compared to stage 2 reasoning demonstrated by non-offenders. These remained once FSIQ was controlled. This supports previous findings by Langdon et al. (2010b; 2011b), who found that offenders with ID engaged in significantly more mature moral reasoning than non-offenders.

Studies however differed somewhat in the actual reasoning stages. In his study that recruited offenders and non-offenders with ID, Langdon et al. (2011b) found both groups reasoned at stage 2. Although within the same stage, offenders were still found to have significantly higher total scores than the non-offenders. Within the current study, the offenders reasoned at stage 2(3), whereas non-offenders reasoned at stage 2. However, approximately equal gaps between offenders and non-offenders existed in both studies.

There are many potential reasons for the slight differences in the moral reasoning scores found between the current study and Langdon et al.'s (2011b) study. Samples in both studies were opportunistic, recruiting those participants who were available at the time of research and who fitted the inclusion criteria. It is likely therefore that there were differences between the samples recruited in the current study and Langdon et al.'s (2011b), including demographic differences such as age or FSIQ, differences in the number of offences, offence severity, length of stay in secure services, amount of treatment received and stage of treatment pathway. In addition, the current study recruited both men and women in the sample, compared to the male only sample in Langdon et al.'s study (2011b), which may have impacted on the differences in the scores.

Along with two ID groups, Langdon et al. (2011b) included an offender and non-offender group in their study who did not have ID. The non-offender groups demonstrated both the lowest (ID group) and highest level of moral reasoning (non-ID group). They therefore proposed that the relationship between moral reasoning and anti-social behaviour was moderated by intelligence, forming an inverted 'U' shape (Langdon et al., 2011a). According to this model, highest rates of offending behaviour are committed by those with borderline ID, who engage in the middle stages of moral

reasoning. In their research offenders typically engaged in the 'tit-for-tat' reasoning that underpins stage 2 reasoning (Langdon et al., 2011b).

The current study partially supported this model, with non-offenders evidencing less mature moral development than offenders, which is consistent with the theory. However it cannot fully support the model as adults without ID were not included in the study, so findings regarding individuals with greater intelligence were not obtained. Nevertheless, from reviewing the literature it appears well evidenced that offenders in the general population engage in less mature levels of moral development than non-offenders. Therefore there is no reason to doubt that this is suggestive of an inverted 'U' shape curve.

No stage numbers feature on the hypothesised 'U' shape figure that Langdon et al. (2011a) proposed. The authors propose that the highest rates of illegal behaviour are displayed by those individuals who engage in the middle stages of moral reasoning, predominantly stage 2 reasoning, which has been supported by the literature (e.g. Gregg et al., 1994). In the current study offenders overall score fell within stage 2(3) reasoning. This represents the middle stage of moral development more accurately in terms of stage (see Table 6), so may in-fact feature at the peak of this curve, and therefore result in the highest levels of illegal behaviour. More research to investigate the relationship between illegal behaviour, moral reasoning and intelligence is required to further develop this model, and to define moral stages on the model itself.

In the current study, the non-offenders demonstrated stage 2 reasoning overall, which according to theory would place them at high risk of offending. Offenders demonstrated stage 2(3) reasoning. This may be accounted for by differences between the groups on the individual constructs. The non-offenders demonstrated reasoning at earlier developmental stages on the Law and Legal Justice constructs, stage 2(1)

reasoning, and just over the stage 2 boundary on the Property construct. Langdon et al. (2011b) also found that non-offenders with ID demonstrated earlier developmental stages on these constructs, despite having an overall total score within stage 2 reasoning. The findings in the current study therefore support the idea that it is the scores in these domains (Property, Law and Legal Justice) that may predict offending behaviour.

Similarly to Langdon et al.'s study (2011b), the current study found that offenders with ID reasoned at a significantly higher level than non-offenders on the Property and Legal Justice construct. Although offenders had higher scores on the Law construct than non-offenders, these were not significantly different in this study, whereas Langdon et al. (2011b) found they were. Interestingly, in both studies these three constructs had the lowest scores for the non-offenders. This was consistent with the literature, as decision making in these areas is more typically driven by authority, rules, physical and punitive consequences in non-offenders (stage 1), whereas offenders typically base decisions on exchanges, own needs, preferences and advantages.

Similarly, low scores on these constructs have been found in the non-ID literature (e.g. Gibbs, 2010; Palmer & Hollin, 1998). Antisocial youths show delay in every area of moral development (Gregg et al., 1994), however they have been found to show greatest delay in the Law domain (Gibbs, 2010). Gibbs described how non-delinquent youths typically reason at stage 3 or stage 3(4), providing responses concerned with loss of trust. In contrast, delinquents' responses tend to be significantly less developed in terms of moral reasoning, marked with concern for getting caught and going to prison. Palmer and Hollin (1998) compared male young offenders with male and female non-offenders, and found moral reasoning was poorer on constructs relating

to offending behaviour (Property and Law) in both offenders and non-offenders. The current study therefore supports what is already understood theoretically in this area.

A further theoretical implication of the current study is the link between these findings and the literature that explores moral reasoning abilities of young offenders. It has been suggested (Langdon et al., in press) that men with ID who have offended have a similar developmental delay in moral reasoning to young offenders. The offenders with ID in the current study had scores at the low end of the 2(3) stage of moral development. This is comparable to the moral ability levels of young offenders without ID, presented by the literature. Palmer and Hollin's (1998) study found young offenders moral reasoning ranged between stages 2 and 3(2) across the constructs, compared to young non-offender males whose reasoning ranged between stages 3(2) and 3, and young non-offender females who reasoned at stage 3. Van Vugt et al. (2011a) found that juvenile sex-offenders without ID demonstrated moral reasoning at the transitional stages 2(3) and 3(2). As findings from the current study appear to be similar to those presented in the young offender literature, it is reasonable to expect that some of the interventions that are implemented with young offenders which draw on moral development theory, may be of benefit to adults with ID. This will be explored further in the clinical implications.

A final important theoretical implication of the current study regards sex. This was the first study to explore moral reasoning and offending behaviour with adults with ID across both sexes. It therefore provides valuable information, significantly adding to the literature base in this area.

The presence or absence of sex differences in individual's moral reasoning abilities has been a debate in the literature for many years. Gilligan (1982) criticised early stage models of moral reasoning (e.g. Kohlberg, 1976), for discriminating against

women by de-valuing their care-oriented approach. Care typically featured at Kohlberg's stage 3 reasoning, whereas decisions based on maintaining laws and societal rules, which Gilligan argued typically underpinned males moral decisions, featured within stage 4 reasoning. Gilligan also criticised the assessment of moral reasoning for being biased towards justice-orientation, therefore discriminating against females (Gilligan, 1982).

Some studies have supported Gilligan's argument (e.g. Yacker & Weinberg, 1990), other studies have found no sex differences (e.g. Garrod et al., 1990, Walker, 1984) whilst some studies have found females to demonstrate more mature reasoning than males (Duckett et al., 1997; Palmer & Hollin, 1998) countering her claims. Gregg et al. (1994) found that both offender and non-offender females displayed more advanced moral reasoning abilities than their male peers, even once age and verbal IQ were controlled.

Overall in this study, no significant differences were found between men and women with ID in their moral development. The result remained once FSIQ was controlled, and offence status proved irrelevant. This study therefore provides support for the argument that men and women are not markedly different in their moral reasoning abilities. It adds weight to the research that counters Gilligan's sex differences claims, and is the first study from the offender ID field to do so.

This finding that sex differences in moral reasoning did not exist in adults with ID is important when considering the relationship between moral reasoning and anti-social behaviour, which Langdon et al. (2011a) proposed is moderated by intelligence. Prior to the current study, this model could only be proposed for men, as research had not been conducted on women. As this study found no significant sex differences, it provides the crucial information that was required to enable such a model to be applied

to the general ID adult population, irrespective of an individual's sex. This therefore, is a substantial theoretical implication, as it allows future research to start looking at adults with ID as a whole, rather than just apply the previously found theoretical implications from other studies, to men.

It is vital that research aims to explore and understand more about the moral development of offenders with ID, as this will help to establish whether interventions that aim to enhance moral development abilities are successful (Van Vugt et al., 2011a). Although there have been a handful of studies conducted in recent years that explore moral development in young males and adult men with ID, very little remains known regarding the female ID forensic population. There is also no clear rationale as to why this client group remains so under-researched. This study aimed to start building the research base for the female ID group, by including both offender and non-offender female groups in the sample, and comparative male groups. It also addresses a limitation of previous studies (e.g. Langdon et al., 2011b) which did not include women in their sample. However, more research is required to enhance and develop further theoretical implications.

#### **4.4 Clinical Implications**

Results from this exploratory study suggest that the moral reasoning abilities of adults with mild ID are similar to those of young offenders, which has clear clinical implications regarding potential treatment. Young offenders have been described as having delayed moral reasoning (Gibbs, 2003; Taylor & Walker, 1997), which presents as a potentially suitable area for intervention. Young offenders have also shown poorer social skills and more cognitive distortions (Gibbs, 2003; Langdon et al., in press).

Langdon et al. (2011a) suggested that individuals who demonstrate the highest and lowest stages of moral reasoning are the least likely to commit offences. It is

therefore important to think about methods of enhancing moral reasoning, for those who present with middle-stage reasoning and have already offended. According to cognitive-developmental theory, moral reasoning can be enhanced through discussion with others who reason at higher moral development stages (Kohlberg & Mayer, 1972; Taylor & Walker, 1997) as the egocentric thinking that typically shapes immature reasoning, is challenged by more advanced peers (Palmer, 2003). This type of intervention has been utilised with both juvenile and adult offenders.

Blatt and Kohlberg (1975) found that group discussion was effective in boosting offender's moral reasoning stage, which has been supported by other studies (e.g. MacPhail, 1989; Rest & Navarez, 1994; Walker, 1988). Weekly large-group discussions of moral dilemmas were found to enhance moral reasoning in adolescent offenders (Arbuthnot & Gordon, 1986; Gibbs et al., 1984; Niles, 1986). Other studies found that once moral reasoning was enhanced, it led to a reduction in offending behaviour (Blasi, 1980; Little et al., 1999; MacPhail, 1989); however such reduction was not always observed (Niles, 1986). Claypoole et al. (2000) found group dilemma discussions to be ineffective in enhancing moral development in male and female juvenile offenders.

Young offenders have been widely researched in this field. Despite appearing to be a comparable group to adult offenders with ID, and therefore findings having some relevance, it is important to consider treatment approaches that have been successfully implemented with individuals with ID. Considerably less research however has looked at enhancing the moral development abilities of adults with ID. One intervention programme that has been administered to adult males with ID, aiming to enhance moral development, was the EQUIP programme (Langdon et al., in press).

