Mental health

The relationship between maltreatment victimisation and sexual and violent offending: differences between adolescent offenders with and without intellectual disability


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Abstract

Background  Juveniles with intellectual disabilities (ID) are more often victims of maltreatment and more often perpetrators of abuse than juveniles without ID. Because previous research on the relationship between maltreatment victimisation and subsequent offending behaviour was primarily performed in non-disabled samples, the present study aimed to examine differences between juvenile offenders with and without ID in the relationship between maltreatment victimisation and sexual and violent offending.

Method  The sample consisted of juvenile offenders with ID \((n = 102)\) and without ID \((n = 526)\) who appeared before the courts for a criminal act and for whom the Washington State Juvenile Court Assessment (WSJCA) was completed. Pearson correlation coefficients were calculated to determine the strength of the relationship between maltreatment and offending, Fisher’s \(z\) tests were calculated to assess the significance of the differences between the two groups in the strength of the correlations, and multiple logistic regression analyses were performed to examine the unique contribution of maltreatment victimisation to the prediction of violent and sexual offending.

Results  Seventy per cent of the juvenile offenders with ID and \(42\%\) of the juvenile offenders without ID had experienced abuse and/or neglect. Both sexual and violent offending were more common in juvenile offenders with ID than in juvenile offenders without ID. Moreover, the relationship between different forms of maltreatment and sexual offending was stronger in juvenile offenders with ID than in juvenile offenders without ID.

Conclusions  Given the high rates of abuse and neglect victimisation and the strength of the association between victimisation and sexual offending, especially in juvenile offenders with ID, treatment should focus on potential trauma and other problems associated with the abuse.

Keywords  juvenile offenders with ID, maltreatment victimisation, sexual offending, violent offending
Introduction

Juveniles with disabilities are more likely to be abused or neglected than their normally developing peers (e.g. Sullivan & Knutson 1998, 2000; Reiter et al. 2007; Akbas et al. 2009). Sullivan & Knutson (2000) examined the prevalence of abuse and neglect in a very large group of child-aged juveniles in school ($n = 50278$) and found juveniles with disabilities to have a 3.4 times greater risk of maltreatment than juveniles without disabilities. The higher prevalence of maltreatment of juveniles with disabilities has been explained by a combination of characteristics of the impairment and by affected family functioning because of the disability (Murphy 2011). However, not all childhood disabilities are associated with an equally higher level of maltreatment (e.g. Jaudes & Mackey-Bilaver 2008; Murphy 2011) and it is known that of all juveniles with disabilities, juveniles with intellectual disabilities (ID) have the highest risk of abuse, and especially sexual abuse (Sullivan & Knutson 2000).

Juveniles with ID are not only at increased risk of becoming victims of abuse, they are also relatively more often perpetrators of abuse (e.g. Holland & Holt 1975; Spellacy 1977, 1978; Holland et al. 1981; Crocker & Hodgins 1997). Juveniles with ID more often experience problems with anger and aggression than juveniles without ID (Novaco & Taylor 2004). Problems in information processing skills have been mentioned as an explanation for the higher levels of aggression in juveniles with ID compared with juveniles without ID (Benson 1994), for example, juveniles with ID tend to encode more negative information (Van Nieuwenhuizen et al. 2005). Additionally, Jahoda et al. (1998) suggested that problems with self-control may affect aggression of juveniles with ID.

It remains unclear whether juveniles with ID are more likely than juveniles without ID to commit sexual offences, partly because of methodological shortcomings of the research on this topic, such as the absence of control groups (Lindsay 2002; Lambrick & Glaser 2004). Sexual offending behaviour of juveniles with ID has been explained by a discrepancy between the cognitive and sexual development of juveniles with ID, which is thought to result in distorted evaluation of certain situations and inability to show sexually appropriate behaviour (Janssens et al. 2009; Wissink et al. 2012). Also, juveniles with ID more often take information literally, such as sexual images (Janssens et al. 2009). As a result, for example, pornographic material can serve as a reference for entering and experiencing sexual relationships (Gesell et al. 2010). In addition, juvenile offenders with ID tend to have problems understanding the point of view of others (Lindsay & Smith 1998), and may therefore believe that a legitimate relationship exists while this is not the case (Timms & Goreczny 2002). Moreover, juveniles with ID often have social skills deficits (Timms & Goreczny 2002), which limits the possibilities to develop and engage in consensual sexual relationships (Lindsay et al. 1999). Finally, juveniles with ID have relatively often been a victim of sexual abuse themselves (Sullivan & Knutson 2000), which is believed to be a risk factor for being a perpetrator of maltreatment later in life. This phenomenon is also referred to as the ‘cycle of violence’ (Widom 1989; Wissink et al. 2012).

