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Juvenile sex offenders mental health and reoffending
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VRIJE UNIVERSITEIT

**Juvenile sex offenders:
mental health and reoffending**

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad Doctor aan
de Vrije Universiteit Amsterdam,
op gezag van de rector magnificus
prof.dr. L.M. Bouter,
in het openbaar te verdedigen
ten overstaan van de promotiecommissie
van de faculteit der Geneeskunde
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door

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Chapter 1

General introduction

Sexual violence is a large public health problem that exacts not only a societal toll in terms of trauma to victims but also in prosecution of offenders and expenditure of correctional resources (Dunsieth et al 2004). The majority of the sexual offenses are committed by adults, but a significant proportion, approximately 20% of all rapes and 20-50% of child abuse cases, is perpetrated by minors (Barbaree and Marshall 2006). They engage in many of the deviant sexual behaviors exhibited by adults, including child molestation, pedophilia and fetishism (Zolondek et al 2001).

The consequences of sexual violence have been widely studied in its victims. Trauma associated with sexual victimization leads to both immediate and longer term negative effects in a number of domains of mental health outcomes, including depression, anxiety, substance abuse and negative behavioral outcomes such as early pregnancy, suicide and antisocial conduct (Barbaree and Marshall 2006; Kilpatrick et al 2003). However, research on the mental health status of perpetrators and whether mental illness plays a role in the development of sexual deviancy is scarce.

Although several studies have found high prevalences of psychiatric disorders among general juvenile offenders (for reviews see: Fazel 2008; Vermeiren et al 2006; Vermeiren 2003), there have been few systematic studies on the association of psychopathology and sex offending in juveniles. Hence, whether the presence of psychiatric disorders is related to sexual reoffending is unknown. However, there is some evidence that juvenile sex offenders constitute a distinct group of juvenile delinquents with respect to the presence of psychopathology, especially in the presence of developmental disorders (Van Wijk et al 2007a). Investigating psychiatric disorders in juvenile sex offenders may contribute to a fundamental issue, namely whether child psychiatry should be involved in the diagnostic assessment and treatment of this very specific subgroup. As high rates of psychiatric disorders in general juvenile offenders are found, several academics have criticized the poor quality of mental health services offered to youths who have had contact with juvenile justice authorities (Grisso 2004; Teplin et al 2002). Because of the limited evidence, one cannot conclude that this is true for the specific subgroup of juvenile sex offenders as well.

In adults, a relationship between sexual delinquency and mental disorders has been documented in several studies, underlining the importance of investigating this relationship in juveniles. Various axis I and axis II disorders have been found in adult sex offenders (Leue et al 2004; McElroy et al 1999; Raymond et al 1999). A considerable part of the examined adult sex offenders stated that they had developed their deviant sexual thoughts and behavior in their youth (Abel et al 1987). Moreover, approximately one third began to offend sexually in adolescence (Longo and Groth 1983). Therefore, it is of interest to investigate the association between psychopathology and sexual delinquency in juveniles as well.

While investigating psychopathology in juvenile sex offenders, developmental disorders, in particular autism spectrum disorders (ASD), are of special interest. Although investigation of the relationship between (sexually) offensive behavior and ASD has recently received increasing attention from various academics, the literature on this specific topic is scarce. Anckarsäter et al (2008) found an ASD prevalence of 13% in a forensic sample of adult and juvenile offenders ($n = 42$, aged 11-47 years). A few case reports described criminal offending by individuals with ASD (Baron Cohen 1988; Wing 1981), including offenses of a sexual nature (Milton et al 2002; Kohn et al 1998; Chesterman and Rutter 1994). These case reports indicate that in ASD patients there may be an increased likelihood of sexual offending. However, conclusions on an increased prevalence of autistic symptoms in the group of juvenile sex offenders cannot be drawn. In any event, prior studies have indicated that sex offenders, specifically the subgroup of child molesters, have poorly developed social skills (Van Wijk et al 2006; Barbaree et al 1998; Hsu and Starzynski 1990; O'Brien and Bera 1986) and it is suggested that sex offending might be associated with developmental disorders like ASD (Van Wijk et al 2007a). As these studies were based on clinical impressions or clinical file analysis, further study of this issue is warranted.

Differences in mental health characteristics between subgroups of juvenile sex offenders have been reported in the literature (Hunter et al 2003; 2000). The subgroup of child molesters (offenders who sexually abuse children below twelve

years of age) in particular was shown to have poorly developed social skills (Barbaree et al 1998; Hsu and Starzynski 1990; O'Brien and Bera 1986). Some studies found that child molesters, when compared to rapists (offenders who rape or assault peers or older persons), are more likely to have internalizing problems (Hunter et al 2003; Becker and Hunter 1997) and more often have a history of sexual abuse (Worling and Långström 2003) while in rapists, externalizing problems are more common (Becker and Hunter 1997).

Bijleveld and Hendriks (2003) reported that group offenders, as compared to solo offenders, had lower scores on neuroticism, impulsivity and sensation seeking and higher scores on social behavior. As up to two thirds of juvenile sex offenses are committed in groups (Bijleveld et al 2007), there is substantial relevance in focusing on this specific phenomenon too. Most studies on differences between solo rapists and group rapists focused on adult samples only and further investigation of younger samples is therefore necessary.