EQUIP aims to reduce cognitive distortions, build social skills, and enhance moral development through perspective taking. These are achieved through group



settings which utilise moral dilemma discussions, social skills training and anger control techniques. EQUIP has been demonstrated to positively influence post-release behaviour amongst male juveniles (Gibbs et al., 1996). Langdon et al. (in press) delivered an adapted version of the EQUIP programme (Gibbs et. al., 1995; Gibbs et al., 1996; Potter et al., 2001), to a group of seven adult men. Their findings appear promising for people with ID and other developmental disabilities, as participants demonstrated an increase in moral reasoning abilities, a reduction in cognitive distortions and enhancement of some problem-solving skills.

Langdon et al. (in press) suggested that the EQUIP programme may be a suitable first treatment group for patients as they enter secure services. Skills learnt in this group, along with potentially increased moral reasoning, may provide a good foundation for offence-specific groups that might be offered at a later stage of their treatment pathway.

However Langdon et al.'s (in press) findings need to be treated cautiously until a larger scale study replicates these findings. Their study was restricted due to a small sample size, and mixed participant group; with three participants having mild ID and four having no ID, but having Asperger Syndrome. This makes it difficult to generalise findings to the wider ID population, as results from only three participants can really be considered. Furthermore, failure to have a comparison control group limits the findings as it is not clear whether residing in a busy inpatient facility itself would provide some scope for encouraging perspective taking, building problem solving skills and enhancing social skills. This hypothesis could have been easily ruled out had seven other members from the same ward completed the measures at the same time point. A more accurate understanding of the impact of attending the EQUIP group would therefore have been established.

Despite there only being three participants' results that can be inspected, two participants' moral reasoning improved. Prior to treatment the participants' demonstrated stage 2(3), stage 3(2) and stage 2(3) reasoning. After attending 12 weeks of group treatment, participants' demonstrated stage 3(2), stage 3(2) and stage 3 reasoning, respectively. The latter of these demonstrated the biggest enhancement of moral reasoning.

Many interventions offered to inpatient offenders are group-based programmes. Both generic groups, such as problem-solving or emotional regulation groups, and offence-specific groups, such as fire-setting or substance misuse programmes can be offered to offenders. Often groups are adapted to enable effective delivery to the ID population, such as the Sex Offender Treatment Services Collaborative – Intellectual Disability (SOTSEC-ID) group, which has been shown to increase participants' sexual knowledge and victim empathy, whilst reducing cognitive distortions (SOTSEC-ID; 2010). Group treatment in general for adults with ID has the added benefit of encouraging perspective-taking and the development of social skills. Previous findings suggest that as a consequence of being in a group setting, it may enhance the moral reasoning skills of those who attend. This may occur regardless of the intervention focus. This is a clear advantage of offering group-based treatment as opposed to, or in addition to, individual treatment.

In their research, Ashkar and Kenny (2007) found that individuals displayed offence-specific deficits in moral reasoning. They proposed that to enable interventions to be successful at reducing reoffending rates, offence-specific deficits require targeting. This could therefore be incorporated alongside Langdon et al.'s (in press) suggestions, potentially offering the EQUIP intervention to offenders to build skills and enhance

moral reasoning, followed by specific offence groups, to target and address these offence-specific deficits.

As no significant sex differences in moral reasoning were found in the current study, it is likely that both men and women would benefit from intervention-programmes to enhance moral reasoning skills. This has clinical implications as suggests that groups do not require tailoring to either sex, and can instead take more of a generic format. This may have attractive cost and time implications for services, as the same resources can be administered to multiple participant groups. If mixed sex groups are offered by services, it would mean that interventions such as the EQUIP programme could potentially be administered to both men and women with ID at the same time, as moral reasoning appears to be similar.

An alternative intervention could be to try and reduce moral reasoning amongst offenders, to see if a potential reduction would protect them against reoffending, in a similar way that it protects non-offenders from offending in the first place. This could potentially be initiated through encouraging more rule-based decision making. However, whether this would be successful at reducing reoffending behaviour is unclear, and resources may therefore be more suitably placed in trying to enhance moral development, where supporting evidence exists.

In addition to IQ, there are other important influences to the development of moral reasoning. An individual's environment plays a key role, and in particular an environment that involves interactions which enable exposure to social skill building can help to enhance and develop an individual's moral reasoning abilities.

A further consideration that should be made therefore regards improving staff understanding of moral development. The EQUIP programme as previously described, aims to enhance moral development through encouraging perspective taking, reducing

cognitive distortions and building social skills. If staff groups, particularly in forensic services, were aware of the roles these aspects play in moral development, then they may be increasingly likely to encourage these and model these appropriately. Helping offenders to perspective take and encouraging social skills would be particularly easy to build into the daily working of the ward. For this to be successful, it would be important for staff teams to understand the rationale for why enhancing moral development has advantages. This could be done through brief training explaining the stage models of moral development, such as Gibbs' Sociomoral Stage Theory (Gibbs et al., 1992), and using Langdon et al.'s (2011a) proposed model of moral development and offending behaviour, moderated by IQ. This would hope to illustrate how enhancing moral reasoning may start to reduce reoffending, and subsequently act as a protective factor against offending.

Moral reasoning theory has been successfully embedded into treatment programmes, such as EQUIP, with some promising results. Administering EQUIP has been shown to reduce recidivism and improve social skills in young offenders (Leeman, Gibbs & Fuller, 1993) and in boosting moral reasoning and social skills in ID offenders (Langdon, et al., in press). However other studies have found no reduction in recidivism in young offenders (Brugman & Bink, 2010).

Despite the literature presenting mixed findings regarding whether enhancing moral reasoning directly causes a reduction in re-offending rates, by embedding moral reasoning principles into already existing treatment interventions, it may increase the chances of successfully reducing re-offending rates. This may be supplemented well by staff in secure services encouraging social skill building, problem solving abilities and encouraging offenders to take the perspectives of their peers on a daily basis. Training

staff, providing a clear rationale, and offering examples of how this could be weaved into their daily practice, would increase successful implementation of these.

If staff discussed hypothetical dilemmas about day-to-day occurrences with the offenders, it may contribute to enhancement of their moral reasoning. Conversing with people of a higher developmental stage has been shown to have positive effects and enable adaptation to higher order reasoning, which Kohlberg stated people have a preference for, given the opportunity (Kohlberg, 1984). Through encouraging staff interaction with offenders on a daily basis may have significant 'knock-on' positive consequences. This may be of particular relevance to and be particularly beneficial for individuals who have grown-up in an environment with minimal social interaction and limited available care-givers to model appropriate behaviours and to provide scaffolding for learning about morality. Encouraging the enhancement of moral development, either through formal group settings or through everyday communication on inpatient wards, could therefore have subsequent important clinical implications.

#### **4.5 Methodological Critique.**

The current study attempted to address and overcome methodological limitations that were identified in previous research studies. However several limitations remain. Strengths and weaknesses of this study are discussed below.

**4.5.1 Design.** A mixed method design was used in this study. To explore the first and second research questions a 2 X 2 between-subjects descriptive design was used, where the main effects and interactions were examined.

In descriptive designs, different participant groups are compared with each other with regard to their performance on a criterion variable, which in this study was moral reasoning scores. Using this type of design, group classification criteria needs to be mutually exclusive. The current research study achieved distinct groups, with sex and

offence history defining the four groups. However, a limitation of using an independent design is that differences detected on the criterion variable (moral reasoning), may be the result of differences between participant's characteristics across the four groups.

The researcher attempted to address this limitation by conducting tests of normality, identifying that groups were significantly different in their FSIQ, and then repeating analysis whilst controlling for the effects of FSIQ. This increases the readers confidence in the group classification criteria (sex or offence history) accounting for differences that were detected, rather than FSIQ. Other differences however remained, such as the prevalence of mental health problems.

To address the latter two questions, a correlational design was used. This was appropriate due to the exploratory nature of this study, which investigated whether relationships between the variables existed. A correlational design has advantages. Information about the level of emotional and behavioural problems, and offence severity is gained through correlation, rather than merely grouping people by the presence or absence of such behaviour. However, one key limitation of this design is that causal relationships cannot be determined. Therefore, conclusions can only report that relationships between variables exist, rather than infer their causality.

Data was cross-sectional, with measures completed at one time point. A limitation of cross-sectional design, is if groups are not equivalent then this may confound the results. Once again, the researcher attempted to address this by conducting tests of normality, identifying that groups FSIQ differed significantly, and conducting analysis whilst controlling for FSIQ. An additional limitation of cross-sectional design is that it captures how individuals were feeling on the day data was collected, which may not necessarily reflect their general experiences. A participant's response on the EPS-SRI (self-report) may reflect the type of day they were having, or particular mood

they were in. Responses therefore could have been significantly different had they been assessed on a different day. For example, one male offender scored fairly highly on the depression based questions, however he had been visited by the police and his solicitor that morning and been given some upsetting news. Had he completed the measures the week before, he may not have scored the same responses. This ‘snap-shot’ approach is a limitation of cross-sectional design. However, undertaking a follow-up measure or repeating measures at a later date, was beyond the scope of this study due to time restrictions.

Finally, to ensure this study was statistically robust, a power calculation was conducted prior to recruitment commencing, reporting that 68 participants were required. This sample size was achieved; a strength of the study. However, a larger sample would have increased the overall power further, and enabled sufficient power to have been achieved for the informant-based measure analysis, where response rates were lower.

**4.5.2 Sample.** Sixty eight adults with mild ID participated in this study. Recruiting a clinical sample strengthened this study, as it increased how generalisable the findings were to the general ID population. However, as the sample was a convenience sample, potential biases may exist. Therefore it is unclear how truly representative the sample was of the ID population.

**4.5.2.1 Recruitment.** A further strength of the current study was that the participant sample required to achieve statistically robust analysis was successfully recruited. To enable this, considerable time was spent building rapport with a range of services, clinicians and potential participants.

One community service that was approached (non-NHS) appeared receptive of the study initially, however after looking through the EPS-SRI became resistant. This

measure includes a vast range of statements including positive statements such as “I am always good”, neutral statements such as “It is easy for me to sit still”, and more negative statements such as “I am a failure” and “At times I wish I was dead”. After reviewing it, the staff expressed feeling that some questions were potentially too distressing and provoking for their clients, despite the researcher explaining how distress would be managed if it occurred during or after the session. However, this service chose not to partake in this study. It appeared that they may have felt that by not asking the participants about difficult thoughts or feelings, meant that these thoughts or feelings didn’t exist. This is a hurdle therefore that needs addressing in future studies.

