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Developing an understanding of the literature pertaining to the moral development of people with intellectual disabilities

Peter E Langdon[1,3]
School of Medicine, Health Policy and Practice
Faculty of Health
University of East Anglia
Norwich
NR4 7TJ
United Kingdom

Broadland Clinic
Hertfordshire Partnership NHS Foundation Trust
Norwich
NR13 5EW
United Kingdom

Isabel CH Clare[2]
Cambridge Intellectual & Developmental Disabilities Research Group
Department of Psychiatry
University of Cambridge
Douglas House
18B Trumpington Road
Cambridge
CB2 8AH

Glynis H Murphy
Tizard Centre
University of Kent
Canterbury
CT2 7LZ

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[2] Isabel Clare is funded by the National Institute for Health Research's CLAHRC for Cambridgeshire & Peterborough.
[3]Requests for reprints should be sent to Dr Peter E Langdon, School of Medicine, Health Policy and Practice, Faculty of Health, University of East Anglia, Norwich, NR4 7TJ, United Kingdom. Email: P.Langdon@uea.ac.uk

Abstract

Recent reviews of moral development theory (Gibbs, Basinger, Grime, & Snarey, 2007) demonstrate that revisionist theoretical perspectives have cross cultural validity, but moral development in relation to people with intellectual disabilities (IDs) has not been considered within this literature. A structured review of the published literature relating to children, adolescents and adults with IDs, and moral development was carried out. Twenty studies meeting the inclusion criteria were found. The review indicated that people with IDs may not progress through the developmental stages of moral reasoning as quickly as typically developing peers, or reach the more advanced stages. This difference from non-disabled peers tends to disappear if groups are matched on some measure of cognitive ability. However, the studies are fraught with methodological problems and there is a need for further research, given the theoretical developments within the area of moral development, including the evidence of a relationship between moral development and anti-social behaviour amongst typically developing children and adolescents.

KEYWORDS: Moral Reasoning; Moral Development, Intellectual Disability; Cognitive Development; Behavior; Learning Disability; Developmental Disability, Sociomoral Reasoning; Moral Judgement

Developing an understanding of the literature pertaining to the moral development of people with intellectual disabilities

Moral reasoning refers to 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". Some theorists emphasise cognition as being crucial to moral reasoning, while recognising emotion as having an important role (Gibbs, 2003, 2010). Others emphasise emotion, but acknowledge the importance of cognition (Hoffman, 2000). Regardless of the theoretical view that is adopted, moral development refers to the changes that occur to the structure of moral reasoning with increasing maturity, both as a consequence of social perspective taking and increasing cognitive ability.

Moral development is associated with the development of cognitive abilities such as abstract reasoning and planning ability (Hoffman, 1977; Johnson, 1962; Tomlinson-Keasey & Keasey, 1974). In addition, processes such as social perspective taking (Selman, 1976, 1980) and decentration relate to moral development, together with factors such as parenting practices (Boyes & Allen, 1993; Buck, Walsh, & Rothman, 1981; Hart, 1988; Powers, 1988; Speicher, 1994; Walker & Taylor, 1991), and peer socialisation (Keasey, 1971). Many of these factors also relate to social perspective taking, and it has been suggested that as opportunities for social interaction increase, social perspective taking increases, and moral development subsequently occurs (Berkowitz, Gibbs, & Broughton, 1980; Kruger, 1992). However, there has been little examination of the moral development of those individuals who experience some kind of developmental delay, in terms of their general cognitive development, or who may not have had the

same opportunities to engage in social perspective taking as typically developing children.

Aspects of cognitive ability, such as attention and memory, are associated with moral development. For example, Knight, Dubro & Chao (1985) reported that aspects of memory are related to the development of social values, while Stewart & Pascual-Leone (1992) found that attentional and mental capacity are linked to moral development in children. Educational attainment and chronological age are widely recognised as being associated with moral reasoning (Dawson, 2002), and studies using large samples of children from the general population have demonstrated a significant positive relationship between IQ and moral development (Hoffman; 1977; Johnson, 1962), supporting the theoretical relationship between cognitive and moral development. However, little appears to be known about the moral reasoning abilities of people with intellectual disabilities (IDs).

Children, adolescents and adults are considered to have IDs if they have a tested intelligence quotient (IQ) below 70, accompanied by significant impairments in their adaptive behaviours, with an onset of these difficulties prior to the age of 18 (American Psychiatric Association, 2000; World Health Organisation, 1994). The prevalence of challenging and aggressive behaviours amongst people with IDs is elevated (Borthwick-Duffy, 1994; Cooper et al., 2009; McClean & Walsh, 1995), and while the literature is fraught with difficulties (for reviews see, Holland, Clare, & Mukhopadhyay, 2002; Murphy & Mason, 2007), it has been claimed that the prevalence of illegal behaviour

may be higher amongst people with IDs (Hayes, 1993, 1996; Hodgins, 1992; Hodgins, Mednick, Brennan, Schulsinger, & Engberg, 1996; Mulrooney, Murphy, Harrold, & Carey, 2004). If moral development is associated with cognitive development and with antisocial behaviour amongst children and adolescents (Blasi, 1980; Nelson, Smith, & Dodd, 1990; Richards, Bear, Stewart, & Norman, 1992; Stams et al., 2006), and people with IDs are at greater risk of anti-social behaviours, then moral development theory may be of some value in understanding the aetiology of such difficulties amongst this population and may provide an effective theoretical rationale governing clinical interventions.

This supposition is important to consider as many clinical interventions for children, adolescents and adults with IDs include the use of applied behaviour analysis or psychotropic medication (see Emerson, 2001; Stenfert-Kroese, 1997; Tyrer et al., 2008), ignoring the role of cognition. Despite some evidence to the contrary (Taylor, Lindsay, & Willner, 2008), there still is an assumption amongst clinicians that people with IDs may not benefit from 'talking therapies' (Hurley, Pfadt, Tomasulo, & Gardner, 1996). These assumptions reflect the exclusion of people with IDs from theoretical developments which underpin applied psychological interventions. This is an issue for all psychological theories, including moral development theory, which should be inclusive of all members of society, and not just those who are seen to be typically developing children, adolescents or adults. However, moral development theory is potentially contentious when considered in relation to people with IDs, as the word

"moral", in relation to this population, has an unfortunate history (Fennell, 1996; Trent, 1994).

In recent years there has been the development of a 'citizenship' agenda for people with IDs within England, encouraged by the publication of the White Paper *Valuing People* and its update (Department of Health, 2001, 2007). A similar agenda was reflected in the President's Committee for People with Intellectual Disabilities (2004) in the United States with the publication of a report that encouraged the development of financial and personal freedom for people with IDs. Considering this, and theoretical developments within moral development theory, we believe it is timely to revisit the existing literature and consider the implications for people with IDs. We therefore undertook a structured review of the literature, looking at moral reasoning and moral development theory in relation to children, adolescents and adults with IDs.