It may therefore be relevant to compare sex offenders when classified by age of victim preference - about the same age or much younger than the perpetrator (Hunter et al 2000; Weinrott et al 1996); or by number of offenders taking part in the offense - solo offending versus group offending (O'Brien and Bera 1986).

Recidivism rates in juvenile sex offenders are relatively low, ranging from 0 to 40% (Worling and Långström 2006) and it was found that juvenile sex offenders in general are more likely to reoffend non-sexually than sexually (Caldwell 2002). Because most juvenile sex offenders do not persist in their harmful sexual behavior, one may wonder whether sexual offending by juveniles is a temporary deviation as part of adolescent development rather than behavior that relates to individual dysfunctioning. The small subgroup of youngsters who do reoffend sexually, however, might be on a sexual deviant pathway and at risk of becoming a persistent sexual offender. This behavior may be related to individual problems such as psychiatric disturbances. Therefore, it is of interest to study the phenomenon of sexual offending in juveniles and the risk for reoffending in this group. Because of the unknown but possible role of psychiatric disorders, it is relevant to focus on this aspect.

Aims of the thesis

Because of the serious consequences for (future) victims as well as the perpetrators, it is of interest to investigate whether mental illness has a role in the development of sexual deviancy. Studies that focus on mental health problems in (subgroups of) juvenile sex offenders are needed in order to inform the juvenile justice system of the necessity to meet its custodial treatment obligation (Grisso 2004). As caretakers of adolescent offenders, the authorities have to deal with mental disabilities of youths in an appropriate way. These studies may also be of help in guiding further research and possibly eventually in guiding intervention, prevention and treatment programs, finally resulting in a better outcome for these juveniles themselves as well as benefiting public safety.

The overall aim of this thesis is to investigate psychopathology, psychosocial and offense related characteristics of juvenile sex offenders and the predictive validity of these characteristics for persistent (sexual) offensive behavior. The focus will be on a wide range of common psychiatric disorders and specifically on autism spectrum disorder symptoms in juvenile sex offenders. Also, the role of psychopathology in recidivism will be investigated. Furthermore, sexual offense and psychosexual developmental characteristics of juvenile sex offenders will be investigated and the phenomenon of group sexual offending will be explored.

Samples

The study population consisted of a sample of male suspects of sex offenses aged 12-18 years referred to four (out of twenty-two) regional Child Protection Board offices and four (out of thirteen) juvenile justice institutions in the Netherlands in the period of May 2003-December 2006.

The sample ($n = 226$) was examined by means of a standardized questionnaire package on psychiatric, psychosocial and offense-related characteristics. In the period from October 2004-December 2006, a subsample ($n = 106$) was investigated by means of a comprehensive semi-structured interview on psychiatric disorders and several other questionnaires.

In total, 309 boys were eligible for participation, of whom 226 agreed to participate

in the study (response rate 73%). During the first period (May 2003-September 2004) 148 boys were eligible for participation, of whom 120 (response rate 81%) agreed to participate. During the second period, 161 boys were eligible for participation of whom 106 (response rate 66%) agreed to participate. The study described in chapter 3 reports on the subsample; the studies described in chapters 4, 5 and 6 report on the total sample.

It should be noted that although participants were legally considered to be only suspected of committing a sexual offense (i.e. arrested for/charged with a sexual offense), for the sake of readability in this thesis they will be called sex offenders or sexual delinquents.

Based on offense characteristics juvenile sex offenders were classified into three subgroups:

- 1) child molesters: offenders suspected of having sexually abused children (below 12 years of age) who were at least four years younger than the offender himself.
- 2) solo peer offenders: offenders suspected of having raped or sexually assaulted peers (at least twelve years old) or older persons on their own.
- 3) group offenders: offenders suspected of having raped or sexually assaulted peers (at least twelve years old) or older persons as part of a group.

Outline of this thesis

Chapter two presents a review of the literature on (the prevalence and characteristics) of psychiatric disorders in male (juvenile) sex offenders.

Chapter three reports on the prevalence of psychiatric disorders in the study sample of juvenile sex offenders and its relation with criminal recidivism. The prevalence of psychiatric disorders and the predictive validity for recidivism, both sexually and non-sexually, are investigated in the total group of sex offenders, as well as specific subgroups of sex offenders. Distinction is made between child molesters, solo peer offenders and group sex offenders.

In **chapter four** a study on autism spectrum disorder (ASD) symptoms in juvenile sex offenders is presented. ASD symptomatology in juvenile sex offenders is compared to ASD symptomatology in normal controls and in a clinical adolescent

ASD sample. Differences in ASD symptoms between specific sexual offender subgroups are also investigated.

Chapter five reports specifically on characteristics of group offenders, emphasizing the role of leaders versus followers. Both groups are compared on levels of psychopathology, intelligence, psychosocial and offense related characteristics.

Chapter six reports on offense related characteristics and the psychosexual development of juvenile sex offenders as measured using the Global Assessment Instrument for Juvenile Sex Offenders (GAIJSO). This instrument is used in addition to the BARO (Basis Raads Onderzoek: Protection Board Preliminary Investigation of Criminal Cases), a global assessment tool for delinquents used in (most) Child Protection Board offices. The predictive validity of these characteristics for persistent (sexual) offensive behavior in subgroups of juvenile sex offenders is investigated. Finally, **chapter seven** summarizes the main findings of this thesis and contains a general discussion and conclusion.