**4.5.2.2 Non-offenders.** The non-offenders groups comprised a range of clinical and non-clinical participants. Perhaps having a full clinical sample would have provided a more accurate reflection of whether it was offence history that proved the significant difference, rather than involvement with services, or the higher prevalence of mental health problems. However, the sample reflected the participant group and time-frame available for recruitment. There were considerably more individuals from the day-services who were willing to partake in the study, and having mental health difficulties or contact with clinical services was not a requirement of the study, therefore there was no reason to exclude them. However, having a mixture of community participants from clinical and non-clinical settings is likely to be a fairer representation of the general ID population, which may strengthen the findings.

An additional strength of this study was that the community groups were screened for offence histories. Clinicians were asked to screen this at the start of the recruitment process and not to recommend any individuals who had offended. One clinician contracted the researcher to double check the criteria as had a potential participant who had received a caution (and was therefore screened out), and a fellow



participant who had historical police involvement as a victim. This person met inclusion criteria as had not committed an offence. All participants were asked by the researcher about potential offence histories and police involvement in their initial meeting. It also featured as a demographic question. This was an advantage of the study, as Stams et al. (2006) previously criticised studies for failing to screen the non-delinquent groups for offending behaviour. This was crucial to prevent contamination of the study findings.

**4.5.2.3 Offenders.** The offenders were recruited from both low and medium secure services, depending on where there were suitable participants who met the inclusion criteria and were keen to engage. However, groups were not matched to ensure even numbers of men and women were recruited from medium and low secure units. This may have meant that people were at different stages of their treatment pathway and recovery. If these groups had been matched with equal numbers of men and women from each level of security, this would have increased the validity, and subsequent readers trust in the findings. This did not occur in this study due to time restraints and the significantly lower proportion of women in ID secure services in general available for recruitment.

Another limitation of the current study is the likelihood that the offender participants had at some stage, received some type of intervention for their offending behaviour. This may therefore have impacted on their moral reasoning ability, particularly if they received group-based treatment, as groups typically encourage perspective-taking. Perspective taking as previously described, can contribute to the enhancement of moral reasoning skills.

**4.5.2.4 Comparisons.** One focus of this study was to draw sex comparisons. Therefore, equal numbers of men and women were recruited. This addresses the flaw of many studies in this area, where authors often fail to justify why their research was

restricted to one sex alone. Groups were not initially matched on their FSIQ, therefore in attempt to address this, analysis was completed controlling for FSIQ. This helps to understand the true impact of the variable being measured (e.g. sex or offence history).

Prevalence rates of mental health difficulties were higher in offenders than non-offenders; however cause and effect could not be determined. Finally, Langdon et al. (2010a) criticises many ID studies for failing to provide clear information about their participant sample. This study addressed this by clearly documenting demographic information, and drawing comparisons between the groups.

**4.5.3 Definition of ID.** One methodological limitation of studies in this area, concerns the definition of ID used. As previously stated, it is clear that ID is not always defined by adherence to DSM-IV guidelines, with studies often including individuals with borderline IQ scores (FSIQ = 71 - 84) (e.g. Barron et al., 2004; Van Vugt et al., 2011a). There are problems therefore in drawing comparisons between studies if different definitions of ID are used, and caution needs to be applied when making references or generalisations to the wider ID population.

A strength of the current study was the use of the WASI to determine individuals FSIQ (Wechsler, 1999). By administering this formal measure of IQ and strictly adhering to the cut-off scores presented by the DSM-IV for mild ID (DSM-IV-TR; APA, 2000), and excluding those individuals who did not meet criteria, this study addressed this common methodological flaw. Where possible, the four subtest version of the WASI was used, as it yields stronger psychometric properties than the two-version subtest, such as on test-retest reliability (Kaufman & Lichtenberger, 2005). However, with six participants, the two-subtest version was used due to physical restrictions. A timed block manipulation task was therefore deemed unsuitable. Using

the two-subtest WASI enabled these participants to engage in the study, promoting inclusion.

A flaw of using the WASI however, was the floor effect. The minimum FSIQ that could be obtained on the WASI was 55, which restricted the range that could be obtained (Young, Martine & Dudgeon, 2002), and may have resulted in people with FSIQ scores below this figure being included. The range of the sample in this study spanned the full IQ range for mild ID, 50 – 70, the lowest range obtained by those who completed the WAIS-III or WAIS-IV as part of their clinical care. Had this study administered the WAIS rather than the WASI, it would have been less likely to produce floor effects, so a more accurate profile of IQ would have been determined. Administering the WAIS however would have had considerable time and cost implications.

According to the American Psychiatric Association (2000), along with having a FSIQ score between 50 - 70, individuals diagnosed with a mild ID also have associated difficulties with their adaptive behaviour. As discussed, FSIQ was measured in this study, whereas adaptive behaviour difficulties were assumed to exist if the individual was accessing local ID services, as this is typically a requisite of accessing such services. However, the current study could have been strengthened if adaptive behaviour was formally assessed.

The Adaptive Behaviour Assessment System (ABAS- 2<sup>nd</sup> Edition; Harrison & Oakland, 2003) is one measure that could have been administered in this study to assess participants adaptive functioning. This would have clarified and strengthened the participant's diagnosis of Mild ID, providing a more accurate picture of whether participants met the study's inclusion criteria. The ABAS measures 10 areas of adaptive functioning, including skills in communication, self-care and community use, in

individuals between 0 - 89 years old. Scores are grouped into three domains; the conceptual, social and practical domains. The relationship between adaptive behaviour scores on the ABAS (2<sup>nd</sup> Edition) and intelligence scores on the WASI, or the WAIS-IV can be explored to determine validity, an added advantage as would have strengthened the diagnosis of ID.

The ABAS (2<sup>nd</sup> Edition) can be completed with the individual (self-report) or by a carer or parent. Considering the 65% response rate of the EPS-BRS, the self report ABAS may have been the most useful version of the ABAS to use, to obtain a full dataset. Administration is reported by the authors to take between 15 and 20 minutes to complete. However it is not clear whether this is the estimated time required for staff, parents and general informants, or the individual themselves. It is unlikely that an individual with suspected ID would complete this measure in the same time as a parent or carer. It can therefore be assumed that the time frame to complete the ABAS with an individual with ID would be longer than the 15-20 minutes estimated.

Adding this measure to the testing session of the current study would have therefore expanded the length of the session significantly, which may have had a detrimental impact on recruitment. Participants may have been less likely to want to engage with a study that required more of their time. In addition, administering a measure of adaptive functioning would have had cost implications for this study. Therefore, there would have been both clear advantages and disadvantages in having measured adaptive functioning alongside FSIQ in this study.

**4.5.4 Measures.** Any intervention administered to adults with ID requires adaptation so that it is in an accessible format and understood by all of the recipients. In the current research project, all of the questions on the measures were read aloud to prevent limitations in reading and writing having an impact on their responses.

Information sheets and consent forms were also read to the participants and queries responded to. Making all of the information in this study accessible appeared to work appropriately.

**4.5.4.1 Moral reasoning.** In their review of the literature of moral reasoning within the ID population, Langdon et al. (2010a) identified that the vast majority of studies administered unstandardised forms of measurement of moral reasoning. Therefore the validity and reliability of studies measurement tools was unknown, limiting the usefulness of their findings. In attempt to rectify the lack of standardised measurement tools of moral reasoning abilities for the ID population, Langdon et al. (2010b) explored the psychometric properties of two measures of moral reasoning. They compared the MTI (Narvaez et al., 1999) with the SRM-SF (Gibbs et al., 1992), concluding that the SRM-SF demonstrated better psychometric properties than the MTI for both men with and without ID.

The current research study therefore utilised this information and administered the SRM-SF, as had been proved to be psychometrically sound. This was a strength of this research project as it helps to address the common methodological flaw of many existing studies into moral reasoning, particularly within the ID field. The only limitation of using this measure was that it was not validated to use with women, as Langdon et al.'s (2010b) study comprised only men. However, in the current study no significant sex differences were found on scores obtained from this measure.

The SRM-SF has also been described as being particularly good at detecting variation around the stage 2 - stage 3 boundary (Tarry and Emler, 2007), a further advantage of using this measure. A final strength regarding this measure was the level of inter-rater reliability achieved. Although scores were lower (yet acceptable) on the first attempt ( $r = .80$ ), ratings were discussed in depth between the two people who

rated the data, and scores were amended. This enhanced the inter-rater reliability scores to an excellent level ( $r = .99$ ).

**4.5.4.2 Emotional Problems Scale.** Both EPS scales were used in this study. Every participant completed the EPS-SRI within the testing session, and so a full data set was obtained. Regarding the EPS-BRS, 44 completed questionnaires were returned to the researcher, resulting in a 65% response rate. Of the completed questionnaires, 27 belonged to the offender groups, whereas 17 belonged to the non-offenders. Groups were not matched which may have had an impact on the findings. For example, when comparing the total sample of men with the total women on both internalising and externalising behaviour problems, there were uneven proportions of offenders and non-offender participants within the groups. However, both the male and female groups comprised more offender than non-offenders participants.

The offender participants were 'mood assessed' prior to partaking in the study, to ensure they were settled in mood, minimising potential risks. However, doing so may have produced some false positive scores by only assessing participants who presented in an average or good mood. It raises the question about how individuals may have scored on this measure had they presented in a less settled mood, and whether scores reflect how they typically present. This is a limitation of this type of measure that gathers information from one time point; it only truly provides a snap-shot of their presentation.

The response rate for the EPS-BRS differed considerably between the groups. For the offender groups, the response rate was 79.4%, compared to 50% of non-offenders. This is likely to be the result of differences in the methodology. For the offenders, the researcher directly passed the questionnaire on to a staff member, or left it for their key worker to complete. Staff were asked to post these back to the researcher

once complete. As the researcher was aware of who the measure had been passed to, it gave some scope to follow up questionnaires that had not been returned. This is likely to have improved the response rate.

For the non-offenders, if the participant was accompanied by a carer to the appointment or if it was at their home where someone was present, they were asked to complete the questionnaire at the same time. However, more often than not, the participant attended the assessment alone. These participants were given the EPS-BRS along with an information sheet to pass onto a suitable person to complete and post back to the researcher. As the researcher did not directly meet with an informant in these cases, it is not known how many of the participants failed to pass this information on and how many carers chose not to do it after reading the information sheet.

As the response rate was 65% for the EPS-BRS, the number of participants required to achieve statistically robust analysis was not achieved. Therefore analysis involving this measure needs to be interpreted with caution. Had greater effort been put into following up the non-offenders measures in particular, the study would have been more likely to have achieved sufficient power. The researcher anticipated a lower response rate from the community groups, and tried to maximise the chance of responding by providing a stamped addressed envelope, reducing the cost for the carer.