Method

We undertook a structured review of the literature by searching electronic databases of published papers such as PsychInfo, Medline and the Science Citation Index, using the search terms "mental retard*[1], "imbecile"[1], "subnormal"[1], "handicap" [1],"learning", "intellectual" or "developmental" ''disability'' or '' difficulty'' and "moral". This was supplemented by using the ancestry method. Results were rejected if the paper did not include participants who had an ID defined by an IQ <70, and did not attempt to

[1] Many of these terms are objectionable. Unfortunately, until recently, they were widely used in the 'scientific literature'. We included them in our search to ensure that no relevant older articles were missed.

investigate moral reasoning or moral development. Papers were only included if they had been published in a journal in which submitted papers were subject to peer-review.

TABLE ONE ABOUT HERE

Articles were classified according to the theoretical stance adopted by the authors: Piaget, Kohlberg or other, and then further divided according to the methods employed within each study (e.g. longitudinal studies, cross sectional matched groups, cross sectional single group, or qualitative research).

Results

We were able to find a total of twenty studies, excluding a review paper by Israely (1985) (Table 1). Two papers that were initially included were later excluded because they actually sampled participants with specific learning difficulties rather than intellectual disabilities (Derr, 1986; Waterman, Sobesky, Silvern, Aoki, & McCaulay, 1981). Another paper was excluded (Boehm, 1966) because the findings relating to adolescents with IDs are published in more detail elsewhere (Boehm, 1967). Very few studies took place before 1960, with the bulk of the literature being published between 1970 and 1989. All of the studies preceded the more recent theoretical progress within moral development theory, and comparison between studies was very difficult because of the use of many different unstandardised measures of moral reasoning. There were no longitudinal studies examining Piagetian theory with people with IDs, while there were

eight studies making use of cross sectional group comparison methods, and two studies which employed a cross sectional single group method. There were no qualitative studies examining Piagetian theory with this population. Two longitudinal studies made use of Kohlberg's original scoring method, while five studies drew upon Kohlbergian methods using cross sectional group comparison designs; one study made use of a cross sectional single group method. There were no qualitative studies drawing upon Kohlbergian theory. Finally, there were only two studies that did not adopt any theoretical perspective with regard to moral development. The first was a cross sectional group study and the second was a qualitative study, although within this study some reference is made to Piaget and Kohlberg (Table 1).

Piagetian Perspectives

The studies adopting a Piagetian theoretical could be classified into two broad areas of research, 1) examination of the moral reasoning abilities of people with IDs, or 2) investigations of the factors associated with the moral reasoning abilities of people with IDs.

Considering studies that attempted to examine the moral reasoning skills of people with IDs, one of the earliest studies we found investigated moral reasoning amongst young women with IDs living in institutions or the community and involved the use of Piagetian moral stories read to participants who were then asked a series of questions to elicit judgements (Abel, 1941). The author reported that the women within institutions engaged in *moral realism* by appealing to the consequences of the act depicted within the moral

story, rather than the intent of the actor, more often than women living within the community. Abel (1941) found that this finding tended to be related to length of institutionalisation, and not 'mental age', and further hypothesised that this was related to the social role taking opportunities within institutions; Abel (1941) pointed out that the inevitable focus on order and rules that accompany institutionalisation may have affected moral reasoning.

The finding by Abel (1941) that young women with IDs tend to appeal to the consequences of an act, rather than intention or motive, is consistent with the findings of Foye and Simeonsson (1979). They reported that adolescents (about 14 years old) and adults (about 26 years old) with IDs of a similar 'mental age' tended to appeal to the consequences of an act and the physical size of actors depicted in Piagetian stories more than intent, as compared to typically developing children around the age of 6 years. Blakey (1973) also reported findings that indicated that participants used physical consequences more often than intention when making judgements. He reported no differences between typically developing children (about 6 years old) and adults with IDs (about 26 years old) matched for 'mental age' on Piagetian moral stories with regards to whether moral judgements were based on intent, consequences or justice. However, he also reported that performance on some stories was at chance levels suggesting that participants may have had difficulties comprehending the stories and completing the task presented to them.

The above findings are inconsistent with those of Bender (1980) who also used Piagetian stories to examine the moral judgement of children and adolescents with IDs (about 10 to 16 years old) and typically developing children (about 8 years old). Bender (1980) found that children and adolescents with IDs, as well as typically developing children, considered intent, more often than outcome, although there was some evidence that typically developing children considered intent more. The most likely reason for the differences in Bender's (1980) findings is associated with the fact that she made use of typically developing children that were older. However, the moral stories used were not presented in the paper, nor was reliability and validity data.

The most recent study to consider moral reasoning amongst children with IDs aimed to examine the moral reasoning of children with autistic spectrum conditions. Grant, Boucher, Riggs and Grayson (2005) presented comic book strips based on Piagetian stories to children with IDs, children with autistic spectrum conditions and typically developing children. They aimed to examine differences between judgements regarding deliberate and accidental harm, and damage to people or objects. They reported that all three groups of children were able to judge culpability on the basis of motive, and recognised that damage to people was more serious than damage to objects or property. The responses given by children with autistic spectrum conditions were more often unscorable, The authors concluded that children with autistic spectrum conditions are able to make judgements that consider motive or intent, as opposed to outcome, and their abilities appeared similar to that of children with IDs. However, neither of these groups performed as well as typically developing children, who were about four years younger

than the other groups, but matched in terms of their verbal "mental age" which fell within the "average" range.

Another study that attempted to compare the moral reasoning ability of children with IDs to that of typically developing children went one step further and attempted to examine changes in moral maturity with increasing 'mental age'. Lind and Smith (1984) used augmented Piagetian stories to examine the development of restitutive reasoning and cooperation in children with and without IDs spread across the 'mental ages' of five to nine. The results indicated that there was a significant linear trend in moral reasoning scores across the 'mental ages', and there was no differences between typically developing children and children with IDs matched on 'mental age' with respect to moral reasoning, with the exception of those matched at 'mental age' seven. Children with IDs scored higher than typically developing children at 'mental age' seven, and the authors suggested that this difference was not of significance, and may have been an anomaly associated with the participant sample.

Four other studies using Piagetian assessment methods attempted to examine how factors such as 'mental age', IQ, or chronological age, along with other factors, were related to moral reasoning amongst people with IDs. Two of these studies used cross-sectional group comparative designs (Gargiulo, 1984; Gargiulo & Sulick, 1978), while the other two made use of a single group design (Boehm, 1967; Ozbek & Forehand, 1973).

Gargiulo and Sulick (1978) set out to examine whether or not chronological age or cognitive ability (IQ) was related to moral reasoning. They used modified Piagetian moral stories with typical developing children and children with IDs ('educable' or more able, and 'trainable' or less able children) aged six to 16 years. Their findings indicated that typically developing children scored higher on the moral reasoning task than children with IDs, and 'educable' children scored higher than 'trainable' children. The authors reported that IQ and chronological age accounted for 81% of the variance in moral reasoning scores, and they suggested that IQ and age may be independently related to moral reasoning.