CHAPTER 1

Chapter 2

Mental disorders in (juvenile) sex offenders: a review of the literature

Submitted

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Abstract

Objective To provide a best estimate of the prevalence of psychiatric disorders in adult and juvenile sex offenders.

Method Computer assisted searches were executed to identify relevant studies on mental disorders established by means of a standardized interview in sex offenders.

Results Eight articles met inclusion criteria: six studies on adult sex offenders and two on juvenile sex offenders. In the studied samples 80% (73-100%) of the sex offenders met criteria for at least one psychiatric disorder.

Discussion Methodological differences between the reviewed studies, such as large differences in sample characteristics, hamper the interpretation of results. Mental disorders were highly prevalent across studies; however, the range of prevalence rates per diagnosis was remarkably wide. The findings of this review demonstrate the scarcity of solid research on mental disorders in sex offenders, leaving several issues and questions concerning this specific delinquent population and sex offender subgroups unresolved and unanswered. In order to give a better estimate of mental health problems in relation to sexual offending it is important to investigate larger samples of sex offenders, preferably in absence of specific selection criteria.

Key words sex offenders – mental disorders – adults – adolescents

Introduction

An increasing body of literature has consistently shown that adult and adolescent offenders bear high levels of mental health needs (for reviews see: Colins et al in press; Fazel et al 2008; Vermeiren et al 2006; Vermeiren 2003; Crichton 1999). A number of studies in adults have focused specifically on such problems in subgroups of offenders (i.g. violent offenders), however, only few studies focused on adolescents (e.g. Colins et al 2009; Elonheimo et al 2007; Haapasalo and Hämäläinen 1996). Overall, while relationships between type of offending and psychiatric disorders remain largely unexplored, this is even more so with respect to sex offending. Scarce research findings do, however, suggest that mental health characteristics of sexual offenders differ from characteristics of those demonstrating other criminal behavior (Hanson and Bussière 1998; Hanson et al 1995). For this reason, the aim of the current review was to fill this void by systematically reviewing the literature on mental disorders in sex offenders. In addition, it may be of interest to explore differences between subgroups of sex offenders, as subgroups (such as child molesters and rapists) were shown to differ in many respects (Hanson and Bussière 1998; Chantry and Craig 1994).

While most sex offending is committed by adult perpetrators, such offenses are not infrequently committed by minors. Of all sex offenses, a significant proportion, approximately 20% of all rapes and 20-50% of child abuse cases, is perpetrated by minors (Barbaree and Marshall 2006). Many adult sex offenders developed their deviant sexual thoughts and sexual behavior in their youth (Abel et al 1987) and approximately one third committed their first sex offense in adolescence (Longo and Groth 1983). Although juvenile sex offending has mostly been explained using theoretical frameworks developed for adult sex offenders (Knight and Prentky 1993; 1990), there is evidence to assume that juvenile sex offenders differ from adult sex offenders (Hunter et al 2000; Awad and Saunders 1991). Predictors for sexual reoffending were also shown to differ between adults and juveniles (Worling and Långström 2003; Miner 2002), while follow up studies have shown that juvenile offenders are less likely to reoffend than adult offenders.

At present, the clinical and judicial implications of mental health needs of offenders are unknown. For several reasons, studies in this field are important (Grisso 2004). First, these studies are needed in order to inform the (juvenile) justice system of the need to meet its legal obligations to respond to the mental health needs of sex offenders in its custody. Second, a better understanding of the relationship between sex offending and mental illness can contribute to improve risk assessment. Accurate risk assessment is needed in order to protect society from future harm and to prevent situations that may impair the perpetrator's outcome. And third, better knowledge of dynamic risk factors (e.g. mental disorders) might eventually lead to the development of more effective legal, correctional and public health policies regarding sex offenders.

Therefore, in order to increase the understanding of the relationship between sexual violence and mental illness, this article aims at reviewing the prevalence of psychiatric disorders in sex offenders, including articles on adult as well as juvenile samples.

Method / selection of articles

Computer-assisted searches (Web of Science) were executed, looking for English-language studies published between 1975 and December 2009. Combinations of keywords were used, relating to sexual offending (e.g. sex* offend* or sex* delinq* or child* molest* or sex* abusive behavior*) and to mental disorders (psychopatholog* or psychiatric* or external* or internal* or disord* or mental* or symp* or diagn* or problem*). The search was refined by the subject area 'psychiatry'.

Abstracts of studies identified by our combination of search terms and reference lists of the selected articles were carefully checked by the first author (LH) and one of the co-authors (OC). Inclusion criteria for relevant empirical studies describing mental disorders in (juvenile) sex offenders were defined as follows:

1. a sample of male sex offenders;
2. assessment of at least one axis 1 psychiatric disorder (DSM or ICD);
3. use of a standardized (semi-)structured interview to define the axis 1 disorder.

No formal statistical meta-analysis could be performed because of the

methodological heterogeneity among the studies. Weighted means and accompanying 95% confidence intervals (CI) for psychiatric disorders were calculated.