Perhaps more could have been done however in attempt to boost response rates from the community groups, such as requesting that the clinician or day-service staff member who nominated the participant originally, prompted or tried to follow-up whether these had been completed and returned. The researcher was however cautious not to ask too much of participating staff members, as maintaining a good working relationship was vital to enable successful recruitment.

**4.5.4.3 Offence-related information.** Participant's offences were scored according to Francis' et al., (2001) paired-comparisons method (Appendix H), and ranked by their most severe conviction. Of the 34 offenders, two participants' offences (one male, one female) could not be scored, as did not suitably match any of those presented by Francis' et al., (2001). One was charged with Property destruction and the other with carrying a knife but not threatening with it. As these offences could not be suitably scored, it resulted in their exclusion from the analysis for research question three. This was a limitation of using this method of scoring, as two participants warranted exclusion despite being convicted for offences, and being detained in a secure hospital as a result.

By ranking offenders by their most severe conviction alone may have however had limitations. It would have been more clinically valuable to have established a method of ranking offenders in a way that incorporated both the number of convictions an individual has, and the severity of these. In the current study, an offender who committed one crime may be ranked as a 'more severe offender' than another offender who committed a dozen offences deemed slightly less serious. By using a scoring system that incorporated both severity and frequency of offences would have provided a more accurate picture of each offender and their profile of offending behaviour.

Finally, regarding the offender group, it would have been useful to have documented whether each participant had received any treatment intervention or not. Although it would have not been possible to have controlled for treatment exposure, knowledge of this may have helped to account for potential differences.

**4.5.4.4 Additional measures.** As the measure of moral reasoning required participants to verbalise their responses to each question, it may have been clinically useful to have conducted a measure of participants spoken language ability. This would



have enabled exploration of whether language ability was correlated to responses on the SRM-SF. In Langdon et al.'s study (2011b) they administered three subtests from the Test of Adolescent and Adult Language –Fourth Edition (TOAL-4; Hammill, Brown, Larsen & Wiederholt, 2007) to assess spoken language skills; Word Opposites, Word Derivations and Spoken Analogies. The authors found that spoken language and moral reasoning were positively correlated, suggesting that spoken language ability accounted for 59% of the moral reasoning score variability (Langdon et al., 2011b). Significant effects remained for the total moral reasoning score and each individual construct, once spoken language was controlled. It was therefore unlikely that language ability had a significant effect on moral reasoning scores.

Although this formed part of the rationale for why language was not assessed in the current study, the study would have been strengthened had it measured spoken language itself. This would have enabled direct measurement of the impact of language ability on the obtained data, rather than relying on findings from a previous study. Once again, having increased time and resources to have expanded the study would have enabled further investigation, and increased the readers confidence in the findings obtained.

#### **4.5.5 Testing session.**

**4.5.5.1 Managing risk.** Following assessment, each participant was asked how they felt, and given a debrief sheet with information of who to contact if they felt worried or distressed afterwards. Participants who responded 'yes' on the EPS to any question that indicated a suicidal risk were asked about this afterwards. Several participants expressed that this was a feeling or thought they had previously had. No participant indicated current suicidal ideation, however this was documented regardless. For the offenders this information was fed back to the lead-nurse, with participants

consent, increasing the teams' awareness that this conversation had taken place. For the one non-offender participant, this information was fed back to the on-call clinical psychologist. The researcher routinely spoke to this clinician following all home appointments, as part of adherence to the lone working policy.

**4.5.5.2 Managing distress.** One male offender became tearful during the study, due to a previously mentioned visit by the police that day. The study was paused, whilst he spoke to his primary nurse. He requested to continue the session shortly after, when he was less tearful. The researcher gave the participant the opportunity not to continue with the study, but he stated he was adamant that he wanted to continue.

A female offender appeared to get quite frustrated towards the start of her testing session, and once more the researcher reminded her that participation was completely voluntary. The participant expressed feeling cross that she may miss her scheduled cigarette break, but wanted to partake. After she was reassured that the study would be paused for her to have her cigarette, her mood settled, and she expressed wanting to continue with the study.

**4.5.5.3 Overall.** The researcher was aware of risk management both with offenders and non-offenders, following the procedures outlined in the method section. Adhering to these ethical procedures and considerations was a strength of the study, as ensured that both the researcher and participants were kept safe for the duration of the study.

**4.5.6 Mental health diagnosis.** The mental health status of the participants in this study requires further consideration. Whether someone had a mental health diagnosis was recorded, however information was self-reported. The specific type of mental health diagnosis was not recorded in the analysis, which was a limitation of this

study. Exploring mental health diagnoses may have been clinically interesting to see whether there were significant differences between the four groups.

To explore whether there was a relationship between the total SRM-SF score and emotional and behavioural problems (research question four), three EPS scores were used; the total pathology, internalising and externalising behaviour problem scores. These were selected as were summations of either all, or some of the individual subscales. However, it would have been interesting to have conducted analysis on each of the subscales (e.g. impulse control, anxiety, non-compliance), to gain a more accurate understanding of differences between the groups. There may have been significant differences on several of these subscales that were not detected by only looking at the summary scores. Not exploring this further is a limitation of this study.

**4.5.7 Summary.** The current study set out to explore the differences between four groups of participants in their moral reasoning abilities. The study was cross-sectional in nature and aimed to investigate the relationships between moral reasoning and offence severity, and moral reasoning and emotional and behavioural problems. Using correlational design for the latter part was appropriate due to the exploratory nature of this study. This study took into account the methodological weaknesses of previous studies and tried to address these. However, limitations did exist in the current study, such as the failure to break-down mental health diagnosis, which future studies could attempt to address these.

#### **4.6 Future Directions**

Although findings from this study appear promising, the study would benefit from replication on a larger scale to gain support for the non-existence of sex differences in moral reasoning in adults with ID. It would also be interesting to explore using a larger scale study, whether offenders with ID demonstrated stage 2 reasoning, or

the transitional stage 2(3) reasoning as detected in the current study. This would help contribute to the refinement of the hypothetical curvilinear relationship between illegal behaviour, moral reasoning and IQ, that was proposed by Langdon et al. (2011a), by exploring whether it is stage 2 or stage 2(3) that sits in the middle of the peak that represents illegal behaviour.

This study focused on the Property, Law and Legal Justice constructs, as scores in these appeared to be linked to offending behaviour in the literature (e.g. Gibbs, 2010; Langdon et al., 2011b). However, both the current study and Langdon et al.'s study (2011b) also found that offenders scored significantly higher than non-offenders on both the Contract and Life constructs, but not the Truth or Affiliation constructs. It would be interesting for future research to further explore these findings, and see whether they are repeated. This would help to enhance our knowledge about these constructs, and increase our understanding in regards to whether high or low scores in any of them, link to, or protect against, offending behaviour.

The cross-sectional nature of the study limits the extent to which results can be understood within current theoretical frameworks, as provides purely a snap-shot of the main effects and interactions between moral reasoning, offending and sex. It would be interesting for future studies to adopt longitudinal designs, taking information from participants at several time points, to establish a clearer understanding of these relationships. It may be particularly useful if the selected emotional and behavioural measure used by future studies is administered at several time points, to gain a more accurate picture of how someone presents, rather than a reflection of their thoughts and feelings on a specific day.

Some promising findings have been demonstrated through delivering the EQUIP programme with adult males with ID, in enhancing moral reasoning abilities, problem

solving skills and reducing cognitive distortions. Research into the effectiveness of this programme however needs to be conducted on a much larger scale to achieve a more valid, reliable and statistically robust set of findings. Administering the same measures of moral reasoning to a control group would also be useful to gain a clearer understanding of whether changes can be successfully attributed to attendance of the group, rather than being the result of residing in a ward environment that may provide alternatively suitable opportunities for perspective taking and social skill development. It would also be valuable to pilot this programme on a group of women with ID, or on a mixed sex group, to observe whether enhancement of moral reasoning occurs across the groups consistently, or whether one sex makes bigger gains than the other.

In addition, it would be useful to pilot other interventions programmes that incorporate moral reasoning principles, and to compare and contrast gains that are made. This would enable the most effective programme to be selected by services. It may also be clinically interesting to measure moral reasoning before and after attendance of any group intervention that is already run by services, to see if gains are made without moral reasoning being the direct focus of the intervention. Further research would also benefit from exploring whether enhancement of moral reasoning has a subsequent impact on re-offending rates.

Future studies could explore whether there are positive effects on offenders moral reasoning, following staff training around moral development and the teams potential role in helping to enhance this through their daily interaction with individuals. It would also be useful for future research to consider relationship between moral development and risk. Understanding more about how moral development and risk are linked could have significant implications for working clinically with individuals, and in informing care plans and treatment pathways.

Finally, it is important for studies to validate measures of moral reasoning with women, to ensure that these are as psychometrically sound for women as they were found to be for men with ID (Langdon et al., 2010b). It is important that more research is conducted in this field to help build up our knowledge about the links between moral reasoning and offending with people with ID, particularly within the female population where less is known. Larger sample sizes will help to increase the power of studies and as a consequence enable more statistically robust findings to be achieved. It is crucial that potential interventions are trialled with people with ID and that outcomes are thoroughly measured, to enable effective treatment programmes to be delivered. In summary, the relationship between moral development and behaviour in people with ID needs further investigation.

#### **4.7 Final Conclusions**

The current study aimed to address the need for further research into moral reasoning abilities within the ID population, by comparing offenders with non-offenders. It recruited both men and women in the sample, investigating whether sex differences existed in individuals moral reasoning abilities. In line with previous research amongst adults with mild IDs, the study revealed that offenders demonstrated significantly more mature moral reasoning in terms of their total moral reasoning stage. This significant difference remained once FSIQ was controlled.

Regarding the individual constructs of moral reasoning, once FSIQ was controlled, four constructs were significantly different (Contract, Life, Property and Legal Justice). Offenders demonstrated significantly more mature reasoning in all four constructs than non-offenders. There were no significant differences between men and women, or interaction effects between sex and offence history, on either the total moral reasoning score or any of the individual construct scores.

The study did not find a significant relationship between offence severity and moral reasoning. The relationship between moral reasoning and emotional and behavioural problems was explored, and a significant positive relationship was identified between scores on the two measures. Finally, the prediction that offenders would score higher levels of emotional and behavioural problems was only partially supported by this research study. Methodological limitations of the current research study that may have contributed to these findings were discussed.

The current research aimed to address some of the methodological limitations that arose from other studies in this field, such as the failure to use measures standardised for individuals with ID. The findings were then considered in terms of their key theoretical and clinical implications. Future research areas are presented which may in turn overcome some of the methodological limitations which remained in this research study.