The relationship between maltreatment victimisation and offending behaviour has been examined in several studies on non-disables populations (see Falshaw et al. 1996 and Widom, 1989 for reviews of the literature). The available research literature, however, does not show a clear pathway from childhood maltreatment to subsequent offending behaviour (Falshaw 2005). There are several explanations for the relationship between childhood maltreatment and subsequent offending behaviour. One explanation is based on Social Learning Theory (Bandura 1973, 1977), which suggests that behaviour is learnt through observation and experience. Witnessing and being subjected to violence, for example within the family, teaches children that violence is an effective method of achieving desired outcomes. Another explanation is based on lifestyle and routine activity theories (Hindelang et al. 1978; Cohen et al. 1981), which suggest that the lack of effective supervision (which may result in attempts to escape an abusive family environment) increases the probability of exposure to offender populations. This, in turn, increases the risk of involvement in violent activity.

Besides the ‘victim to offender’ theories, it has been suggested that the experience of a particular type of maltreatment most likely results in the same kind of offending behaviour (e.g. Briere & Runtz
1990; Prendergast 1991; Dutton & Hart 1992; Bagley et al. 1994; Ford & Linney 1995; Lindsay et al. 2001; Jespersen et al. 2009). Juveniles who have experienced sexual abuse are more likely to progress to sexual offending in comparison with other types of offenses (Prendergast 1991; Dutton & Hart 1992; Bagley et al. 1994; Ford & Linney 1995), whereas juveniles who have experienced physical abuse are more likely to commit violent offenses (Briere & Runtz 1990; Dutton & Hart 1992). However, other studies have not found support for these specific relationships (e.g. Widom & Ames 1994; Epps et al. 1996; Higgins & McCabe 2000, 2003), although it is suggested that the propensity to crime in general depends on the type of abuse experienced (Zingraff et al. 1994). For example, victims of neglect are at greatest risk of delinquency, closely followed by victims of physical abuse, whereas sexual abuse victims were found to be no more at risk of offending than juveniles who were not a victim of maltreatment (Zingraff et al. 1994). A recent study showed that boys who were victim of childhood neglect were four times more often convicted for offending than juveniles who were not victim of childhood neglect (Kazemian et al. 2011).

It is important to know how maltreatment is related to offending behaviour in juveniles with ID. The available knowledge about the relationship between maltreatment and offending is primarily based on research performed in non-disabled samples. However, it is possible that the relationship between maltreatment victimisation and subsequent offending behaviour is stronger in juveniles with ID than in juveniles without ID. Asscher et al. (2012) found risk factors in the attitudebehaviour, aggression and skills domains, such as impulsive behaviour, low frustration tolerance, problems in dealing with others, problems in dealing with feelings and poor problem-solving behaviour, to be more common in juveniles with ID than in juveniles without ID. It may therefore be more difficult for juveniles with ID to deal with the consequences of maltreatment. The current study provides information that is considered to be important for assessment and treatment of juvenile offenders with ID, because maltreatment has shown to be more common in juveniles with ID than in juveniles without ID (e.g. Sullivan & Knutson 1998, 2000; Reiter et al. 2007; Akbas et al. 2009). Although juveniles with ID who experienced maltreatment often receive treatment, very little is known about the specific problems that are associated with maltreatment, such as offending. If problems are associated with maltreatment, it seems to be important to treat these problems in concert, paying attention to all different types of risks at once.