Results

Study selection

While the initial search identified 927 publications, further refinement by the subject area 'psychiatry' reduced the initial outcome to 214 hits. A total of 34 articles on axis I psychiatric disorders assessed by means of a diagnostic interview were found. Of these, 26 articles were excluded for the following reasons: 15 (Daderman and Johnson 2008; Oxnam and Vess 2008; Baltieri and Andrade 2008; Crisford et al 2008; Novak et al 2007; Dudeck et al 2007; Ahlmeyer et al 2003; Firestone et al 1998; Duffield et al 1998; Clark and Mezey 1997; Bourget and Bradford 1995; Shaw et al 1995; Barnard et al 1992; Saunders and Awad 1991; Grossman and Cavanaugh 1990) did not use a standardized psychiatric interview, eight (Alish et al 2007; Hill et al 2007, 2006; Stinson et al 2005; Firestone et al 2005; Vess et al 2004; Baker and White 2002; Greenberg et al 1996) were based on file-analysis and one study (Green and Kaplan 1994) included only female sex offenders. As some papers presented the same samples in different papers (Dunsieth et al 2004 + Mc Elroy et al 1999; Leue et al 2004 + Hoyer et al 2001), the most recent papers with the largest sample size and with the largest variety of assessed diagnoses were selected (Dunsieth et al 2004; Leue et al 2004) and the other two studies (Hoyer et al 2001; Mc Elroy et al 1999) were excluded. Finally eight studies were eligible and were included in the current review (Harsch et al 2006; Leue et al 2004; Dunsieth et al 2004; Fazel et al 2002; Langevin et al 1999; Raymond et al 1999; Galli et al 1999; Kavoussi et al 1988). The selection process is summarized in figure 1.

Study and sample characteristics

The eight included studies sampled a total of 521 male sex offenders from four different countries (United States, United Kingdom, Germany and Canada). Sample sizes varied from $n = 22$ to $n = 113$, with mean ages between 15.3 and 65.5. Six studies included adult sex offenders (> 18 years old), one of which included only

Figure 1. **Study selection process**

elderly subjects (> 59 years old). Finally, two studies included juvenile sex offenders (13 to 18 years old). Sampling methods comprised consecutive and cross-sectional sampling. Response rates varied from 83% to 97%. Three studies did not mention their methods of sampling or response rates.

Studied samples varied across studies. Studies on adult sex offenders included pedophilic sex offenders from outpatient and residential sex offender treatment programs; physicians charged with sex offenses, in or outside their clinical practice, examined prior to legal and disciplinary proceedings; imprisoned sex offenders; sex offenders referred to a residential treatment program and sex offenders recruited from state forensic hospitals and sex offenders detained in forensic psychiatry.

Studies on juveniles included juvenile sex offenders who had been found guilty of a sexual crime, referred to an outpatient evaluation and treatment program and adolescents confessing to having sexually molested a child, recruited from residential programs and the juvenile court system.

Across studies six different interviews were used (see table 1). Five studies used the Structured Clinical Interview for DSM-IV Axis I disorders (SCID-I); in one study modules for DSM-IV impulse control disorders not elsewhere classified and sexual disorders (SCID-SD) were added. One study assessed the presence of mental disorder by means of the Geriatric Mental State (GMS). One study assessed psychiatric disorders by means of the *Diagnostische Interview für psychische Störungen-Kurzversion* (Mini-DIPS) [Diagnostic Interview for Psychiatric Disorders-short version] based on the original DIPS and DSM-IV criteria. In two studies self developed structured interviews were used to assess DSM-III-R paraphilias and impulse control disorders. The Schedule for Affective Disorders and Schizophrenia (SADS) was used in two studies for the assessment of psychiatric disorders, with one of these studies using the child version (K-SADS). The Diagnostic Interview for Children and Adolescents (DICA-A) with the corresponding parent version (DICA-P) was used in one study for the assessment of attention-deficit/hyperactivity (ADHD) and conduct disorder (CD).

Two studies reported on lifetime and current prevalence rates; the other six studies did not mention the time-frame used to examine the presence of disorders (present/current and/or lifetime diagnosis). For this review, if available, lifetime prevalence rates for axis I disorders were used.

The reviewed studies investigated and compared a variety of sex offender subgroups: sex offenders with or without paraphilias, sex offenders with impulse control disorders, imprisoned sex offenders, forensic sex offenders, physician sex offenders, juvenile rapists and non-rapist juvenile sex offenders. In four of these studies differences between sex offender subgroups were investigated. Two studies compared sex offenders with non-sex offenders as controls (e.g. violent offenders and non-sex offenders). Given four out of eight studies reported on paraphilic sex offenders in particular. Results on types and prevalences rates of paraphilias will be given separately.