Despite some recent advances in the research base to increase the readers understanding of the moral reasoning abilities of adult males with ID who have offended, there are no published studies to date, that explore this within women. This research study therefore aimed to address this deficit within the literature. No significant differences were found between the moral reasoning of men and women. The study did however demonstrate offender's engaging in more mature levels of moral reasoning than non-offenders, supporting the recent work by Langdon et al. (2011a; 2011b; in press). Further research into suitable and effective interventions for the ID client group is required.

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## **Doctoral research thesis - Participants required**

I am currently working on my research thesis project, which involves adults with mild learning disabilities. I would appreciate you passing the study handout on to anyone in your service who you think may be interested in participating in the study, and who meets the inclusion criteria listed below.

### **Inclusion criteria:**

- Males and females with **mild** learning disabilities (who do not have a formal diagnosis of autism)
- IQ (if known) between **50-70**
- 18 years or older
- English speaking

In addition:

- Have **NO** known forensic history (arrests, cautions or convictions)

If anyone expresses interest in taking part in the study, please contact me using the details below, with their contact details. I will then arrange to meet with them to discuss the study and provide further information.

Anyone who participates in the study will be given a £5 shopping voucher to thank them for their time.

Thank you  
Emily

### **Contact details**

Emily McDermott  
Trainee Clinical Psychologist  
Postgraduate Office  
Faculty of Health  
University of East Anglia  
NR4 7TJ  
[e.mcdermott@uea.ac.uk](mailto:e.mcdermott@uea.ac.uk)

## **Introduction to the research study**



We are working on some research. It looks at how people think, feel, behave and make decisions.

We are interested in finding out more about people who have **never** been in trouble with the police.



We would like both men and women to take part.



You will be asked to answer some questionnaires. You might be asked to do some short puzzles.

We will give you a £5 shopping voucher to thank you for taking part.



**If you are interested in taking part and would like more information, please tell your staff member.**



**Thank you for your help.**

Emily

Emily McDermott, Trainee Clinical Psychologist

## **Participant Information Sheet**



### **Introduction**

You are being asked to take part in some research. This sheet will help you to decide if you would like to take part.

### **What is this study about?**

We are trying to understand why some people commit crimes.



### **Why have I been chosen?**

You have been chosen because you have **never** been in trouble with the police. There will be about 70 people in Suffolk and Norfolk taking part.



It is your choice if you want to take part. If you want to take part we will ask you to sign your name on a consent form.



### **What will I have to do?**

Tasks will be explained to you before you do them. You may be asked to answer some questions and solve some puzzles. You will be asked some questions about different situations. You will also be asked questions about how you feel and behave.



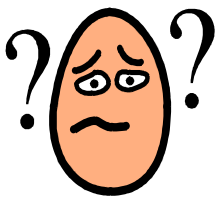
We will ask you if we can have a look at your case files or speak to a staff member you know to see if you have done any of these tests before.

A staff member or carer will also be asked to fill out a questionnaire. This will ask questions about your mood and behaviour. You can choose who this carer is.



### **How long will it take?**

The study will take about one hour. I can come to your house to complete it, or somewhere else if you prefer. After the study you will be given a £5 shopping voucher to thank you for taking part.



### **Are there any risks of taking part?**

The questions should not cause you any problems. But if you do feel tired or upset you can ask for a break or ask to stop. You do not have to answer any question you do not want to. Remember, you can stop at any time you want.



You will be given contact details to talk to someone if you feel concerned.

### **What are the benefits of taking part?**

We hope this study will help us to understand why some people get into trouble with the police.

### **Will my information be kept private?**

What you tell me will be private. Your name will not be written on the forms we use. We will use numbers instead of names to make sure these stay private.



But if you tell us something that makes us worry about you or somebody else we might have to tell someone about this. This might be a member of staff. We would tell you if we were going to do this.



### **Can I stop if I change my mind?**

Yes. It is your choice to take part, you do not have to. If you start but change your mind you can stop at any stage. You do not have to tell us why you want to stop.

If you stop, any information or questionnaires you have completed will be kept in the study. You will not be asked any new questions.

### **Why is this research being done?**

This research is being done as part of a university project. The university has insurance in case anything goes wrong.

### **What if there is a problem?**



If you feel unhappy after the study and want to make a complaint you can talk to Dr Langdon. He is from the university and is supervising this study. Or you can tell your staff and they can talk to him. His details and phone number are below.

### **Who are the researchers?**

The researchers are called:



**Emily McDermott and Dr Peter Langdon**

Thank you for reading this!



## **You can contact us on:**

### **Dr Peter Langdon**

Clinical Senior Lecturer  
Dept of Psychological Sciences  
Norwich Medical School  
University of East Anglia  
Norwich, NR4 7TJ  
Norwich Research Park  
[p.langdon@uea.ac.uk](mailto:p.langdon@uea.ac.uk)  
01603 593599

### **Emily McDermott**

Trainee Clinical Psychologist  
Dept of Psychological Sciences  
Norwich Medical School  
University of East Anglia  
Norwich, NR4 7TJ  
Norwich Research Park  
[e.mcdermott@uea.ac.uk](mailto:e.mcdermott@uea.ac.uk)

## Consent form

**Please tick the boxes if you agree:**

I have read the information sheet.

I have understood the information sheet and had a chance to ask questions.

I understand this is my choice to take part and I can stop at any time. If I stop, I understand that my information will be kept but no new information will be collected. Stopping the study will not affect my treatment.

I understand if I tell you something that worries you, you may have to share this with other staff. You will tell me if you have to do this.

I understand that some of my notes may be read by the researcher. I give permission for this.

I understand that the researcher may want to talk to my staff member about me. I give permission for this.

I understand a carer I have chosen will be asked to fill out a questionnaire about me. I give permission for this.

I agree to take part in the study.

-----  
**Name of participant**

-----  
**Date**

-----  
**Signature**

-----  
**Name of researcher**

-----  
**Date**

-----  
**Signature**



## **Doctoral research thesis - Participants required**

I am currently working on my research thesis project, which involves adults with mild learning disabilities. I would appreciate you passing the study handout on to anyone in your service who you think may be interested in participating in the study, and who meets the inclusion criteria listed below.

### **Inclusion criteria:**

- Males and females with **mild** learning disabilities (who do not have a formal diagnosis of autism)
- IQ (if known) between **50-70**
- 18 years or older
- English speaking

In addition:

- Have committed at least one **offence** dealt with by a Crown Court.
- Detained under the Mental Health Act

If anyone expresses interest in taking part in the study, please contact me using the details below, with their contact details. I will then arrange to meet with them to discuss the study and provide further information.

Anyone who participates in the study will be given a £5 shopping voucher to thank them for their time.

Thank you, Emily

### **Contact details**

Emily McDermott  
Trainee Clinical Psychologist  
Postgraduate Office  
Faculty of Health  
University of East Anglia  
NR4 7TJ  
[e.mcdermott@uea.ac.uk](mailto:e.mcdermott@uea.ac.uk)

## **Introduction to the research study**



We are working on some research. It looks at how people think, feel, behave and make decisions.

We are interested in finding out more about people who **have** been in trouble with the police in the past.



We would like both men and women to take part.



You will be asked to answer some questionnaires. You might be asked to do some short puzzles.

We will give you a £5 shopping voucher to thank you for taking part.



**If you are interested in taking part and would like more information, please tell your staff member.**



**Thank you for your help.**

Emily

Emily McDermott, Trainee Clinical Psychologist

## **Participant Information Sheet**



### **Introduction**

You are being asked to take part in some research. This sheet will help you to decide if you would like to take part.

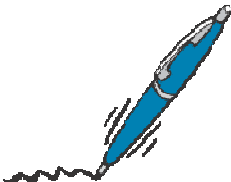
### **What is this study about?**

We are trying to understand why some people commit crimes.

### **Why have I been chosen?**

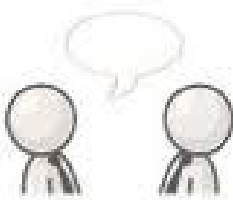


You have been chosen because you have gotten into trouble with the police. There will be about 70 people in Suffolk and Norfolk taking part.



It is your choice if you want to take part. If you want to take part we will ask you to sign your name on a consent form.

### **What will I have to do?**



Tasks will be explained to you before you do them. You may be asked to answer some questions and solve some puzzles. You will be asked some questions about different situations. You will also be asked questions about how you feel and behave.



We will ask you briefly about any crimes you have committed. We will ask you if we can have a look at your case files or speak to a staff member you

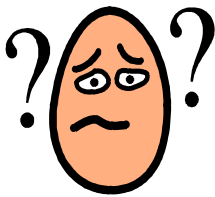
know, to check the information that you give us about your crimes, and to see if you have done any of these tests before.

A staff member or carer will also be asked to fill out a questionnaire. This will ask questions about your mood and behaviour. You can choose who this staff member is.



### **How long will it take?**

The study will take about one hour. I will come to visit you at the hospital to complete the study. After the study you will be given a £5 shopping voucher to thank you for taking part.



### **Are there any risks of taking part?**

The questions should not cause you any problems. But if you do feel tired or upset you can ask for a break or ask to stop. You do not have to answer any question you do not want to. Remember, you can stop at any time you want.



You will be given contact details to talk to someone if you feel concerned.

### **What are the benefits of taking part?**

We hope this study will help us to understand why some people get into trouble with the police.

### **Will my information be kept private?**

What you tell me will be private. Your name will not be written on the forms we use. We will use numbers instead of names to make sure these stay private.



But if you tell us something that makes us worry about you or somebody else we might have to tell someone about this. This might be a member of staff. We would tell you if we were going to do this.

Please only tell us about crimes that other people know about. If you tell us about crimes that people don't know about then we would have to tell other people, such as a staff member. We would tell you if we were going to do this.



### **Can I stop if I change my mind?**

Yes. It is your choice to take part, you do not have to. If you start but change your mind you can stop at any stage. You do not have to tell us why you want to stop.

If you stop, any information or questionnaires you have completed will be kept in the study. You will not be asked any new questions.

### **Why is this research being done?**

This research is being done as part of a university project. The university has insurance in case anything goes wrong.



### **What if there is a problem?**

If you feel unhappy after the study and want to make a complaint you can talk to Dr Langdon. He is from the university and is supervising this study. Or you can tell your staff and they can talk to him. His details and phone number are below.

## **Who are the researchers?**

The researchers are called:

### **Emily McDermott and Dr Peter Langdon**



Thank you for reading this!