In Gargiulo's (1984) later study, again used augmented Piagetian stories, he set out to try to determine whether or not 'reflective' or 'impulsive' cognitive styles were related to moral reasoning in typically developing children and children with IDs matched on 'mental age'. Participants were grouped into 'reflective' or 'impulsive' groups on the basis of response latency and number of errors associated with the completion of the Matching Familiar Figures Test. The results indicated that children with IDs responded more quickly and made more errors although this was not significantly different from typically developing children, and similar numbers of children from each group were assigned to the 'reflective' or 'impulsive' category. There was no significant difference between typically developing children and children with IDs, matched on 'mental age', with respect to moral reasoning. However, the 'reflective' group evidenced significantly higher moral reasoning than the 'impulsive' group. Gargiulo also reported that age and

IQ were not related to moral reasoning, while ‘mental age’ was significantly associated with moral reasoning.

The first study to make use of a single-group design was also the oldest papers found. In an earlier study, Boehm (1966) commented that she originally used Piagetian stories to assess the moral reasoning of children in an international study with the help of Piaget’s assistant in about 1936. In 1967, she went on to publish a study where she administered Piagetian stories to adolescents with IDs in New York City, and compared her findings to previous studies using typically developing children. She did not find a relationship between age and IQ and performance on the moral stories when used with adolescents with IDs, and concluded that this was because of the nature of IDs found within her sample (Boehm, 1967).

The final study making use of Piagetian theory attempted to examine whether chronological age, sex, ‘mental age’, socioeconomic status, and behaviour were associated with the moral reasoning of young adolescents with IDs (Ozbek & Forehand, 1973). The authors reported that aggression, paternal education and chronological age significantly predicted moral reasoning, and with age being the best predictor. However, it is important to note that the sample size used within this study is rather small (N=32), and complete data were available for only twenty-seven participants.

Studies making use of Piagetian theory and assessment methods have tended to demonstrate that the moral reasoning of people with IDs develops at a slower pace than

that of typically developing children, and developmental differences tend to disappear when groups are matched on a measure of 'mental age'. Studies that have made use of typically developing children around the age of six years, matched to people with IDs with a similar "mental age" have demonstrated that people with IDs had difficulties engaging in moral reasoning that considered motive or intent, and these participants tended to appeal to the consequences of an act when making judgements (Abel, 1941; Blakey, 1973; Foye & Simeonsson, 1979). People with IDs matched to older children around the age of eight years evidenced moral reasoning that considered motive more frequently (Bender, 1980; Grant, Boucher, Riggs, & Grayson, 2005), and one study demonstrated that moral development may take a linear form amongst people with IDs and typically developing children spread across the 'mental ages' of five to nine (Lind & Smith, 1984). Other studies have demonstrated that variables such as IQ, 'mental age', behaviour, chronological age and a 'reflective' cognitive style are associated with moral reasoning amongst people with IDs (Gargiulo, 1984; Gargiulo & Sulick, 1978; Ozbek & Forehand, 1973).

Kohlbergian Perspectives

There were a total of eight studies found that have adopted a Kohlbergian approach to the assessment and formulation of moral reasoning amongst people with IDs. These studies can be classified into 1) longitudinal studies that aimed to explore moral development and conduct in children and adolescents with IDs, and 2) cross sectional studies that aimed to explore factors associated with moral reasoning amongst people with IDs.

Considering longitudinal design methodologies first, Beth Stephens and her colleagues at Temple University in Philadelphia undertook a large research project examining the development of logical reasoning skills in people with IDs. As part of this work, Mahaney & Stephens (1974) investigated the development of moral reasoning longitudinally amongst three age groups of children and adolescents with and without IDs (ages six to 10, 10 to 14 and 14 to 18), making use of Kohlberg's earlier content analysis based scoring system. At the same time, using the same sample and longitudinal design, Moore & Stephens (1974) investigated the development of moral conduct.

Mahaney & Stephens (1974) developed a set of stories based around the concepts of lying, justice, punishment, collective responsibility, clumsiness, stealing and rules. They mostly presented stories, supported by pictures, and asked participants to make choices regarding appropriate and inappropriate behaviour or decisions, but for the assessment of the understanding of rules, the experimenter and the participant played a game of bowling. The participant was asked a series of questions regarding rules relating to the game in order to assess his or her "conceptions of the origin, divinity and heteronomy of rules" (p. 134, Mahaney & Stephens, 1974). Responses to the stories and questions were coded, using what appears to be Kohlberg's early content-analysis approach, with regards to lying, justice and clumsiness and stealing. One hundred and fifty children and adolescents were included, divided into equal groups of those with, and without IDs. During the first phase of the study, significant differences between the two groups of participants were found on most variables. Comparisons across age-groups revealed developmental increases for children with and without IDs, although the oldest group of

participants with IDs (aged 14 to 18) did not perform better than they younger peers (aged 10 to 14). Mahaney and Stephens (1974) suggested that moral development may reach a ceiling for this population. Examination of their longitudinal data during the second phase of their study revealed that moral development, as indexed by a significant difference over time, was noted for the participants without IDs, although some reversal was detected. Similar differences over time were found regarding moral development of participants with IDs, but these increases were not as marked, and some of them did not reach statistical significance. There was again some evidence of reversal. The longitudinal data refuted the suggestion that moral development of young people with IDs is static during the ages of 14 to 18, although the extent of the development may not be as marked or as consistent as that of their typically developing peers.

Moore & Stephens' (1974) study focused on the development of 'moral behaviour', not simply on cognition. A series of structured situations were devised in which each participant took part while their behaviour was observed. Situations were classed into those that aimed to assess self-control, honesty, stealing, mishaps, cheating and persistence. For example, one situation assessed a mishap where the participant was left in a room by an experimenter. Another experimenter entered the room to collect some papers, and took the clock as they left. The first experimenter then returned and asked the participant if they knew anything about the missing clock.

The cross sectional data from the first phase of the study demonstrated a developmental progression in the moral conduct across groups of participants. The moral conduct scores

of people with IDs were lower than for those without IDs, but this difference disappeared when participants were matched according to 'mental age'. Examination of the longitudinal data during the second phase of the study demonstrated a developmental improvement for people with and without IDs, but there was some deterioration in moral conduct scores for adolescents with IDs aged between 12-16 years over time. This deterioration did not occur for adolescents without IDs.

McLaughlin & Stephens (1974) attempted to integrate the findings from the two studies (Mahaney & Stephens, 1974; Moore & Stephens, 1974) by undertaking a factor analysis of the data generated during the various phases of their studies. A positive relationship was found between moral conduct and moral reasoning. This relationship strengthened across the longitudinal aspect of their studies. However, limited information was presented on how this factor analysis was completed, and as a consequence, caution is recommended regarding the conclusions drawn from this analysis.