To our knowledge, there are no studies that have examined whether the relationship between maltreatment victimisation and offending behaviour is different for juveniles with ID compared with juveniles without ID. Therefore, the present study is unique in the examination of the effect of sexual and physical abuse and neglect on violent and sexual offending behaviour for both juvenile offenders with and without ID. We first examined the prevalence of different forms of maltreatment (sexual abuse, physical abuse and neglect) and the prevalence of sexual and violent offending behaviour in juvenile offenders with and without ID. Based on the extant literature we expected maltreatment and both sexual and violent offending to be more common in juvenile offenders with ID than in juvenile offenders without ID. Furthermore, we examined whether there are differences between juvenile offenders with and without ID in the strength of the relationship between (different types of) maltreatment and sexual and violent offending behaviour.

**Method**

**Sample**

For this study, secondary data from the Washington State Juvenile Court Assessment (WSJCA) validation study were used (Barnoski 2004a). This data set consists of data of American juveniles, aged 12–18, who appeared before the courts for a criminal act and for whom the WSJCA was completed. A distinction was made between the following groups: 1. **Offenders with ID:** all juvenile offenders with a formal diagnosis of ID, which means a full scale IQ of less than 70, coupled with a significant deficit in adaptive behaviour, with childhood onset. The juveniles of this group were special education students or they had a formal diagnosis of a special education need. The diagnosis of ID was made by a professional in the social service/healthcare field (e.g. a
child psychiatrist, child psychologist or developmental/behavioural paediatrician). This group consisted of 102 juveniles – 81 boys (79%) and 21 girls (21%) – with an average age of 15.35 (SD = 1.21). The offenders in this group committed on average 1.04 felony offenses and 2.43 misdemeanour offenses.

2 Offenders without ID: a random sample of all juvenile offenders without a formal diagnosis of ID. This group consisted of 526 juveniles – 386 boys (73%) and 140 girls (27%) – with an average age of 15.39 (SD = 1.38). The juveniles in this group committed on average 1.02 felony offenses and 2.06 misdemeanour offenses.

There were no significant differences between the two groups in gender distribution ($\chi^2 = 1.63$, $P = \text{n.s.}$), age ($F = 0.17$, $P = \text{n.s.}$), total number of felony offenses committed ($F = 0.03$, $P = \text{n.s.}$) and total number of misdemeanour offenses ($F = 2.48$, $P = \text{n.s.}$)

Instruments and procedure

**Washington State Juvenile Court Assessment (WSJCA)**

The WSJCA is a screening and risk assessment instrument, which was developed in Washington State (Barnoski 2004a,b). The WSJCA maps out the most important risk and protective factors for recidivism on a large number of domains. The development of this instrument was based on a review of the following types of research: literature on the prediction of recidivism and available risk assessment instruments, such as the Wisconsin Risk Scale (Baird et al. 1984) and the Youth Level of Service and Case Management Inventory (Hoge & Andrews 1994); theoretical models for the explanation of juvenile delinquency; research on risk and protective factors; resiliency research, and research on effectiveness of juvenile delinquency programmes (see Barnoski 2004a). The selection of domains and items took place on the basis of this review and was then modified, based on feedback from an international team of experts (Barnoski 2004a).

The WSJCA comprises two parts: a pre-screen and full assessment part. The pre-screen is a shortened version of the full assessment that quickly indicates whether a youth is at low, moderate or high risk for reoffending. The pre-screen measures the most important predictors of recidivism from two domains: the criminal history domain and the social history domain (Barnoski 2004b). The pre-screen is administered to all youth on probation and the full assessment is used only for youth having moderate or high risk on the pre-screen (71% of the juvenile offenders). The aim of the pre-screen is to estimate the risk of recidivism, and the aim of the full assessment is to identify a youth’s risk and protective factor profile to guide intervention targeting rehabilitation and desistance from crime.

The full-screen is a comprehensive risk and needs assessment instrument, which measures both static (historical) and dynamic (current) risk and protective factors (132 items total) in the following domains: school (e.g. truancy, academic performance), family (e.g. parental authority and control, family support network), relationships (anti-social friends, resistance to influence of anti-social peers), use of free time (daily activities, involvement in structured activities), mental health (victim of maltreatment, mental health problems), alcohol and drugs (drug/alcohol abuse contributes to criminal behaviour), attitude/behaviours (empathy, accepting responsibility for behaviour), aggression (frustration tolerance, hostile interpretation of intentions of others) and skills (dealing with others, problems in controlling internal and/or external triggers). Items are rated on a three-point scale (strong promotive side, neutral middle part, strong risk side), a four-point scale (strong promotive side, weak promotive side, weak risk side and strong risk side) or a five-point scale (strong promotive side, weak promotive side, neutral middle part, weak risk side and strong risk side).