### **You can contact us on:**

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Clinical Senior Lecturer  
Dept of Psychological Sciences  
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University of East Anglia  
Norwich, NR4 7TJ  
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#### **Emily McDermott**

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University of East Anglia  
Norwich, NR4 7TJ  
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## Appendix H: Offence Ranks

Top 20 most serious offences from the paired-comparisons method (Francis, Soothill & Dittrich, 2001)

Rank	Offence	Score
1	Murder, manslaughter, attempted murder	6.111
2	Rape	1.842
3	Wounding/ other acts endangering life	1.705
4	Robbery and assaults with intent to rob	1.632
5	Buggery	1.502
6	Blackmail	1.482
7	Arson	1.453
8	USI with girl under 13	1.362
9	Housebreaking/ aggravated burglary	1.261
10	Incest	1.252
11	Burglary	1.128
12	Procuration	1.017
13	Breaking into shops, warehouses	0.961
14	Abduction	0.820
15	Forgery	0.785
16	Attempted buggery/ indecent assault on male	0.784
17	Child abduction	0.769
18	Unauthorised taking	0.712
19	Larceny by a servant	0.650
20	Threats, conspiracy or incitement to murder	0.626

## **Carer Information Sheet**

### **Introduction**

We would like to invite you to take part in our research study. This information sheet will help you to decide if you would like to take part.

### **What is this study about?**

This study is looking at how adults with learning disabilities think, feel, make decisions and behave. We are also interested in people who have committed crimes in their past, as well as people who have not committed crimes. We hope that this research will help us to understand these areas better.

### **Why have I been chosen?**

We are interested in finding out more about people with mild learning disabilities. You have been chosen because someone with a learning disability has nominated you as their chosen carer, to complete a questionnaire about them. This person may be your friend, family member, partner or patient.

There will be about 70 adults with learning disabilities across Suffolk and Norfolk taking part in the study. Each participant has been asked to nominate a carer to complete a questionnaire about them.

It is your choice if you want to take part in the study. If you agree to take part you will be asked to provide written consent.

### **Do I have to take part?**

No. Your participation is entirely voluntary.

### **What will I have to do?**

You will be asked to complete a questionnaire about the person who nominated you. The questionnaire lists 135 statements about various behaviours and you are asked to rate how often the person



engages in them. An example a statement is how often do they 'complain of being tired'. The options to select from are 'almost never', 'rarely', 'occasionally' or 'often'. You are asked to select which you think is the most accurate answer. There are no right or wrong answers.

You may be asked to complete this questionnaire whilst the person who nominated you is completing their assessment with the researcher. Alternatively, you may be asked to complete the questionnaire and return it in the stamped and addressed envelope provided. Please also include the signed consent form in this envelope.

**How long will it take?**

The questionnaire will take approximately 20 minutes to complete.

**Are there any risks of taking part?**

This questionnaire should not cause you any problems. However, you will be given contact details to talk to someone if you feel concerned.

**What are the benefits of taking part?**

We hope this study will help us to understand some of the factors that may be associated with criminal offending.

**Will my information be kept confidential?**

Yes. Any personal information that we collect from you about yourself and the person who nominated you, will be kept private and confidential. Both of your names and personal details will not be included in the study. We will use numbers instead of names to identify people in order to make sure these stay private. These numbers will only be known to the researchers. Once the data has been collected it will be stored securely in a locked archive at the University of East Anglia for 5 years. After 5 years this information will be destroyed.

### **Can I stop if I change my mind?**

Yes. It is your choice to take part. If you start to complete the questionnaire but change your mind you can stop at any stage. You do not have to tell us why you want to stop. The study is voluntary.

If you chose not to participate, or to stop the questionnaire once you have started, any information gathered from the person who nominated you will be kept in the study. You will not be asked any new questions.

### **Why is this research being done?**

This research is being done as part of a university thesis research project.

### **What if there is a problem?**

If you feel unhappy after the study and want to make a complaint you can talk to Dr Langdon. Dr Langdon is from the university and is supervising this study. His details and phone number are below.

In the unlikely event that something does go wrong and you or the person who nominated you are harmed during the research, as a result of someone's negligence, then you may have grounds for legal action for compensation against the University of East Anglia. The University of East Anglia has insurance that covers this research project.

### **Who are the researchers?**

The researchers are called:

### **Emily McDermott and Dr Peter Langdon**

Thank you for reading this. If you require any further information about the study please contact either researcher using the details below.

**You can contact us on:**

**Dr Peter Langdon**

Clinical Senior Lecturer  
Dept of Psychological Sciences  
Norwich Medical School  
University of East Anglia  
Norwich Research Park  
Norwich, NR4 7TJ  
[p.langdon@uea.ac.uk](mailto:p.langdon@uea.ac.uk)  
01603 593599

**Emily McDermott**

Trainee Clinical Psychologist  
Dept of Psychological Sciences  
Norwich Medical School  
University of East Anglia  
Norwich Research Park  
Norwich, NR4 7TJ  
[e.mcdermott@uea.ac.uk](mailto:e.mcdermott@uea.ac.uk)

## **Carer consent form**

**Name of Researcher:** Emily McDermott

**Name of person who nominated me to answer a questionnaire about them:** \_\_\_\_\_

**Please write your initials inside the boxes if you agree with these statements:**

I have read the carer information sheet provided and have understood the information.

I understand that my participation is voluntary and I am free to withdraw at any time without giving a reason.

The person who nominated me is happy for me to complete the questionnaire.

I agree to take part in the study.

\_\_\_\_\_  
**Name of carer**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Signature**

\_\_\_\_\_  
**Name of researcher**

\_\_\_\_\_  
**Date**

\_\_\_\_\_  
**Signature**

## Participant Debrief Sheet



Thank you very much for taking part in this research study!



The study looked at how people think, feel, behave and make decisions. We spoke to people who have not gotten into trouble with the police. We also spoke to people who have gotten into trouble with the police.

The questions were not meant to cause you any problems.



But if you do feel unhappy or worried afterwards, please talk to the staff member who told you about the study. If you still feel unhappy, please call Dr Langdon on the phone number below, or ask your staff to do this for you.



Do you have any questions?

**Thank you for helping.**

**Emily**



You can contact us on:

**Dr Peter Langdon**  
Clinical Senior Lecturer  
Dept of Psychological Sciences  
Norwich Medical School  
University of East Anglia  
Norwich Research Park  
Norwich, NR4 7TJ  
[p.langdon@uea.ac.uk](mailto:p.langdon@uea.ac.uk)  
01603 593599

**Emily McDermott**  
Trainee Clinical Psychologist  
Dept of Psychological Sciences  
Norwich Medical School  
University of East Anglia  
Norwich Research Park  
Norwich, NR4 7TJ  
[e.mcdermott@uea.ac.uk](mailto:e.mcdermott@uea.ac.uk)

## Participant Debrief Sheet



Thank you very much for taking part in this research study!



The study looked at how people think, feel, behave and make decisions. We spoke to people who have not gotten into trouble with the police. We also spoke to people who have gotten into trouble with the police.

The questions were not meant to cause you any problems.



But if you do feel unhappy or worried after the study, please talk to one of your staff members. If you still feel unhappy, please call Dr Langdon on the phone number below, or ask your staff to do this for you.



Do you have any questions?

**Thank you for helping.**

**Emily**



You can contact us on:

**Dr Peter Langdon**

Clinical Senior Lecturer  
Dept of Psychological Sciences  
Norwich Medical School  
University of East Anglia  
Norwich Research Park  
Norwich, NR4 7TJ  
[p.langdon@uea.ac.uk](mailto:p.langdon@uea.ac.uk)  
01603 593599

**Emily McDermott**

Trainee Clinical Psychologist  
Dept of Psychological Sciences  
Norwich Medical School  
University of East Anglia  
Norwich Research Park  
Norwich, NR4 7TJ  
[e.mcdermott@uea.ac.uk](mailto:e.mcdermott@uea.ac.uk)

Appendix M: NHS ethics committee study approval letter

**NRES Committee East of England - Essex**

East of England Rec Office 1  
Victoria House  
Capital Park  
Fulbourn  
Cambridge  
CB21 5XB

Telephone: 01223 597893  
Facsimile: 01223 597645

**Reissued 23 September 2011**

15 September 2011

Miss Emily McDermott  
Trainee Clinical Psychologist  
Cambridgeshire and Peterborough NHS Foundation Trust  
Department of Psychological Sciences  
Norwich Medical School, UEA  
Norwich  
NR4 7TJ

Dear Miss McDermott

**Study title:** Exploring the impact of gender and offence history on moral reasoning in adults with mild intellectual disabilities.  
**REC reference:** 11/EE/0282

Thank you for your letter of 01 September 2011, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

**Confirmation of ethical opinion**

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

**Ethical review of research sites**

**NHS sites**

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

**Non-NHS sites**

The Committee has not yet been notified of the outcome of any site-specific assessment (SSA) for the non-NHS research site(s) taking part in this study. The favourable opinion does not therefore apply to any non-NHS site at present. We will write to you again as soon as one Research Ethics Committee has notified the outcome of a SSA. In the meantime no study procedures should be initiated at non-NHS sites.

### Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

**Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.**

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>.

Where a NHS organisation's role in the study is limited to identifying and referring potential participants to research sites ("participant identification centre"), guidance should be sought from the R&D office on the information it requires to give permission for this activity.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of approvals from host organisations

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

### Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date	
Covering Letter	from Emily McDermott	01 July 2011	
Evidence of insurance or indemnity	Zurich Municipal	25 May 2011	
Investigator CV	Miss Emily McDermott	01 July 2011	
Investigator CV	Malcolm Adams		
Investigator CV	Peter Langdon		
Letter from Sponsor	From Tracy Moulton at UEA	01 July 2011	
Other: Recruitment information sheet for community staff	2.0	26 August 2011	
Other: Recruitment information sheet for forensic staff	2.0	26 August 2011	
Other: Debrief Sheet Community	2.0	26 August 2011	
Other: Debrief Sheet Participant	2.0	26 August 2011	
Participant Consent Form: Participant	2.0	26 August 2011	



Participant Consent Form: Carer	2.0	26 August 2011	
Participant Information Sheet: Community	2.0	26 August 2011	
Participant Information Sheet: Forensic	2.0	26 August 2011	
Participant Information Sheet: introductory handout for interested participants - community	1.0	04 June 2011	
Participant Information Sheet: introductory handout for interested participants - forensic	1.0	04 June 2011	
Carer Information sheet	1.0	26 August 2011	
Protocol	version 1	04 June 2011	
Questionnaire: Social Reflection Questionnaire			
Questionnaire: EPS Behaviour rating scales			
Questionnaire: EPS Self Report Inventory			
REC application	82122/22887 7/1/045		
Referees or other scientific critique report	letter from Malcolm Adams	01 July 2011	
Response to Request for Further Information		01 September 2011	

#### Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

#### After ethical review

##### Reporting requirements

The attached document "*After ethical review – guidance for researchers*" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

##### Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review

11/EE/0282	Please quote this number on all correspondence
------------	--

With the Committee's best wishes for the success of this project

Yours sincerely

**Dr Alan Lamont**  
Chair

Email: [suzanne.emerton@eoe.nhs.uk](mailto:suzanne.emerton@eoe.nhs.uk)