Some important conclusions can be drawn from these studies. First, there is development in both moral reasoning and moral conduct amongst children and adolescents with IDs. Secondly, while moral conduct seems similar amongst children and adolescents with IDs compared to their peers of a similar 'mental age', this is not entirely the case for moral reasoning. Thirdly, the developmental trend appears to be attenuated for children and adolescents with IDs. Fourthly, there may be some periods of reversal amongst children and adolescents with IDs as well as their same age peers. Finally, there appears to be a relationship between moral reasoning and moral conduct amongst children and

adolescents with and without IDs. However, it must be noted that these studies made use of an early version of Kohlberg's scoring system which was not standardised and was used with techniques to assess moral reasoning that are of unknown validity and reliability.

Moving on to consider studies making use of Kolbergian scoring techniques that have employed a cross sectional group comparison method, these tend to have focused on whether or not chronological age, as well as mental age, is related to moral reasoning amongst people with IDs. Theories of moral development state that social role taking opportunities are required in order for individuals to progress through the stages of moral development, and this is preceded by cognitive development (Gibbs, 1979, 2003, 2010; Kohlberg, 1969, 1976; Piaget, 1932). As age increases, opportunities and experiences with social role conflict around moral choice and decision within peer groups also increase, resulting in learning. Chronological age is therefore considered to be an index, albeit flawed, of social role taking opportunity.

In order to examine the relationship between age, 'mental age' and moral reasoning, Taylor & Achenbach (1975) matched older children with IDs to younger typically developing children spread across three levels of 'mental age': 6.6 years, 8 years, and 9.3 years. They reported a significant relationship between moral reasoning and 'mental age', in contrast, IQ and chronological age were not related to moral reasoning. Taylor & Achenbach (1975) suggested that their study contradicts the proposed relationship between chronological age and moral reasoning. Similar results were reported by Kahn

(1976) who reported no relationship between chronological age and moral reasoning amongst people with IDs. He matched young adults with moderate IDs to children with mild IDs, and typically developing children, on the basis of 'mental age', and used Kohlberg's scoring system. On the measure of moral reasoning, young adults with moderate IDs performed significantly worse than the typically developing children, while the children with mild IDs did not differ from either of the other two groups. Considering that typically developing children and children with mild IDs differed in chronological age, but not mental age or moral reasoning ability, he concluded that there was no support for a relationship between chronological age and moral reasoning. However, there was a significant positive correlation between chronological age and moral reasoning for the entire sample, contradicting his assertion that chronological age was not related to moral development.

Kahn (1983) went on to complete another study where he concluded that moral reasoning is not related to chronological age, but is significantly associated with cognitive ability, as measured by a series of logical reasoning tasks, and 'mental age'. The relationship between performance on the logical reasoning tasks and moral reasoning was stronger than the relationship with 'mental age'. He reported similar findings in a later study, and also reported that the moral reasoning abilities of typically developing children were significantly higher than adolescents with moderate IDs, but not any different from those with mild IDs (Kahn, 1985).

Only one other study was found that used a cross-sectional group comparative design and made use of a Kohlbergian scoring system. Miller, Zumoff and Stephens (1974) examined the moral reasoning of three groups of participants: adolescent girls with a history of 'delinquency', and adolescent girls with and without IDs and no such history. A set of moral tasks was used that aimed to assess the participants' views of constructs such as justice, punishment, responsibility and lying, and was scored using Kohlberg's content-analysis approach. While the typically developing adolescents, with no history of problems, did not perform any better than their 'delinquent' peers, the 'delinquent' adolescents performed significantly better than adolescents with IDs on some, but not all, the tasks. It was noted that girls with IDs tended to appeal to the consequences of an act when making moral judgements, and it was concluded that moral reasoning and moral behaviour may be unrelated. Unfortunately, this study did not include any participants with IDs and behavioural problems. Moreover, the reliability and validity of the methods used to assess moral reasoning are questionable.

The final study found making use of Kohlbergian scoring methods used a single group cross sectional design. Sigman, Ungerer & Russell (1983) recruited a small sample of adolescents from an inpatient ward for people with behavioural and developmental delays. The mean Full Scale IQ of the sample was 70.2, indicating that at least some of the participants had IDs. This is the only study we could find that attempted to use a standardised procedure for eliciting and scoring moral judgement with a group where some of the participants had IDs. Stories from Kohlberg's Standard Scoring Manual (Sigman et al., 1983) were used to measure moral reasoning, while the Test of Social

Inference (Edmonson, de Jung, Leland, & Leach, 1966) was used to examine social problem solving and social acceptance. An assessment of the principle of conservation was also employed with the original teacher rating questionnaire of the Conners' Rating Scale (Conners, 1969). The authors did not find any relationship between moral reasoning and 'mental age', or IQ. Ability to understand social situations and conservation skills was not related to moral reasoning, but there was a significant relationship between moral reasoning and behavioural difficulties. Participants who performed better on the measure of moral reasoning showed the fewest behavioural difficulties as indexed by the Conners' Rating Scale.

Other Perspectives

There were two studies found that did not draw on any specific theoretical perspective with respect to the assessment or scoring of moral reasoning ability. The first made use of a cross-sectional group comparative methodology, where participants matched for 'mental age' completed the Jackson Hypothetical Temptation to Steal Test. In this task, participants were read a story about being tempted to steal and then asked what they think they would and should do in that situation (Jackson & Haines, 1982). The "should" statement was meant to elicit what a participant believed is morally right in the situation. It was found that typically developing girls said they would have resisted stealing significantly more than girls with IDs, although there was no difference for boys. Jackson and Haines (1982) reported no difference between younger typically developing children and older children with IDs with respect to their report of what they "should do". While acknowledging their limitations in terms of the validity of their assessments,

Jackson & Haines (1982) considered that the children's accounts were related to their moral judgements, suggesting the groups were similar with respect to their moral reasoning, or moral judgement

The second study involved a qualitative approach to the assessment of moral reasoning amongst children with IDs of differing ages. Petrovich (1982) recruited school children (55% male) with mild IDs (aged nine to 17) from two cities in what is now Serbia. Each participant was interviewed and asked to judge their own behaviour, elicited through a series of questions such as "What do you think is the best thing you have ever done?" Responses were subjected to a thematic analysis by different raters. The author suggested that there was no gender difference, but noted that younger girls gave "helping others" as a justification for their behaviour more often than did younger boys. There was also a bias noted toward the recall of bad actions rather than good actions, which the author suggested was related to a bias to pay attention to negative events as part of the socialisation of children. It was also noted that some children were unable to answer some of the questions. This was thought to reflect limitations in their expressive vocabulary, but it was also noted that this reticence occurred more frequently to questions about inappropriate, rather than appropriate, behaviour. Petrovich (1982) also reported some developmental trends with respect to the answers the children gave. She reported that the categories generated by younger children related to rule-governed behaviour, while older children appealed to the idea of helping others, emotion, norms, reciprocity, and the development of "positive personality characteristics". Although Petrovich (1982) did not draw parallels with moral development theory, the categories elicited by

the younger participants appear to relate to preconventional moral reasoning, while there are elements of conventional reasoning within the older participants' categories.