Probation officers performed the full assessments on the basis of information from a structured motivational interview with the youth and youth’s family. Probation officers were trained in conducting the assessment. This training includes reviewing video-taped interviews and the resulting assessment to ensure the probation officer has mastered the assessment skills. There is a manual available for the full assessment and quality assurance is an important part of the assessment structure and organisation in Washington State (Barnoski 2004b).

The WSJCA has been adapted for use in several jurisdictions, as the Youth Assessment and Screening Instrument (YASI), distributed by Orbis Partners,
and the Positive Achievement Change Tool (PACT), distributed by Assessments.com. Both tools comprise a pre-screen and a full assessment. The predictive validity of the WSJCA pre-screen and the slightly adapted tools (PACT pre-screen and YASI pre-screen) was examined in four different studies (Barnoski 2004a; Orbis Partners Inc. 2007; Baglivio 2009; Van der Put et al. 2012). The Barnoski study (2004a) examined the extent to which the WSJCA pre-screen is able to predict 18-month recidivism (defined as adjudications/convictions). In this study, a distinction was made between three types of recidivism: total recidivism (both misdemeanour and felony re-offenses), felony recidivism and violent felony recidivism. The area under the receiver-operating-characteristic curve (AUC) was 0.64 for all three types of recidivism. The Baglivio study (2009) examined the extent to which the PACT pre-screen is able to predict 12-month recidivism, defined as any subsequent delinquency referral after the assessment date (both felony and misdemeanor referrals). The AUC of the PACT pre-screen was 0.59. The study of Orbis Partners Inc. (2007) examined the predictive validity of the YASI pre-screen (Orbis Partners Inc. 2007) for different types of 12-month and 24-month recidivism: new referrals/arrests, violations of probation and adjudications/convictions. For the 12-month follow-up period, the AUC was 0.58 for new referrals/arrests, 0.65 for violations of probation and 0.60 for adjudications/convictions. There were no significant differences between the AUC values for 12-month recidivism and the AUC values for 24-month recidivism. Finally, Van der Put et al. (2012) examined the extent to which the WSJCA pre-screen is able to predict 18-month recidivism, defined as any subsequent delinquent referral after the assessment date, and they found an AUC of 0.63. A meta-analysis of the predictive validity of risk-assessment instruments for juveniles delinquents showed that the AUC varied from 0.53 to 0.78, with an average AUC of 0.64 (Schwalbe 2007). The AUC of the WSJCA is therefore comparable to the average AUC of juvenile justice risk assessment instruments.

Because the aim of our study was to examine differences between juvenile offenders with and without ID in the strength of the relationship between maltreatment victimisation and sexual/violent offending, we have included all variables measuring maltreatment victimisation (physical abuse, sexual abuse and neglect) and all variables measuring violent and sexual offending in our analysis.

Variables measuring maltreatment victimisation

Juveniles were asked to report on the histories of physical abuse, sexual abuse and history of being a neglect victim. The self-reported information was checked with child protective services, community mental health organisations and other sources of information. Any history of being a victim of physical or sexual abuse or neglect that was suspected, whether or not substantiated, was included. False reports of abuse or neglect were excluded (Barnoski 2004b). Physical abuse, sexual abuse and neglect were operationalised following child protective services (CPS) definitions (Barnoski 2004b):

**Physical abuse** included any non-accidental physical injury, such as bruises, burns, fractures, bites or internal injuries. Physical abuse was scored as follows: ‘Being a victim of physical abuse’, yes or no; ‘Physically abused by a family member’, yes or no; and ‘Physically abused outside the family’, yes or no.

**Sexual abuse** included acts such as indecent liberties, communication with a minor for immoral purposes, sexual exploitation of a child, child molestation, sexual misconduct with a minor, rape of a child and rape. Like physical abuse, sexual abuse was scored as ‘Being a victim of sexual abuse’, yes or no; ‘Sexually abused by a family member’, yes or no; and ‘Sexually abused outside the family’, yes or no.