Enclosures: "After ethical review – guidance for researchers"

Copy to: Ms Tracy Moulton  
Research Enterprise and Engagement office  
The Registry  
University of East Anglia  
Norwich  
NR4 7TJ

Claire Fahy  
The Ipswich Hospital NHS Trust  
Research office (C361)  
Crtu Office Level 3 East  
Heath Road  
Ipswich  
IP4 5PD

## Appendix N: R&D committee study approval letter - Norfolk

Ref: 2011LD01

**Emily McDermott**  
Department of Psychological Sciences  
Norwich Medical School  
University of East Anglia  
Norwich  
NR4 7TJ

**Research & Development**  
NHS Norfolk  
Lakeside 400  
Old Chapel Way  
Broadland Business Park  
Thorpe St Andrew  
Norwich  
NR7 0WG

Tel: 01603 257283  
Fax: 01603 257292  
E-mail: [paul.mills@norfolk.nhs.uk](mailto:paul.mills@norfolk.nhs.uk)  
[www.norfolk.nhs.uk/research](http://www.norfolk.nhs.uk/research)

19 September 2011

Dear Emily,

**Re: 2011LD01. Exploring the impact of gender and offence history on moral reasoning**  
REC Number: 11/EE/0282  
**Chief Investigator:** Emily McDermott, University of East Anglia  
**Sponsor:** University of East Anglia

Further to your submission of the above project to the R&D office at NHS Norfolk your project has now been reviewed and all the mandatory research governance checks have been satisfied. I am therefore pleased to inform you on behalf of **Norfolk Community Health & Care NHS Trust** that NHS permission (R&D approval) was granted on **19<sup>th</sup> September 2011** for your study to take place at the following sites:

- Norfolk Community Health & Care NHS Trust

Please note that NHS Permission is granted on the basis of the information supplied in the application form, protocol and supporting documentation, if anything subsequently comes to light that would cast doubts upon or alter in any material way, any information contained in the original application, or a later amendment application there may be implications for continued NHS Permission.

Please note the following conditions of approval:

- The R&D office in NHS Norfolk understands that all personal identifiable data of participants will be stored securely at the University of East Anglia only.
- It is understood that no forensic participants will be recruited within Norfolk Community Health & Care NHS Trust
- It is noted the two documents marked with a \* below are not listed on the RFC letter of favourable opinion. It is understood that this is a REC error as you sent these documents to them with your response letter of 1<sup>st</sup> September 2011 and in the initial submission. It is suggested you ask the REC to send you an updated letter listing these documents.

You may now begin your study at the above sites.

Permission is granted on the understanding that the study is conducted in accordance with the Research Governance Framework. I have enclosed two copies of the Standard Terms and

Conditions of Approval. Please sign and return one copy to the R&D office at the above address. Failure to return the standard terms and conditions may result in NHS permission being revoked.

**Please note, under the agreed standard terms and conditions you must inform the R&D Office at NHS Norfolk of any proposed changes to this study, whether minor or substantial, and to keep the Committee updated on progress. Please note also, if you wish to extend approval to any sites other than those listed above you must apply for this through the relevant R&D office.**

If you have any queries regarding this or any other project please contact Paul Mills, R&D Officer, at the above address. Please note, the reference number for this study is **2011LD01** and this should be quoted on all correspondence.

The following documents were reviewed:

Letter of Favourable Opinion from NRES Committee East of England – Essex, dated 15<sup>th</sup> September 2011

- Protocol, Version 1.0, 4<sup>th</sup> June 2011
- Recruitment Information Sheet – Community Staff, Version 2.0, 26<sup>th</sup> August 2011
- Recruitment Information Sheet – Forensic Staff, Version 2.0, 26<sup>th</sup> August 2011
- Participant Information Sheet – Community, Version 2.0, 26<sup>th</sup> August 2011
- Participant Information Sheet – Forensic, Version 2.0, 26<sup>th</sup> August 2011
- Participant Consent Form – Participant, Version 2.0, 26<sup>th</sup> August 2011
- Participant Consent Form – Carer, Version 2.0, 26<sup>th</sup> August 2011
- Questionnaire – Social Reflection Questionnaire
- Questionnaire – EPS Behaviour Rating Scales
- Questionnaire – EPS Self Report Inventory
- Debrief Sheet – Community, Version 2.0, 26<sup>th</sup> August 2011
- Debrief Sheet – Participant (Forensic), Version 2.0, 26<sup>th</sup> August 2011
- Investigator CV – Emily McDermott
- Investigator CV – Peter Langdon
- Investigator CV – Malcolm Adams
- Letter from Sponsor, 1<sup>st</sup> July 2011
- Evidence of Insurance/Indemnity, 25<sup>th</sup> May 2011
- Evidence of Peer Review, 1<sup>st</sup> July 2011
- Response to Request for Further Information, 1<sup>st</sup> September 2011

Other Documents Reviewed

- Fully Signed R&D Form, Lock Code 82122/229441/14/284
- Signed SSI Form, 82122/229731/6/43/113346/217641
- Participant Information Sheet – Carer, Version 1.0, 26<sup>th</sup> August 2011 \* See note above
- Introductory Handout – Community, Version 1.0, 4<sup>th</sup> June 2011 \* See note above
- Introductory Handout – Forensic, Version 1.0, 4<sup>th</sup> June 2011 \* See note above

Yours sincerely



Dr Jenny Harries  
**Joint Director of Public Health**  
**NHS Norfolk & Norfolk County Council**  
*Signed on behalf of Norfolk Community Health & Care NHS Trust*

cc:

Sue Steel, University of East Anglia, Sponsor Representative  
Malcolm Adams, University of East Anglia, Academic Supervisor  
File

Enc

CAJ\_MH\_TEMPLATE version 4.0 Iss11

Appendix O: R&D committee study approval letter - Hertfordshire



Hertfordshire Partnership   
NHS Foundation Trust

Research & Development Department  
Hertfordshire Partnership NHS Foundation Trust  
MHU, QEII Hospital  
Howlands  
Welwyn Garden City  
AL7 4HQ

Ms Emily McDermott  
Trainee Clinical Psychologist  
Cambs & Peterborough NHS Foundation Trust  
Dept of Psychological Sciences  
Norwich Medical School, UEA  
Norwich  
NR4 7TJ

27th Sept 2011

Dear Emily

**Re: Exploring the impact of gender and offence history on moral reasoning in adults with mild intellectual disabilities**

Following a review by the R&D Department, I am pleased to confirm R&D approval for the above study on behalf of Hertfordshire Partnership NHS Trust.

Approval is given on the understanding that you will notify the R&D Office of any amendments to the study design, that you will carry out the study as specified in the final version of the protocol, and that you will comply fully with the HPFT R&D Policy. I attach a copy of this document for your records.

Kind Regards

Tim M Gale Ph.D  
R&D Manager  
Visiting Professor, School of Psychology, UoH

Enc.  
Cc: Dr Pete Langdon

Appendix P: R&D committee study approval letter – Suffolk



**Suffolk  
County Council**

Miss Emily McDermott  
Trainee Clinical Psychologist  
Department of Psychological Sciences  
Norwich Medical School  
UEA  
NORWICH  
NR4 7TJ

**Suffolk** 

Mental Health Partnership NHS Trust

Research & Development Office  
Post Bag Code 0361  
The Ipswich Hospitals  
Heath Road  
Ipswich  
Suffolk  
IP14 5LQ

Tel: 01473 704543  
Fax: 01473 704757  
Email: research.office@ipswichhospital.nhs.uk

25 November 2011

Our Reference: 2011/C55/JC/01

Dear Miss McDermott

**R&D Ref:** 2011/055

**Short Title:** Exploring the impact of gender and offence history on moral reasoning

**Title of Research:** Exploring the impact of gender and offence history on moral reasoning in adults with mild intellectual disabilities.

**The study has been reviewed at the Research Assessment Team meeting. I am pleased to confirm that the above project has been given Trust Approval.**

**Clause:** Any researcher(s) whose substantive employer is not Suffolk Mental Health Partnership must have a Letter of Access or Honorary Research contract before coming on site to conduct their research in this project. Please note that you cannot take part in this study until you have this documentation. If a Letter of Access / Honorary Research Contract has not been issued please contact us immediately.

The Principle Investigator is	Miss McDermott
The Chief Investigator is	Miss McDermott
The Research Sponsor is	University of East Anglia
Funder(s)	Other funding-Student study

	Approval Date	Ref/Signed by
The Project had ethical approval on	15 September 2011 and reissued on 23 September 2011	NRES East of England-Essex REC Ref: 11/EE/0282
The current approved protocol is version 1 dated 4 June 2011	15 September 2011 and reissued on 23 September 2011	NRES East of England-Essex REC Ref: 11/EE/02
The current documents approved for the study were approved on:	15 September 2011 and reissued on 23 September 2011	NRES East of England-Essex REC Ref: 11/EE/02

This approval is conditional on the following

- You must ensure that you and your research team have read, understood and follow the **Research Management & Governance Manual - Standard Operating Procedures** (available on the Research & Development page on the Intranet or by request from the Research Office).
- Please note that **SOP004-007** apply to approved research.

*All correspondence relating to Research must be addressed to the R&D Office  
(see address at top of letter)*

Page 1 of 2

2011\_C55\_TAL Initial 111125

11/20/11

- c) The research is conducted in accordance with any project-specific agreement (attached to this letter if applicable). **If the agreement identifies the Trust as a responsible party then that responsibility is delegated to yourself.** You may wish to further delegate this to someone else but this must be recorded in your Site File in the 'Delegation Log'. In the event that you do not wish to accept responsibility then you must inform the Research Office as soon as possible. If the Trust cannot identify someone who is willing and able to accept a delegated responsibility then the Trust Approval will be suspended.
- d) **The appropriate headed paper must be used and it is the responsibility of the Principal Investigator to ensure that this is done.**

If you and/or your research team have not had Good Clinical Practice (GCP) training, please contact the Research Office who are arranging in-house training with an external trainer for research active staff.

May I take this opportunity to wish you well with this piece of research.