Discussion

The literature reviewed in this paper is problematic and generates more questions than answers. However, some tentative conclusions can be drawn. First, the studies suggest that the moral development of children, adolescents and adults with IDs is attenuated in comparison to same-age matched peers, but this difference tends to disappear if people with IDs are matched to typically developing children on a measure of 'mental age'. This highlights the important role cognitive ability has with respect to moral development. Second, the longitudinal studies of Beth Stephens and her colleagues (Mahaney & Stephens, 1974; Moore & Stephens, 1974; Stephens & McLaughlin, 1974) demonstrate that the moral development of children and adolescents with IDs does progress, but in an slower manner, in comparison to typically developing peers. Furthermore, these authors demonstrated that the moral development of older adolescents with IDs does not reach a ceiling and does continue with increasing age. Unfortunately, the scoring method employed within these studies appears to be Kohlberg's (1968) content-analysis approach. This has been criticised, and Snarey (1985), in his review of the moral reasoning literature, assigned articles using this approach to a "caution" category because of the difficulties with subjectivity and unreliability. Nevertheless, Lind and Smith (1984), using a different method, similarly demonstrated that moral development in children and adolescents with ID is attenuated, but occurs in a linear manner.

The third conclusion that can be drawn from the literature is that moral reasoning is related to behaviour amongst people with IDs (Moore & Stephens, 1974; Sigman et al.,

1983). Finally, there appears to be some evidence that a measure of 'mental age', as opposed to chronological age, is positively related to moral development. Given that the participants included in the studies had IDs, which would have affected the expected relationship between moral development and chronological age, this finding is not surprising.

As noted, there are significant problems with the studies included within this review. First, none consider the relationship between language ability and performance on measures of moral reasoning. This is problematic because many of the differences between the groups, in terms of moral reasoning ability, may reflect differences in language ability. Second, many studies used 'mental age' as an index of cognitive functioning and this is sometimes misconstrued as an index of maturity. Cognitive development does not continue through-out life in a more or less linear fashion as would be suggested by the concept of 'mental age'. Hence, it is inappropriate to suggest that adults with IDs are similar to typically developing children using an index such as 'mental age'. It would be more appropriate to use a standardised psychometric instrument of intellectual functioning.

Third, the studies reviewed used different measures of moral reasoning, which are un-standardised and idiosyncratic. Reliability and validity data regarding for these measures is absent, and this makes the interpretation of findings problematic. Moreover, many of the measures used within studies do not relate well to theory, and as a consequence, this limits the conclusions that can be drawn about the moral development of people with IDs.

Fourth, the participants are not thoroughly described in any of the papers. There is a general assumption that people with IDs are a homogenous group; this is far from the case. There is the possibility that moral development may vary with intellectual and developmental disabilities of different aetiologies. For example, children and adolescents with autistic spectrum conditions may have specific difficulties with social-perspective taking, which may have an affect upon their moral reasoning and development. Drawing firm conclusions from the literature included in this review is complicated because people with IDs are treated as a homogenous group, as well as the fact that conceptions of moral reasoning, IDs and the measurement of intelligence have changed over time.

The idea that development may be affected by intellectual and developmental disabilities of differing aetiologies is not a novel idea. Inhelder (1966) espoused the view the development of children with IDs is equivalent to children without intellectual disabilities, but occurs at a slower rate. Zigler (1969) supported this view and proposed that the development of people with IDs whose disabilities are of 'cultural-familial' aetiology, as opposed to 'organic' aetiology, should be similar to 'mental age'-matched peers. The view adopted here is that development in people with IDs of genetic, teratogenic, or injurious aetiologies is likely to be dissimilar to typically developing peers. Development occurring amongst people with IDs of socio-environmental aetiologies (e.g. poverty) is likely to be similar to typically developing peers, but the development may be slower. This view has been called the 'similar-sequence

hypothesis' (Weisz & Zigler, 1979), and underpinned many of the studies included within this review.

The final criticism of these studies is that the focus of many of these studies was narrow in the sense that they attempted to simply describe the moral reasoning of children, adolescents or adults with IDs and compare this with that of typically developing children. Even with this goal, very few of the studies actually reported the moral reasoning stage of their samples, and this no doubt relates to the use of measures that are unstandardised or idiosyncratic. Bearing the difficulties already discussed, two studies that did report moral stage found that the majority of their participants were scoring at preconventional levels, with very few participants scoring at more advanced levels (Sigman et al., 1983; Taylor & Achenbach, 1975).

The absence of reliable and valid measures of moral reasoning for use with people who have IDs is of concern, particularly as it has received little attention within the literature. Broadly speaking, there are two types of measures that are currently used to assess moral reasoning. The first are referred to as recognition instruments. These provide a set of moral justifications, traditionally following the presentation of a moral dilemma, after which participants are asked to select the justification that best matches their own reasoning. The second group of instruments are referred to as production instruments. These require participants to verbalise their own moral reasoning in response to questions aimed at eliciting these judgements. Given that many people with IDs may have communication difficulties, recognition instruments of moral reasoning, where a

participant is given a set of moral justifications and asked to choose one, may be of greater utility with this population because they may be easier to understand.

However, many recognition instruments do not measure the developmentally younger stages of moral reasoning which may be more relevant to people with IDs (Rest, 1979; Rest, Narvaez, Thoma, & Bebeau, 1999) and they do not discriminate reliably between offender and non-offender groups, drawing their validity into question (Basinger & Gibbs, 1987; Gavaghan, Arnold, & Gibbs, 1983; Gibbs et al., 1984; Stams et al., 2006). In contrast, a difference between such groups has been more often reported when production instruments are used (Basinger, Gibbs, & Fuller, 1995; Gavaghan et al., 1983; Gibbs, Widaman, & Colby, 1982; Gregg, Gibbs, & Basinger, 1994; Palmer & Hollin, 1998; Palmer & Hollin, 2000). There is scope in considering whether or not The Sociomoral Reflection Measure – Short Form (Gibbs, Basinger, & Fuller, 1992), which is a modern production instrument of moral reasoning, can be used with people who have IDs, as this measure has been successfully used with young children (Gibbs et al., 2007) and can be administered as an interview, negating the need for reading and writing.