**Neglect** included negligent or maltreatment (dangerous act) or omission that constitutes a clear and present danger to the child’s health, welfare and safety, such as: (1) failure to provide adequate food, clothing, shelter, emotional nurturing, or healthcare; (2) failure to provide adequate supervision given the child’s level of development; (3) an act of abandonment with the intent to forego parental responsibilities despite an ability to do so; (4) an act of exploitation, such as requiring the child to be involved in criminal activity, imposing unreasonable work standards, etc.; (5) an act of reckless endangerment, such as a parent driving under the influence of alcohol or drugs with children present; and
other dangerous acts, such as hitting, kicking, throwing, choking a child or shaking an infant. Neglect was assessed by a ‘Being a victim of neglect’ score, yes or no.

Variables measuring violent and sexual offending

Sexual and violent offending included both index offenses and previous offenses. Violent offending was defined as one or more acts of physical abuse or physical violence that are serious enough to cause injury to one or more persons, regardless of whether injury really occurred. These acts must be sufficiently severe so as to lead to prosecution for crime (felony or misdemeanor offenses) or prosecution (reports/evidence not included in criminal history). In measuring sexual and violent offending behaviour, a distinction was made between felony offenses, misdemeanor offenses and reports/evidence of sexual aggression or violence not included in criminal history.

Sexual offending behaviour

Sexual offending behaviour was operationalised as the occurrence of one or more felony sex offenses, misdemeanor offenses or reports/evidence of sexual aggression not included in criminal history. Felony sex offenses included child molestation, incest, indecent exposure, indecent liberties, assault, rape and sexual misconduct. Misdemeanour sex offenses included public indecency, indecent exposure and pornography. Reports/evidence of sexual aggression not included in criminal history included reports of aggressive sex, child sex, voyeurism and exposure.

Violent offending behaviour

Violent offending behaviour was operationalised as the occurrence of one or more against-person felony offenses, against-person misdemeanor offenses or reports/evidence of violence not included in criminal history. Felony against person offenses included offenses involving force or physical harm to another person, such as homicide, manslaughter, assault, robbery, kidnapping, domestic violence, harassment and intimidation. Against-person misdemeanor offenses included offenses involving threats, forces or physical harm to another person (assault, coercion, harassment, intimidation, etc.). Reports/evidence of violence not included in criminal history included reports of violent outbursts and/or displays of temper and/or uncontrolled anger with potential to cause harm, deliberately inflicted physical pain, used/threatened with weapon, animal cruelty).

Analyses

Analysis of variance (ANOVA) was used to determine whether there were differences between juvenile offenders with and without ID in the prevalence of sexual and violent offending behaviour and in the prevalence of maltreatment. Pearson correlation coefficients were calculated to determine the strength of the relationship between maltreatment and offending behaviour. Fisher’s z tests were calculated to assess the significance of the differences between juvenile offenders with and without ID in the strength of the correlations. To examine the unique contribution of the predictors, multiple logistic regression analyses were performed. Separate multivariate models were tested for the prediction of sexual and violent offending in juvenile offenders with and without ID.

Results

Prevalence of sexual and violent offending behaviour

Table 1 shows the prevalence rates of sexual and violent offending behaviour for juvenile offenders with and without ID. Both sexual and violent offending were more common in juvenile offenders with ID (21% and 84% respectively) than in juvenile offenders without ID (7% and 69% respectively). The differences between offenders with and without ID were greatest in the reports/evidence not included in the criminal history of sexual aggressive behaviour (15% and 7% respectively) and violent behaviour (75% and 52% respectively).

Prevalence of maltreatment victimisation

Table 2 shows the prevalence rates of sexual and physical abuse victimisation and neglect victimisation for juvenile offenders with and without ID. All
forms of abuse and neglect were more common in juvenile offenders with ID than in juveniles without ID. Seventy per cent of the juvenile offenders with ID and 42% of the juvenile offenders without ID had experienced any form of maltreatment (sexual abuse and/or physical abuse and/or neglect). The average number of different types of maltreatment (sexual abuse by a family member, sexual abuse outside the family, physical abuse by a family member, physical abuse outside the family, neglect) was 1.45 in the group with ID and 0.65 in the group without ID.