Table 1. Study and sample characteristics

Study	Year	J/A	Country	Total N	Sex offender subgroups
1. Kavoussi	1988	Juveniles	USA	58	-
2. Galli	1999	Juveniles	USA	22	Childmolesters (n = 22)
3. Raymond	1999	Adults	USA	45	-
4. Langevin	1999	Adults	Canada	57	Physician sex offenders (n = 19) Sex offenders controls (n = 19) General sex offender population (n = 19)
5. Fazel	2002	Adults	UK	101	Elderly sex offenders > 59y
6. Dunsieith (Mc Elroy, 1999)	2004	Adults	USA	113	With paraphilia (n = 84) Without paraphilia (n = 26) Unclassified (n = 3)
7. Leue (Hoyer, 2001)	2004	Adults	Germany	55	Paraphilia (n = 30) Impulse control disorder (n = 25)
8. Harsch	2006	Adults	Germany	70	Imprisoned sex offenders (n = 30) Forensic sex offenders (n = 40)

Prevalence of psychiatric disorders

Almost 80% of sex offenders met criteria for at least one disorder (range: 73% to 100%; mean = 79.7; CI 78.7-81.0). Substance use disorder (SUD) was most prevalent, followed by affective disorder, impulse control disorder, and anxiety disorder. Psychotic disorder was diagnosed the least. Conduct Disorder (CD) and Attention deficit Hyperactivity Disorder (ADHD) were assessed in the two studies on juvenile sex offenders only, with CD being the most prevalent. Table 2 shows a detailed overview of prevalence rates, means and CI.

Control groups	Mean age	Method	Interview	Response rate
-	15.3	-	SCID-I, K-SADS-E	-
-	15.9 (SD1.1)	Consecutive	SCID-I, DICA-A/P and a structured. interview for paraphilias and impulse control disorders	-
-	37	-	SCID-I	94%
-	48 (SD 10) 42 (SD 8) 34 (SD 12)	-	SADS	-
Non sex offenders	65.5 (SD 5)	Cross sectional	GMS	87%
-	35.3 (SD 10.4)	Consecutive	SCID-I, SCID-SD and modules for impulse control disorders	97%
-	36.5 30.7	Cross sectional	Mini DIPS	83%
Violent offenders	> 18	Cross sectional	SCID-I	85%

Prevalence rates for paraphilias were between 33% and 100% (mean = 69.6; CI 66.5-72.7). In adults, pedophilia was the most frequently diagnosed paraphilia: mean 55.1 (CI 50.7-59.5) and prevalence rates ranged from 37-100%. Finally, among adolescents who met DSM criteria for pedophilia, 86% were also diagnosed with frotteurism, 50% with voyeurism and 65% with paraphilias not otherwise specified.

Table 2. Detailed overview of prevalence rates

	Kavoussi (1988) N = 58	Galli (1999) N = 22	Raymond (1999) N = 45	Langevin (1999) N = 57	Fazel (2002) N = 101
Sample characteristics	Juveniles	Juveniles Child molesters	Adults	Adults Elderly > 59 y	Adults
Any of the assessed disorders	81	100	93	-	-
No diagnosis	19	-	7	-	-
Any affective disorder	9	82	67	-	-
<i>Major depressive disorder</i>	-	23	56	-	7
<i>Bipolar disorder</i>	-	55	9	-	-
Any anxiety disorder	5	55	64	-	-
<i>Social phobia</i>	5	-	38	-	-
<i>Simple phobia</i>	-	-	27	-	-
<i>OCD</i>	-	27	9	-	-
<i>PTSD</i>	-	32	33	-	-
ADHD	7	71	-	-	-
Conduct disorder	48	94	-	-	-
Any substance use disorder	-	50	60	-	1
<i>Alcohol abuse</i>	9	36	51	33	-
<i>Marihuana abuse</i>	10	36	38	-	-
Psychotic disorder	-	-	2	12	6
Any eating disorder	-	-	9	-	-
Paraphilia	-	100	100	-	-
Impulse control disorder	-	55	29	-	-

Note. *OCD* = obsessive compulsive disorder; *PTSD* = post traumatic stress disorder;
ADHD = attention deficit/hyperactivity disorder; Means are weighted by sample size;
C.I. = confidence interval.

MENTAL DISORDERS IN (JUVENILE) SEX OFFENDERS: A REVIEW OF THE LITERATURE

	Dunsieth (2004) (Mc Elroy 1999) N = 113	Leue (2004) (Hoyer 2001) N = 55	Harsch (2006) N = 87	Mean (%)	CI	Number of studies/8
Sample characteristics	Adults	Adults	Adults			
Any of the assessed disorders	74	-	73	79.7	78.7-81.0	5/8
No diagnosis	26	-	27	21.8	21.0-22.6	4/8
Any affective disorder	58	56	9	42.9	40.3-45.6	6/8
<i>Major depressive disorder</i>	24	53	-	27.7	25.7-29.7	5/8
<i>Bipolar disorder</i>	35	-	-	31.1	29.0-33.2	3/8
Any anxiety disorder	23	69	6	30.8	28.2-33.4	6/8
<i>Social phobia</i>	10	38	-	19.1	17.4-20.9	4/8
<i>Simple phobia</i>	6	40	-	19.3	17.3-21.2	3/8
<i>OCD</i>	5	-	-	8.9	7.8-9.9	3/8
<i>PTSD</i>	9	27	-	19.9	18.5-21.3	4/8
ADHD	-	-	-	24.5	18.2-30.8	2/8
Conduct disorder	-	-	-	60.9	56.4-65.4	2/8
Any substance use disorder	85	56	60	51.2	48.2-54.2	6/8
<i>Alcohol abuse</i>	-	56	-	36.2	33.9-38.4	5/8
<i>Marihuana abuse</i>	-		-	24.7	22.4-27.1	3/8
Psychotic disorder	-		-	6.9	6.4-7.4	3/8
Any eating disorder	9		-	8.8	8.8-8.8	2/8
Paraphilia	74		33	69.6	66.5-72.7	4/8
Impulse control disorder	38		-	37.9	36.8-39.0	3/8

Sex offender subgroups

Four studies compared sex offender subgroups with respect to psychiatric disorder. Conduct disorder was significantly more prevalent in juvenile rapists than in juvenile non-rapist sex offenders (75% versus 38%) (Kavoussi et al 1988).