The SRM-SF is linked to a cognitive-developmental theory of moral reasoning (Gibbs, 2003, 2010), and there are theoretical approaches to moral development which have not been considered within the literature included within this review. For example, according to Turiel's (1983, 2002) social domain theory, there are social conventional rules that do not cause intrinsic harm when violated, and there are moral rules which do cause harm to individuals when they are violated. In contrast to Kohlberg (Kohlberg, 1958, 1969;

Kohlberg & Kramer, 1969), moral development and social-conventional development are separated, and morality is seen as the system of rules and conventions governing harm, trust, justice and rights, while social conventions are the rules that govern social systems and appropriate behaviour (Semetana, 1999). Other approaches include Gilligan (1982) who argued that Kohlberg's approach was sexist because it did not consider appropriately moral judgements based on care and relationships, which Gilligan (1982) considered to be prevalent amongst women. Eisenberg (1989) considers both justice and care-based moral reasoning within a model where a central role is given to empathy in helping to determine prosocial behaviour, while Hoffman (2000) also gives empathy centre-stage with respect to moral reasoning. None of these theoretical approaches to understanding moral development and behaviour has been examined with people who have IDs, and there is a need for further research within this area.

It is also important to consider the socio-political context in which many of the studies reviewed were undertaken. In the United Kingdom, many people with IDs were placed within institutions. For example, in the United Kingdom from 1914 to 1948 (excluding 1939 to 1945), more than 5693 men and women with IDs were confined to hospital using the Mental Deficiency Act of 1913 (Walker & McCabe, 1973), and people with IDs did not have a right to education until 1970, with the introduction of the Education Act 1970. In the United States, many people with IDs were also forced to live within institutions (Trent, 1994), and they were not given the right to education until 1975, with the introduction of the Education for All Handicapped Children Act 1975. Discrimination against all people on the basis of disability was eventually prohibited in the United States

with the introduction of the Americans with Disabilities Act 1990, and the effectiveness of this Act is uncertain.

The bulk of the studies reviewed took place during a period when many people with IDs did not have the right to education and many would have been living in settings that are different from those used today. Given that social perspective taking is linked to moral development, institutionalisation and a lack of education may have had an impact upon the moral development of this population, and this may have affected the findings of the studies within the current review. Today in the United Kingdom, almost all of the state-run large institutions for people with IDs have closed, and the introduction of the Community Care Act 1990, and other legislation, such as the Disability Discrimination Act 1995 (revised in 2005), and the Human Rights Act 1998 have gone some way to promoting community living for people with IDs. The government has developed specific policies to encourage the social inclusion of people with IDs (Department of Health, 2001, 2007) through the promotion of a 'citizenship' agenda which attempts to address barriers that deny people with IDs full citizenship. Other pieces of legislation exist within the United States which attempt to help ensure that all people with disabilities have similar rights to those without disabilities (e.g. Voting Accessibility for the Elderly and Handicapped Act 1984; Civil Rights of Institutionalized Persons Act 1997). The President's Committee for People with Intellectual Disabilities in the United States functions to promote a citizenship agenda for people with IDs by helping to advise the President on issues such as employment, housing, and community living in relation to people with IDs.

As a consequence, the lives of people with IDs have changed dramatically in comparison to the time period when many of the studies undertaken within the current review took place. People with IDs are likely to have different social-perspective taking opportunities which may have an impact upon moral development. However, no attention has been paid to this within the literature, and further studies of the moral development of people with IDs are needed.

In conclusion, research into the moral development of people with IDs is needed given that there have been several theoretical developments within the field. Gibbs (2003, 2010) has revised Kohlberg's (Kohlberg, 1958, 1969, 1976) traditional stage theory of moral development, embracing information processing theory and incorporating aspects of Hoffman's (Hoffman, 2000) developmental approach which pinpoints empathy as relevant to the process of moral development and reasoning. Many of the studies included in the current review actually predate many of the theoretical developments of Lawrence Kohlberg, let alone John Gibbs or Martin Hoffman or many of the other theorists in the area. The studies that have been completed are often poorly designed and make use of measures of moral reasoning that are unreliable and lack validity.

Further studies in this area as also needed, considering that there has been marked interest in the relationship between moral reasoning and offending behaviour (Blasi, 1980; Nelson et al., 1990; Stams et al., 2006). However, little to nothing is known about the relationship between anti-social behaviour and moral reasoning amongst children,

adolescents or adults with IDs (Langdon, Clare, & Murphy, in press). There is reason to explore this relationship given that there is evidence that psychological interventions drawn from moral development theory, in combination with other interventions, are effective (Leeman, Gibbs, & Fuller, 1993). There are further issues here which also need to be investigated. Specifically, interventions drawing upon moral reasoning theory such as EQUIP (Gibbs, Potter, & Goldstein, 1995) aim to encourage developmental increases in moral judgement, and people with IDs may have difficulty reaching the developmentally higher moral reasoning stages which may protect against anti-social behaviour. This poses a difficulty with respect to the utility of these interventions with this population, and once again we are faced with more questions than answers.

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Table 1: Studies examining the moral reasoning abilities of people with intellectual disabilities. Studies were grouped according to theoretical perspective (Piaget, Kohlberg or other), and then ordered according to methodology as follows: longitudinal studies, cross sectional studies with groups matched on some variables, cross sectional studies with only one group, and qualitative studies. (Acronyms: MA='Mental Age'; CA=Chronological Age; IDs=Intellectual Disabilities; SES=Socio-Economic Status)

	Study	Country	Sample	Matching & Selection	Groups	Measures	Results
1. Piagetian: Cross Sectional Studies (Some Matching of Groups)	Abel (1941)	United States	N=94 (NB: this changed throughout the study)	1. Participants matched for CA, MA and SES in some instances..	1. Women with IDs aged 15 to 21 (MA 6 to 11) sampled from either institutions (N=20) or trade adjustment classes (N=20). 2. Women with IDs who had been in institutions for less than one year (N=15) compared to women who had been in institutions for over six years (N=15). 3. Women with IDs of MA 6-8 (N=28) or MA 9-11 (N=29).	1. Unstandardised moral stories.	1. Institutionalised girls endorsed punitive consequences of inappropriate behaviour more frequently and tended to appeal to outcome rather than intent. 2. Reduction in egocentric moral justification related to increasing 'mental age'.
	Bender (1980)	United States	N=42	1. Unable to complete Piagetian tasks of conservation.	1. Children of normal intelligence (*M* age=94.7 months). 2. "Educable mentally retarded" children (*M* age =117.7; *M* IQ=62). 3. "Trainable mentally retarded" adolescents (*M* age =192.4; *M* IQ=40.7)	1. Four unstandardised stories and drawings regarding a lost child and an older child who helps this lost child. Stories varied according to outcome and intent. Subjects were asked to award chocolate to the child after the story based on helpfulness.	1. All children tended to consider intention, rather than outcome. 2. Children with IDs tended to award chocolate more often than children without IDs when the intention was positive and the outcome was negative. 3. Typically developing children rewarded fewest chocolate when intent was negative and outcome was negative.
	Blakey (1973)	Scotland	N=40	1. Sex 2. MA	1. Adults with IDs (*Median* age =26 years; *Median* MA=6 years). 2. Children without IDs (*Median* age =6 years)	1. Unstandardised moral stories developed to examine whether the respondent appeals to intention, reciprocity, punishment, or justice.,	1. No difference between IDs and Non-IDs groups. Author concluded that this was because they were matched on MA. Participants appealed to consequences more than actor intent. 2. Girls and women tended to endorse more severe punishments for transgressions. Author suspects that this is because many stories depicted boys as characters. 3. Respondents performance was at chance levels on some stories.
	Foye & Simeonsson (1979)	United States	N=60	1. Sex (equal numbers of males and females in all	1. Adolescents with mild IDs (*M* age =171.65 months; *M* MA=87.95 months; *M* IQ=61.15). 2. Adults with moderate IDs (*M* age =316.35 months; *M* MA=92.85 months; *M* IQ=55.50).	1. Unstandardised moral stories presented through slides and audio	1. No overall differences between the groups. Participants tended to appeal to consequences more than intent. 2. However, adults with IDs rated negative intent