Relationship between offending behaviour and maltreatment

Table 3 shows the correlations between maltreatment victimisation and both sexual and violent offending for juvenile offenders with and without ID. The relationship between maltreatment victimisation and sexual offending was stronger in the group with ID than in the group without ID, the difference being significant for history of sexual abuse victimisation (total), history of sexual abuse victimisation outside the family, history of physical abuse victimisation and number of different types of maltreatment. There were no significant differences between the juvenile offenders with and without ID in the strength of the correlations between maltreatment victimisation and violent offending.

In addition, we found support for specific relationships between maltreatment victimisation and offending behaviour, both in juvenile offenders with ID and in juvenile offenders without ID. In juvenile offenders with ID, sexual offending was more strongly related to sexual abuse victimisation.
than to physical abuse victimisation ($r = 0.17$; Fisher’s $z = 1.67$, $P < 0.01$) or to neglect victimisation ($r = 0.14$; Fisher’s $z = 2.69$, $P < 0.01$).

In juvenile offenders without ID, sexual offending was more strongly related to sexual abuse victimisation ($r = 0.12$) than to physical abuse victimisation ($r = 0.02$; Fisher’s $z = 1.63$, $P = 0.05$) and violent offending was stronger related to physical abuse victimisation ($r = 0.22$) than to sexual abuse victimisation ($r = 0.11$; Fisher’s $z = 1.83$, $P < 0.05$).

To examine the unique contribution of the predictors, separate multivariate models were tested for the prediction of sexual and violent offending in juvenile offenders with and without ID. The logistic regression coefficients predicting sexual offending are presented in Table 4, and the logistic regression coefficients predicting violent offending are presented in Table 5. A history sexual abuse victimisation by a family member was the only variable that was uniquely related to sexual offending, both in juveniles with ID and in juveniles without ID. In juveniles with ID, a history of sexual abuse victimisation outside the family just failed to reach significance, and was therefore considered a trend predicting sexual offending. Variables with a significant contribution to the pre-

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**Table 3** Correlation between different forms of maltreatment and offending behaviour separately for juvenile offenders with and without intellectual disabilities (ID)

<table>
<thead>
<tr>
<th></th>
<th>Correlation with sexual offending</th>
<th>Correlation with violent offending</th>
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<tbody>
<tr>
<td></td>
<td>ID group ($n = 102$)</td>
<td>Non-ID group ($n = 526$)</td>
</tr>
<tr>
<td>History of sexual abuse victimisation (total)</td>
<td>0.41***</td>
<td>0.12*</td>
</tr>
<tr>
<td>By a family member</td>
<td>0.24*</td>
<td>0.11*</td>
</tr>
<tr>
<td>Outside the family</td>
<td>0.21*</td>
<td>0.02</td>
</tr>
<tr>
<td>History of physical abuse victimisation (total)</td>
<td>0.17*</td>
<td>0.02</td>
</tr>
<tr>
<td>By a family member</td>
<td>0.16</td>
<td>0.03</td>
</tr>
<tr>
<td>Outside the family</td>
<td>0.01</td>
<td>-0.01</td>
</tr>
<tr>
<td>History of neglect victimisation</td>
<td>0.14</td>
<td>0.04</td>
</tr>
<tr>
<td>Any form of maltreatment</td>
<td>0.18*</td>
<td>0.02</td>
</tr>
<tr>
<td>Number of different forms of maltreatment</td>
<td>0.25***</td>
<td>0.06</td>
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* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

**Table 4** Logistic regression coefficients predicting sexual offending, separately for juvenile offender with and without intellectual disabilities (ID)

<table>
<thead>
<tr>
<th></th>
<th>ID group</th>
<th>Non-ID group</th>
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<tr>
<td></td>
<td>$B$</td>
<td>SE</td>
</tr>
<tr>
<td>Sexual abuse victimisation by a family member</td>
<td>1.18</td>
<td>0.58</td>
</tr>
<tr>
<td>Sexual abuse victimisation outside the family</td>
<td>1.17</td>
<td>0.64</td>
</tr>
<tr>
<td>Physical abuse victimisation by a family member</td>
<td>0.38</td>
<td>0.58</td>
</tr>
<tr>
<td>Physical abuse victimisation outside the family</td>
<td>-0.94</td>
<td>0.85</td>
</tr>
<tr>
<td>History of neglect victimisation</td>
<td>0.60</td>
<td>0.61</td>
</tr>
<tr>
<td>Constant</td>
<td>-2.29</td>
<td>0.48</td>
</tr>
</tbody>
</table>

* $P < 0.10$, * $P < 0.05$, ** $P < 0.01$. 