Alcohol abuse was less prevalent in physician sex offenders (16%) than in sex offender controls (37%) and a general population of undifferentiated sex offenders (42%) (Langevin et al 1999).

In comparison with non paraphilic sex offenders, sex offenders with paraphilias, were more likely to have mood (73% versus 19%), anxiety (29% versus 8%) and impulse control (45% versus 15%) disorders. Non paraphilic sex offenders had more psychoactive substance abuse overall (100% versus 82%) (Dunsieth et al 2004). Paraphilic sex offenders had more (53% versus 20%) social phobia but fewer major depression diagnoses (30% versus 80%) than sex offenders with impulse control disorders (Leue et al 2004).

Sex offenders versus non sex offenders

Only two studies compared sex offenders with a non sex offender control group. Fazel et al (2002) did not find significant differences between elderly sex offenders and elderly non sex offenders. In the study conducted by Harsch et al (2006), the prevalence of mental disorders was investigated in forensic sex offenders, imprisoned sex offenders and violent offenders. When SUDs were excluded, in forensic sex offenders the prevalence of axis I disorders (63%), especially paraphilias, was significantly higher as compared to imprisoned sex offenders and violent offenders.

Discussion

Overall, our review showed that only eight studies (including 521 sex offenders) have been conducted to investigate rates of mental disorders in sex offenders by means of a standardized interview. Methodological differences between these studies, such as differences in sample characteristics, hamper the interpretation of results. Across studies, the range of prevalence rates for each diagnosis was remarkably wide. Nevertheless, mental disorders were highly prevalent in all studies.

The findings of this review demonstrate the scarcity of solid research on mental disorders in sex offenders, but it provides enough evidence to further investigate the mental health characteristics of (subgroups of) sex offenders.

Methodological constraints were striking and multiple, and emphasize that caution should prevail when interpreting the results. As has been described before in general delinquents (Vermeiren et al 2006), rates for each diagnosis varied widely by study. This may reflect methodological diversity of available studies, some of which are described here. First, all investigations were done by means of a standardized (i.e. (semi) structured) interview, while the types of interviews used were almost as diverse as the number of studies. Moreover, different selections of axis I disorders were studied and none of the studies under review assessed the full range of axis I disorders. Differences in prevalences between studies may reflect variance in definition and assessment rather than differences between samples. Second, as selection criteria differed across studies, included sex offender subsamples and population characteristics differed substantially. Differences in age (juveniles, adults, elderly) and type of sex offenders (rapists, child molesters, paraphilic, impulse control disordered, physician sex offender) were present across studies and hamper comparison.

As compared to a recent meta-analysis on the prevalence of psychiatric disorders among general prison populations (Fazel et al 2002), adult sex offenders showed comparable rates of psychiatric disorders, however rates of psychotic disorders were higher in sex offenders (6.9% versus 3.7%). When compared to juvenile delinquents in general (for reviews see Colins et al in press; Fazel et al 2008; Vermeiren et al 2006; Vermeiren 2003) juvenile sex offenders showed comparable prevalence rates of psychiatric disorders. Any affective disorder (weighted mean 28.8) was somewhat higher in the juvenile sex offender populations under review, as compared to the mean prevalence found by Colins (weighted mean 13.9). However, based on the two studies directly comparing sex offenders with non-sex offenders in this review, no convincing support for differences between groups was found.

The diversity of problems in sex offenders is displayed in a wide range of psychiatric disorders. Although this was an inclusion criterion in four studies, almost 70% met criteria for paraphilia and further high prevalences of SUD, ADHD, CD and impulse control disorders were found in the samples under review. Paraphilia and CD are, although in varying degrees, strongly related to (sexual) offensive behavior. The presence of these disorders is important for the developmental course of sex offenders, however it is unknown if treatment will prevent future offending. In reverse, one cannot exclude the possibility that treatment will increase the chances of further sexual offensive behavior. Such could, for example be enhanced by reducing impulsivity without adequately addressing sexual preference. Furthermore, the high prevalence of externalizing disorders suggests that many sex offenses are committed as part of an antisocial behavior pattern. It explains the high rates of non sexual recidivism in sex offenders (Caldwell 2002; Hanson and Bussière 1998) and requires attention.