			groups).	3. Children with No-IDs (*M* age =77.45 months; *M* MA=85.65 months; *M IQ=106.90)*	which varied according to actor size, intention, and consequences. 2. Three additional unstandardised moral stories assessing authority, peer and altruistic moral perspectives.	more positively than adolescents with IDs and children without IDs, and also rated smaller actors more positively than larger actors.
Gargiulo (1984)	United States	N=94	1. Random selection procedure 2. Matched on 'mental age'.	1. Children with IDs (*M* age =10.10; *M* IQ=62.58) 2. Children with no-IDs *(M* age=6.52; *M* IQ=109.38)	1. Matching Familiar Figures Test 2. Unstandardisded moral judgement stories based on Piagetian stories (Boeham, 1967)	1. No difference between groups on moral reasoning measure. 2. No relationship with moral reasoning and IQ detected. 3. No difference in accuracy or time to respond amongst the groups. 4. Participants were grouped into "reflective" and "impulsive" groups according to accuracy. "Reflective" participants evidenced higher moral reasoning.
Gargiulo & Sulick (1978)	United States	N=135	1. Random selection procedure 2. Participants were placed into age bands: 6 to 10; 11 to 13; and 14 to 16.	1. Children and adolescents with no-IDs (Age range 6 to 16) 2. Children and adolescents who were "educable mentally retarded" (Age range 6 to 16; IQ=50 to 80) 3. Children and adolescents who were "trainable mentally retarded (Age range 6 to 16; IQ=25-50)	1. Unstandardisded moral judgement stories based on Piagetian stories (Boeham, 1967)	1. Significant difference between groups; Participants without IDs scored higher than participants with IDs, and "educable" participants scored higher than "trainable participants". 2. Positive relationship between moral judgement and CA. 3. No relationship between IQ and CA. IQ and CA accounted for 81% of variance in moral judgement scores.
Grant, Boucher, Riggs & Grayson (2005)	England	N=56	1. CA (excluding typically developing children) 2. Verbal 'mental age'	1. Children with mild IDs (*M* age =153.76 months; *M* MA=94.35 months; *M* VIQ=66.65). 2. Children with autism (*M* age =146.4 months; *M* MA=102.50 months; *M* IQ=74.18). 2. Children with no-IDs (*M* age =100.85 months; *M* MA=99.22 months; *M IQ=99.45)*	1. Six stories with comic strips adapted from Elkind & Dabek (1977) which are based on Piagetian stories.	1. All groups able to judge culpability. 2. Damage to people judged as more serious than damage to objects by all participants. 3. Justifications poorer amongst children with autism.
Lind & Smith (1984)	Australia	N=112	1.'mental age' 2. Sex 3. Socio-economic status 4. Family size	1. "Educable Mentally Retarded Children" 2. "Intellectually Average Children" *Both groups spread across 'mental age' of 5-9 years.*	1. Stanford-Binet Intelligence Scale 2. Slosson Intelligence Test 3. Modified Piagetian Moral Stories 4. Marble Pull Apparatus (Madsen & Connor, 1973) used to	1. No moral judgement differences between groups matched on MA (with the exception that "educable mentally retarded children" at MA 7 scored higher than typically developing children; the authors thought this finding was difficult to interpret). 2. Developmental linear trend in moral judgement for both groups. 3. "Educable Mentally Retarded" children scored

						measure cooperation	higher on measures of cooperation.
2. Piagetian: Cross sectional studies (single group)	Boehm (1967)	United States	N=67	1. All Caucasian and considered "not to be seriously emotional disturbed"	1. People with IQ=50 to 69 aged 16 to 20 (*M* age =18.0 *M* IQ=61.0) sampled from high schools in New York City or an Occupational Training Centre.	1. Modified Piagetian Moral Stories	1. Those attending the training centre had difficulties giving answers. Comparisons are made with a sample of typically developing children within the results section, although this sample is not described elsewhere. 2. No relationship between moral responses and age or IQ detected. 3. No trends across age groups found.
	Ozbek & Forehand (1973)	United States	N=32	1. All participants from the Georgia Retardation Centre	*M* age =155.3 months *M* MA =88.6 months *M* IQ =58.9 months	1. Missouri Children's Behaviour Checklist 2. Piagetian Stories presented using films	1. Positive correlation between moral judgement and CA or MA. Negative correlation with paternal education and occupation. 2. Regression equations predicting moral judgement demonstrated that aggression, paternal education, and CA were significant predictors. 3. Authors conclude that CA is best predictor of moral judgement amongst those with IDs.
1. Kolbergian: Longitudinal studies	Mahaney & Stephens (1974)	United States	N=150 longitudinal 4-year study	1. Age & Sex 2. Random sampling.	1. Children and adolescents with No-IDs (*IQ* =90-110) split across three age groups (6 to 10; 10 to 14; 14 to 18 years) 2. Children and adolescents with IDs (*IQ* =90-110) split across three age groups (6 to 10; 10 to 14; 14 to 18 years)	1. Moral stories making use of a scoring method developed by Kohlberg in his PhD thesis.	1. Significant differences between participants with IDs and no-IDs. 2. Relationship between CA and moral reasoning reported for both participants with IDs and no-IDs. 3. Significant increases in performance with time for participants with IDs and no-IDs, but some reversal noted. Development not as marked or consistent for participants with IDs
	Moore & Stephens (1974)	United States	N=150 longitudinal 4-year study	1. Age & Sex 2. Random sampling	1. Children and adolescents with No-IDs (*IQ* =90-110) split across three age groups (6 to 10; 10 to 14; 14 to 18 years) 2. Children and adolescents with IDs (*IQ* =90-110) split across three age groups (6 to 10; 10 to 14; 14 to 18 years)	1. A structured situation was devised where participant's behaviour was observed in order to assess moral conduct across dimensions of honesty, self-control, cheating etc.	1. Negative correlation between age and misconduct score suggesting a developmental improvement in conduct. 2. Misconduct scores higher for participants with IDs in comparison to those with no-IDs, and this difference partially disappeared when MA was controlled. When MA and CA controlled differences between groups remained during initial assessment period, but differences disappeared when participants assessed two years later. 3. Significant decrease in misconduct score over time for all groups except IDs group aged 12-16 at second assessment phase (two years later); misconduct scored increased for this population.
2. Kolbergian: Cross Sectional Studies (Some Matching of Groups)	Kahn (1976)	United States	N=60	1. All male and Black. 2. SES 3. MA 3. Randomly	1. Children with mild IDs (*M* age =128 months; *M* MA=90 months; *M* IQ=66). 2. Adolescents with moderate IDs (*M* age =218 months; *M* MA=88 months; *M* IQ=45). 2. Children with no-IDs (*M* age =83 months; *M*	1. Piagetian tasks. 2. Moral Reasoning Stories based on Kohlberg's work- five stories with questions	1. Children with no-IDs significantly higher on moral reasoning than adolescents with moderate IDs. No difference between children with no-ID and mild IDs, and children with mild IDs and adolescents with moderate IDs.