($r = 0.41$) than to physical abuse victimisation ($r = 0.17$; Fisher’s $z = 2.41$, $P < 0.05$) or to neglect victimisation ($r = 0.14$; Fisher’s $z = 2.69$, $P < 0.01$).
diction of violent offending were physical abuse victimisation by a family member, physical abuse victimisation outside the family (trend) and sexual abuse victimisation outside the family (trend) in juvenile offenders without ID. In juvenile offenders with ID, the only variable that was uniquely related to violent offending (trend) was physical abuse victimisation by a family member. These results also support specific relationships between maltreatment victimisation and offending behaviour.

**Discussion**

Because previous research on the relationship between maltreatment victimisation and subsequent offending behaviour was primarily conducted using non-disabled samples, the present study aimed to examine differences between juvenile offenders with and without ID in the relationship between maltreatment victimisation and sexual and violent offending. First, differences between juveniles with and without ID in the prevalence of different types of maltreatment and sexual and violent offending were examined. In line with our expectations, we found that all forms of maltreatment and both sexual and violent offending were more common in juvenile offenders with ID than in juveniles without ID. Seventy per cent of the juvenile offenders with ID and 42% of the juvenile offenders without ID had experienced abuse and/or neglect. The average number of different types of maltreatment was 1.45 in the group with ID and 0.65 in the group without ID. There were no differences between the two groups in the total number of offenses, but both sexual and violent offending were much more common in juvenile offenders with ID than in juvenile offenders without ID.

Moreover, it turned out that there were differences between juvenile offenders with and without ID in the associations between history of victimisation and sexual offending, but not with violent offending. The relationship between history of victimisation and sexual offending was stronger in the group of juvenile offenders with ID than in the group of juvenile offenders without ID, the difference being significant for history of victimisation of sexual abuse (total), history of victimisation of sexual abuse outside the family, history of victimisation of physical abuse and number of different types of maltreatment. There were no differences between juvenile offenders with and without ID in the relationship between history of victimisation and violent offending. It should be noted that the relationship between victimisation and offending is not necessarily direct and causal. Victimisation can have a wide range of different effects that could increase the risk of involvement in offending behaviour (Falshaw 2005). For example, victimisation can result in substance abuse, mental health problems, run away behaviour and a decline in school performance, which increases the risk of involvement in offending behaviour. Further research should focus on differences between juvenile offenders with and without ID in these mechanisms in order to be able to

<table>
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<th>Table 5</th>
<th>Logistic regression coefficients predicting violent offending, separately for juvenile offender with and without intellectual disabilities (ID)</th>
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<tr>
<td></td>
<td>ID group</td>
</tr>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Sexual abuse victimisation by a family member</td>
<td>-0.28</td>
</tr>
<tr>
<td>Sexual abuse victimisation outside the family</td>
<td>1.39</td>
</tr>
<tr>
<td>Physical abuse victimisation by a family member</td>
<td>1.18</td>
</tr>
<tr>
<td>Physical abuse victimisation outside the family</td>
<td>-0.43</td>
</tr>
<tr>
<td>History of neglect victimisation</td>
<td>-0.21</td>
</tr>
<tr>
<td>Constant</td>
<td>1.29</td>
</tr>
</tbody>
</table>

* P < 0.10, * P < 0.05, ** P < 0.01.

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effectively prevent offending behaviour by means of treatment.

As juvenile offenders with ID showed more sexual offending behaviour, special attention should be focused on sexual related violence in treatment programmes. Given that for sex offenders with ID, it is more difficult to understand the other’s point of view, and that these offenders more often suffer from social isolation, which makes it harder to develop age appropriate teenage romantic (and sexual) relationships (Lindsay & Smith 1998; Lindsay et al. 1999; Wissink et al. 2012), juvenile offenders with ID should be taught in skills training or cognitive behavioural therapy to find socially accepted ways to deal with their feelings. Additionally, there should be attention for denial of offense, intent, responsibility and harm to victim (Lindsay et al. 1999).