Affective and anxiety disorders among sex offenders reached prevalence rates that were higher than expected in the normal population. It may be relevant to find out whether these conditions were present before or as a consequence of (shame and guilt or social isolation related to) the offense and / or subsequent to incarceration. Feelings of depression or anxiety, if present prior to the offense, could have increased susceptibility to offending. Some have suggested that negative mood states are a consistent precursor to sexually inappropriate acts (Ward and Hudson 1998). According to these hypothetical models, sex offenders exhibit dysfunctional mood regulation, and sexual deviancy may result from their inability to modulate negative emotionality. Although this may account for some individuals, our review shows that a substantial proportion of sex offenders does not have an affective disorder. Also, as depression is related to diminished interest and decreased sexual desire a relation with sexual offending may be less plausible. Therefore, the time related association between depressive conditions and sex offending should be the subject of further study.

Although traumatization is frequently described in the sex offender population (Worling 1995; McCormack et al 1992), the prevalence of PTSD in the studies under

review was remarkably low. Perhaps these boys did experience traumas, but these took place long before the offense, or the trauma may not have resulted in PTSD. Alternatively, it is possible that their own sexual victimization may have led to other internalizing problems and not to PTSD.

Implications for clinical practice and future research

Although this review showed that there is remarkably little research on this topic, it is clear that a considerable proportion of the specific delinquent population of sex offenders has mental disorders. For some disorders it is unknown if these conditions were present before or are a result of the offense and further research is warranted. In order to give a better estimate of mental disorders in sex offenders, it is important to investigate broad groups of sex offender samples, without very specific selection criteria, with special attention to internalizing disorders, in relation to long-term recidivism. Hopefully, future research will make it possible to translate diagnostic findings into guidelines for prevention and intervention.

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CHAPTER 2

Chapter 3

Juvenile sex offenders: psychiatric disorders, comorbidity and recidivism

Submitted

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Abstract

Objective To investigate the prevalence of psychopathology in (subgroups of) juvenile sex offenders and its relation with criminal recidivism two to four years later.

Method A sample of 106 adolescent sex offenders (mean age 15.0 ± 1.5 years) referred to the Dutch child protection agency, was classified into group offenders ($N = 60$), (solo) rapists ($N = 27$) and child molesters ($N = 19$). Psychiatric disorders were assessed by means of a semi structured interview (K-SADS-PL), the level of functioning by means of the Children's Global Assessment of Functioning Scale (CGAS) and recidivism was ascertained from registration systems.

Results Three quarters of juvenile sex offenders met criteria for at least one psychiatric disorder, comorbidity was found in more than half of the subjects and almost two thirds of the juvenile sex offenders were functionally impaired. As compared to the other subgroups of juvenile sex offenders, child molesters showed higher rates of internalizing disorders and had a lower overall level of functioning. Forty percent of juvenile sex offenders had committed multiple sexual offenses. Compared to one time sex offenders, they were higher in DBD and anxiety disorder. Although none of the participants recidivated sexually, more than half of participants re-offended non-sexually, and approximately one third with violent offenses. Violent reoffending was predicted by the presence of any disorder.

Conclusions Child and adolescent psychiatric care should be given to juvenile sex offenders, with particular attention to multiple sex offenders and child molesters. However, the predictive value of psychopathology for sexual recidivism remains unclear and warrants further research.

Keywords juvenile sex offenders, psychopathology, psychiatric characteristics, recidivism

Introduction

Juvenile sex offending all too often is the reason of public commotion and concern. It has been estimated that about 20% of all rapes and 20-50% of cases of child abuse are perpetrated by juveniles (Barbaree and Marshall 2006). However little is known on the characteristics of these youths. It is therefore of interest to improve our understanding of this phenomenon. Surprisingly, while several studies have reported on the association of psychopathology with juvenile delinquency (Fazel et al 2008; Vermeiren et al 2006; Vermeiren 2003), just 2 studies have addressed mental health problems in juvenile sex offenders (Galli et al 1999; Kavoussi et al 1988). Both studies reported high prevalences of internalizing as well as externalizing disorders but do however not allow for vast conclusions because of methodological shortcomings. Investigating psychiatric disorders in juvenile sex offenders may contribute to a fundamental issue, namely whether child psychiatry should be involved in this very specific subgroup. Because of the high rates of psychiatric disorders in other groups of juvenile offenders, several academics have criticized the poor mental health services to youths in contact with juvenile justice (Grisso 2004; Teplin et al 2002). Because of the limited evidence, one cannot conclude this to be true as well for the specific subgroup of juvenile sex offenders.

Furthermore, since juvenile sex offenders constitute a heterogeneous group, it may be important to study specific subgroups. Indeed, differences in mental health characteristics between subgroups of juvenile sex offenders have been reported (Hunter et al 2003; 2000). Some studies found that offenders with preference towards younger children (i.e. child molesters), when compared to those abusing older persons (i.e. rapists), are more likely to suffer from internalising problems (Hunter et al 2003; Becker and Hunter 1997) and more often have a history of sexual abuse (Worling and Långström 2003) while in rapists externalizing problems are more common (Becker and Hunter 1997). Although based on a retrospective analysis of judicial files, Bijleveld and Hendriks (2003) reported that group offenders had lower scores on neuroticism, impulsivity and sensation seeking and higher scores on sociability as compared to solo offenders. Further, the subgroup of child molesters in particular was shown to have poorly developed social skills

(Barbaree et al 1998; Hsu and Starzynski 1990; O'Brien and Bera 1986). Therefore, it may carry relevance to compare sex offenders when classified by age of victim preference (about same age or much younger than perpetrator (Hunter et al 2000; Weinrott 1996); or by number of offenders taking part in the offense (solo offending versus group offending) (O'Brien and Bera 1986).