Yours sincerely



Dr Hadrian Ball  
Medical Director and Head of Pharmacy Services  
Suffolk Mental Health Partnership Trust

**cc (by email)**

**Academic Supervisors**

Dr Peter Langdon  
Professor Malcolm Adams

**Clinical supervisor**

Dr Natus Oelofsen

**Sponsor Contact**

Tracey Moulton

*All correspondence relating to Research must be addressed to the R&D Office*

*(see address at top of letter)*

Page 2 of 2

2011\_055\_T&L Initial 111125

Appendix Q: Non-NHS organisation study approval letter – Partnerships in Care



Emily McDermott  
Trainee Clinical Psychologist  
Dept of Psychological Sciences  
Norwich Medical School  
UEA  
Norwich NR4 7TJ

St John's House  
Lion Road  
Paigrove  
Diss Norfolk IP22 1BA  
T 01379 643324  
F 01379 641135  
e [learningdisabilityservices@partnershipsincare.co.uk](mailto:learningdisabilityservices@partnershipsincare.co.uk)  
w [www.partnershipsincare.co.uk](http://www.partnershipsincare.co.uk)

5 October 2011

Dear Ms McDermott

**Re: Your study 'Exploring the impact of gender and offence history on moral reasoning in adults with mild intellectual disabilities.'**

Rec. Reference No. 11/EE/0282  
SSA Reference No. 11/EE/0301

I have read the letter from the NRES Committee, East of England, Norwich dated 15 July 2011, which you forwarded to me.

I confirm that we are happy for you to come and interview our patients as part of this study.

Yours sincerely

**Dr S Hoare**  
Medical Director



INSPIRED BY PEOPLE

Partnerships in Care Limited. Registered in England No. 2522761, 2, Victoria Park, Mowden Road, Colnbrook, Uxbridge, Middlesex UB8 3PH



## Appendix R: Non-NHS organisation study approval letter – Mencap



6 Wright Road  
Ipswich Suffolk  
IP3 9JG

T: 01473 723858  
F: 01473 278327  
E: [info@orwellmencap.co.uk](mailto:info@orwellmencap.co.uk)

[www.orwellmencap.co.uk](http://www.orwellmencap.co.uk)

Dear Emily

### Research project at Genesis Orwell Mencap

After consultation with key members of the Support Team I am happy to give permission my permission for you to approach suitable customers at Genesis for their permission to be involved in your research project.

Prior to your start could you please forward the information documents we discussed to allow me to let all team members know the scope and remit of your project.

Yours Suzanne



Suzanne Brinley  
Director of Support

Orwell Mencap is a company limited by guarantee. Registered office address 6 Wright Road Ipswich IP3 9JG  
Company registration number 05889111 (England) Registered charity number 1117568. Affiliated to the Royal Mencap Society



Appendix S: Non-NHS organisation study approval letter – Build



Mrs Emily McDermott

Church House, Church Alley,  
Redwell Street, Norwich, NR2 4SN  
Tel 01603 618029  
E Mail [admin@buildnorwich.org.uk](mailto:admin@buildnorwich.org.uk)  
[www.buildnorwich.org.uk](http://www.buildnorwich.org.uk)

21<sup>st</sup> November 2011

Dear Emily,

**Research Project**

Further to our recent correspondence, and meetings I am pleased to confirm our formal approval of your engagement with BUILD, and its members with disabilities to take part in your research project.

I understand that this is being done under the supervision of my colleague, Roy McGee, who can be your first point of call in raising any issues.

I hope that you find the exercise useful and rewarding and would welcome a meeting at the end of the project for you to share your findings with us.

Yours sincerely

James Kearns  
Chief Executive

**BUILD is an independent Registered Charity 264584**

Incorporating: The Wednesday Club, My Time, AwayDays, MTV, BeFriends, Research, Training and Consultancy Services and BUILD Youth Groups in Norwich and Dereham.



Appendix T – End of study acknowledgement letter

  
**Health Research Authority**  
NRES Committee East of England - Essex  
East of England Rec Office 1  
Victoria House  
Capital Park  
Fulbourn  
Cambridge  
CB21 5XB  
Tel: 01223 597750  
Fax: 01223 597645

E.Mcdermott@uea.ac.uk

28 May 2012

Miss Emily McDermott  
Trainee Clinical Psychologist  
Cambridgeshire and Peterborough NHS Foundation Trust  
Department of Psychological Sciences  
Norwich Medical School, UEA  
Norwich  
NR4 7TJ

Dear Miss McDermott

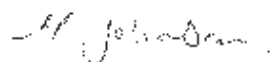
**Study title:** Exploring the impact of gender and offence history on moral reasoning in adults with mild intellectual disabilities.  
**REC reference:** 11/EE/0282

Thank you for sending the declaration of end of study form, notifying the Research Ethics Committee that the above study concluded on 14 May 2012. I will arrange for the Committee to be notified.

A summary of the final research report should be provided to the Committee within 12 months of the conclusion of the study. This should report on whether the study achieved its objectives, summarise the main findings, and confirm arrangements for publication or dissemination of the research including any feedback to participants.

11/EE/0282:	Please quote this number on all correspondence
-------------	--

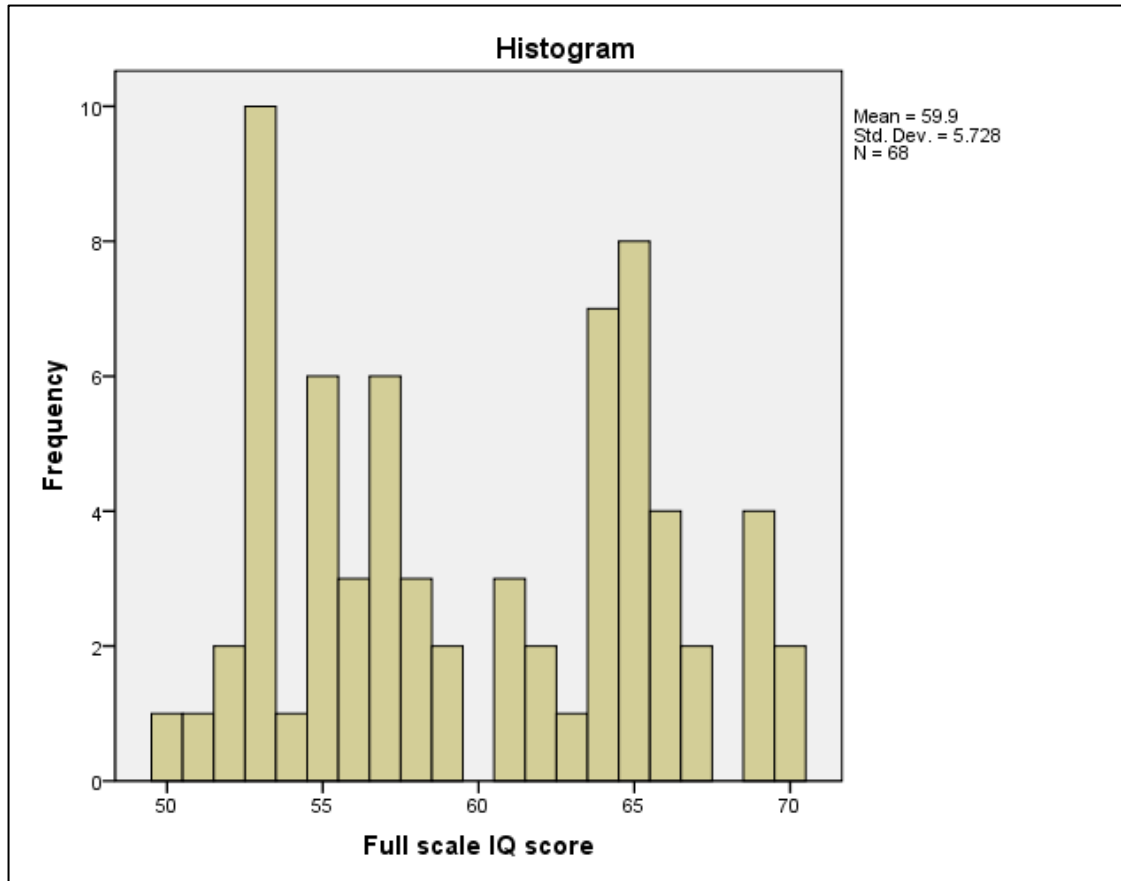
Yours sincerely



**Mrs Melanie Johnson**  
Assistant Committee Co-ordinator  
E-mail: [melanie.johnson@eoe.nhs.uk](mailto:melanie.johnson@eoe.nhs.uk)  
Copy to: *Ms Tracy Moulton, : [t.moulton@uea.ac.uk](mailto:t.moulton@uea.ac.uk)  
Claire Fahy, The Ipswich Hospital NHS Trust:  
[research.office@ipswichhospital.nhs.uk](mailto:research.office@ipswichhospital.nhs.uk)*

## Appendix U – Histogram of the FSIQ distribution

A graph to show the distribution of Full-Scale IQ scores across the whole participant sample.



**REC Reference: 11/EE/0282**

### **Summary of Research**

**Study title:** Exploring the impact of sex and offence history on moral reasoning in adults with mild intellectual disabilities

**Background:** There is a small growing body of literature exploring moral reasoning in adult male offenders with mild intellectual disabilities (ID). These offenders have demonstrated more mature moral reasoning than their non-offending counterparts. No published studies have explored this in females with ID, despite the existence of sex differences in moral reasoning being widely debated. This study aims to address this gap in the literature.

**Methods:** Using a cross-sectional 2 (Sex: Men *vs* Women) X 2 (Offence history: Offenders *vs* Non-Offenders) between-subjects design, 68 adults with mild ID from secure settings and community settings were recruited. In addition to an assessment of intellectual functioning, participants completed the Socio-Moral Reflection Measure-Short Form (SRM-SF; Gibbs, Basinger & Fuller, 1992) and the Emotional Problem Scale (EPS; Prout & Strohmer, 1991). An informant version of the EPS was also used.

**Results:** Offenders with ID demonstrated stage 2(3) reasoning, significantly higher than the stage 2 reasoning demonstrated by non-offenders. Offenders' moral reasoning was higher on six of the individual SRM-SF constructs, however differences disappeared on two constructs after controlling for Full Scale IQ. Non-offenders reasoned below stage 2 on the Law and Legal Justice constructs, where decision making driven by obeying authority and avoiding punishment was likely to have prevented them offending. No significant sex differences were found. Total SRM-SF scores were not significantly related to offence severity. A significant positive relationship was found between moral reasoning and emotional/behavioural problems, with the study partially supporting the prediction that offenders would have higher EPS scores.

**Conclusions:** This study achieved its objectives. Offenders, irrespective of sex, engaged in more mature moral reasoning than non-offenders, supporting previous findings. This study attempted to address methodological limitations of previous studies, such as through using a measure standardised for ID. Further research would be valuable to help develop suitable and effective interventions for this client group.

**Publication/ Dissemination:** Any service or participant who requests information about the findings of the study will be given the above summary (or a simpler, more accessible version). All services and participants were given the contact details of the researcher and project supervisor, so can request information via this pathway. The researcher hopes to publish this research project in a peer reviewed journal, for example the Journal of Applied Research in Intellectual Disabilities (JARID) or the Journal of Intellectual Disabilities Research (JIDR).