In line with former research among juvenile offenders with ID (e.g. Briere & Runtz 1990; Prendergast 1991; Dutton & Hart 1992; Bagley et al. 1994; Ford & Linney 1995), we found that the experience of a particular type of maltreatment was most strongly related to the same kind of offending behaviour (not with general offending behaviour), both in juvenile offenders with ID and in juvenile offenders without ID. In juvenile offenders with ID, sexual offending was stronger related to sexual abuse victimisation than to physical abuse or neglect victimisation. In juvenile offenders without ID, sexual offending was stronger related to sexual abuse victimisation than to physical abuse victimisation. Moreover, in juvenile offenders without ID, violent offending was stronger related to physical abuse victimisation than to sexual abuse victimisation.

A substantial part of the juvenile offenders with ID (70%) had been victim of abuse and/or neglect. The question that follows from the results is how this vulnerable group can be protected. As suggested by Murphy (2011), the best way to protect children with ID from abuse is by addressing the needs of the caretakers. Families of children with ID can benefit from social support services, respite care and parenting interventions that address topics such as child behaviour management and stress management techniques (Murphy 2011; Weisleder 2011). In addition, it is important to promote self-advocacy in children with ID, so that they are able to distinguish between appropriate and inappropriate interactions with adults and know how to communicate about this with the adults they trust (Murphy 2011).

Additionally, the high incidence of maltreatment in juvenile offenders with ID also indicates that when treating juvenile offenders with ID attention should be given to possible experiences of maltreatment and all associated feelings that might cause the juveniles to harm someone else. For example, feelings of powerlessness seem to play an important role in the so-called ‘cycle of abuse’ (Firth et al. 2001; Timms & Goreczny 2002; Wissink et al. 2012). Besides, problems that are related to abuse and neglect, such as trauma and post-traumatic stress disorder, should be addressed in treatment (Mevissen & De Jongh 2010). Moreover, because the relationship between sexual abuse victimisation and subsequent sexual offending behaviour is relatively strong for ID offenders, special attention should be focused on preventing that ID juvenile offenders become abusers themselves. Lindsay (2005) showed that addressing cognitive distortions and improving problem-solving skills are crucial in the treatment of sex offenders with ID. Skills training adjusted to the level of intellectual functioning therefore seems an important aspect of improving treatment for offenders with ID.

There are several limitations worth mentioning. First, we included only juveniles in the ID group for whom a diagnosis of ID was present. It is possible, however, that there were low functioning juvenile offenders in the non-ID group, who just happen to have no formal diagnosis of ID. However, the information available in the present study is the information that is usually present in court. So it is important to use this information to come to treatment decisions. Second, the WSJCA was not designed to provide an in-depth examination of risk factors. Instead, it is a risk assessment tool that is designed to be used by juvenile justice professionals and clinicians to summarise juveniles’ risks and needs, classify their overall risk level, and plan treatment and supervision strategies. Third, there are no research results available regarding the inter-rater reliability of the WSJCA. However, quality assurance is an important part of the assessment structure and organisation in Washington State and probation officers receive intensive training to
adequately administer and reliably score the WSJCA (Barnoski 2004a,b). Fourth, the relatively high prevalence of sexual and violent offending behaviour in juvenile offenders with ID could possibly be the result of the fact that juvenile offenders with ID are at increased risk of getting caught compared with juvenile offenders without ID (Hendriks 2011). On the other hand, there is empirical evidence showing that sexual abuse cases involving youngsters with ID often do not make it into court because of unclear statements or lack of clarity about what happened precisely between the youngsters involved (Wissink et al. 2012).

Notwithstanding these limitations, the present study provides important information on differences between juvenile offenders with and without ID in the relationship between maltreatment and offending behaviour. The relationship between different forms of maltreatment and sexual offending behaviour was stronger in juvenile offenders with ID than in juvenile offenders without ID. Additionally, the strength of the association between maltreatment victimisation and sexual offending behaviour indicates that, in the first place, treatment, especially of juvenile sexual offenders with ID, should focus on problems and potential trauma associated with the abuse. Moreover, given the high rates of abuse and neglect victimisation, preventive initiatives of people working with ID juveniles and their families should be aware of the potential higher risk of maltreatment and actively try to protect the vulnerable ID victims.

References


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