			sampled.	MA=87 months; *M* IQ=101).	to elicit moral judgement (Porter & Taylor, 1972)	2. Significant positive correlation between moral reasoning and cognitive functioning and MA. 3. Significant positive correlation between CA and moral reasoning.
Kahn (1983)	United States	N=76	1. MA 2. Piagetian Stage 3. All male. 4. SES	1. Adolescents with moderate IDs with organic aetiology (*M* age =238.95 months; *M MA*=82.84 months; *M* IQ=43.11). 2. Children with mild IDs with organic abnormality (*M* age =127.16 months; *M* MA=84.16 months; *M* IQ=65.95). 3. Children with mild IDs with no known organic abnormality (*M* age =124.26 months; *M* MA=81.37 months; *M* IQ=65.32). 4. Children with no-IDs (*M* age =82.47 months; *M* MA=84.89 months; *M* IQ=103.26)	1. Piagetian tasks 2. Moral Reasoning Stories based on Kohlberg's work- five stories with questions to elicit moral judgement (Porter & Taylor, 1972)	1. Children with no-IDs had higher moral reasoning than adolescents with moderate IDs. 2. IQ and MA significantly associated with moral reasoning score. 3. No relationship between CA and moral reasoning. 4. Author concludes that CA is not related to moral reasoning amongst participants with IDs.
Kahn (1985)	United States	N=80	1. All male. 2. MA	1. Adolescents with moderate IDs (*M* age =19 years and.10 months; *M MA*=6 years and 10 months; *M* IQ=44.50). 2. Children with mild IDs with organic abnormality (*M* age =10 years and 7 months; *M* MA=6 years and 11 months; *M* IQ=62.30). 3. Children with 'sociocultural' mild IDs (*M* age =10 years and 5 months; *M* MA=6 years and 9 months; *M* IQ=61.70). 4. Children with no-IDs (*M* age =6 years and 10 months; *M* MA=7 years; *M* IQ=103.70)	1. Slosson Intelligence Test. 2. Goldschmid & Bentler's (1968) Concept Assessment Kit-Conservation. 3. Moral Reasoning Stories based on Kohlberg's work- five stories with questions to elicit moral judgement (Porter & Taylor, 1972)	1. Moral reasoning significantly positively associated with cognitive maturity and MA. Strength of association greater with cognitive maturity. 2. Moral reasoning not associated with CA. 3. Analysis controlling for MA indicated that children with no-IDs scored significantly higher than adolescents with moderate IDs and children with mild IDs of organic abnormality. Children with 'sociocultural' mild IDs had significantly higher moral reasoning than adolescents with moderate IDs. 4. Analysis controlling for cognitive ability resulted in no significant differences between the groups.
Taylor & Achenbach (1975)	United States	N=60	1. Participants taken from public schools in north-eastern United States. 2. MA	1. Children with no-IDs of "Low" MA (*M* IQ=104; *M* age =75 months). 2. Children with IDs of "Low" MA (*M* IQ=76; *M* age =121 months). . 3. Children with no-IDs of "Middle" MA (*M* IQ=115; *M* age =79 months). 4. Children with IDs "Middle" MA (*M* IQ=76; *M* age =138 months). 5. Children with no-IDs "High" MA (*M* IQ=113 *M* age =96 months). 6. Children with IDs "High" MA (*M* IQ=79; *M* age =150 months).	1. Piagetian Tasks. 2. Peabody Picture Vocabulary Test 3. Role taking within game play. 2. Moral Judgement Stories from Kohlberg.	1. Significant positive relationship between MA and Moral Reasoning, but not IQ, or CA. 2. No difference between IDs and Non-IDs groups on Piagetian tasks; relationship between 'mental age' and performance on some tasks. 3. A relationship between performance on Piagetian tasks and moral reasoning stage was found for some tasks.
Miller, Zumoff & Stephens (1974)	United States	N=62	1. Random selection procedures	1. Adolescent girls with mild IDs (IQ=71.81). 2. Adolescent girls with no-IDs (IQ=102.19). 2. Adolescent 'delinquent' girls (IQ=88.38)	1. Piagetian reasoning tasks. 2. Unstandardised	1. No significant difference between groups on moral judgement. 2. Difference between the groups on the Piagetian

				2. Age 3. All adolescent girls		moral stories scored using a similar system employed by Kohlberg in his PhD thesis.	reasoning tasks.
3. Kolbergian: Cross Sectional Studies (Single Group)	Sigman, Ungerer & Russell (1983)	United States	N=20	1. Equal numbers of males and females	*M* age =16.2 years *M* MA =11.3 years *M* IQ =70.2	1. Kolhberg's Moral Judgement Stories Form A	1. No relationship between intelligence or MA and moral reasoning. 2. Significant relationship between moral reasoning and disruptive behaviour.
1. Other: Cross Sectional Studies (Some Matching of Groups)	Jackson & Haines (1982)	Tasmania	N=96	1. Sex 2. SES 3. Random selection of ID participants from schools. 4. MA	1. Children with IDs (*M* age=12.2) 2. Children with No-IDs (*M* age=7.1)	1. Jackson Hypothetical Temptation to Steal Test – the "did do" and "Moral Judgement" version. This is a self-report measure of behaviour in reaction to stories depicting stealing situations. Respondents are asked to indicate what they "would do" and what they "should do".	1. Children with no-IDs "resisted" stealing more than children with IDs, and this difference was attributable to girls rather than boys. 2. No differences between two groups on reports of what they "should do".
2. Other: Qualitative Studies	Petrovich (1982)	England and Serbia	N=170	1. All from special schools in Belgrade or Novi Sad	*IQ* range=50 to 70 M IQ for females=66.43 M IQ for males=64.88	1. Children were interviewed and asked to make value judgements regarding their own behaviour. Responses were coded into themes based around good and bad acts. 2. Frequency tables calculated for categories of responses and trends examined.	1. There were no sex differences for the type of categories generated regarding good and bad acts. 2. There were more bad categories than good. 3. Developmental trends were noted, but they appear to occur later than they do with children without IDs.