Finally, in contrast to figures in adult sex offenders, recidivism rates in juvenile sex offenders are relatively low, ranging from 0-40 % (Worling and Långström 2006). However, it seems that juvenile sex offenders are generally more likely to reoffend non-sexually than sexually (Caldwell 2002). Because most juvenile sex offenders do not persist in their harmful sexual behavior, one may wonder whether sexual offending by juveniles is a temporary deviation as part of the adolescent development rather than a behavior that relates to individual disfunctioning. Therefore, it is of interest to study the phenomenon of sexual offending by juveniles, with particular interest in psychopathology and other possible predictors of recidivism and factors that are related to desistance.

The overall aim of this study is to report on the prevalence of psychiatric disorders in juvenile sex offenders and to assess its relation with criminal recidivism. More specifically the prevalence of psychopathology will be investigated in the general group of sex offenders, as well as specific subgroups of sex offenders. Distinction will be made between those abusing young children (child molesters), those abusing peers without co-offenders (solo peer offenders) and those abusing peers as part of a group of offenders (group offenders). Because a relationship is expected between severity of offending and psychopathology, multiple and single sex offenders will be compared on variables of interest. Finally, the predictive validity of psychiatric disorders for recidivism, both sexually and non-sexually, will be investigated.

Method

Participants in this prospective longitudinal study were 106 male juvenile sex offenders referred to the Child Protection Board (CPB). As the police in the

Netherlands is obliged to refer all 12 to 18 year olds suspected of having committed a sex crime to the CPB, regional CPB offices were the primary site of inclusion. Out of twenty two regional offices, four were selected because of their location in rural and urban regions. Juvenile sex offenders admitted to four (out of the thirteen) juvenile justice institutions in The Netherlands, which the selected CPB offices usually referred to, were asked to participate as well.

Exclusion criteria were an IQ below 70 and insufficient command of the Dutch language. The study was approved by the Ethics Committee of the VU University Medical Center Amsterdam, The Netherlands. After explaining the study to the subjects, written informed consent was obtained from them and their parents or legal guardians.

In total, 161 boys were eligible for participation, of whom 106 (response rate = 66%) (mean age 15.0 SD 1.5) agreed to participate. Non-responders did not differ from responders with respect to age ($t = -.514$; $p = .608$) or offense characteristics, such as gender of victim ($\chi^2 = .001$; $p = 1.000$), age of victim ($\chi^2 = .843$; $p = .358$) or type of offending ($\chi^2 = .533$; $p = .766$). There was one difference between the two groups: responders were more often of non-Dutch ethnicity than non-responders (76% versus 43%, $\chi^2 = 14.304$; $p < 0.05$).

Measurements

File information

Offense characteristics, such as age and gender of the victim and number of (co)offenders were retrieved from both police records and CPB files. Based on offense characteristics juvenile sex offenders were classified into three subgroups: 1) child molesters: offenders suspected of having sexually abused children (below 12 years of age) who were at least four years younger than the offender himself ($n = 19$).

2) solo peer offenders: offenders suspected of having raped or sexually assaulted peers (at least twelve years old) or older persons on their own ($n = 29$).

3) group offenders: offenders suspected of having raped or sexually assaulted peers (at least twelve years old) or older persons as part of a group ($n = 58$).

K-SADS-PL

Psychiatric disorders were assessed by means of the K-SADS-PL (Schedule for Affective Disorders and Schizophrenia for school age children - Present and Lifetime (Kaufman et al 2006; 1997) a semi-structured interview for psychiatric disorders listed in the Diagnostic and Statistical Manual of Mental Disorders IV (APA 1994). Research has shown good concurrent validity and high inter-rater agreement. Test-retest reliability kappa coefficients have been described as good for present diagnoses of posttraumatic stress disorder (PTSD) and attention-deficit hyperactivity disorder (ADHD) and as excellent for present and/or lifetime diagnoses of major depression, any bipolar, generalized anxiety, conduct and oppositional defiant disorder (Ambrosini 2000; Kaufman et al 1997). Histories of sexual abuse and parental physical abuse were also investigated by means of the K-SADS-PL. Because of our interest in psychopathology prior to the index arrest of the subjects the time frames of the K-SADS-PL were adapted from 'last year' into 'year before arrest' and 'last six months' into 'last six months before arrest'. The Kiddie-SADS-PL interviews were all performed by the first author, who received formal training.

The Children's Global Assessment of Functioning Scale (CGAS)

This scale (Shaffer et al 1983) provides a global measurement of the level of functioning in children and adolescents and was scored as part of the K-SADS-PL interview. A score below 61 indicates functional impairment and is an absolute indication for treatment. A score between 61 and 70 means some difficulty in a single area but generally functioning pretty well.

Criminal history and recidivism

By means of official registration systems from the Dutch police (HKS: Herkenningsdienstsysteem/Police Identification Service System) and the Dutch Ministry of Justice (JDS: Justitieel Documentatie Systeem/Justice Documentation System), both the criminal history of the offenders prior to the index offense and recidivism in the two-four year follow-up period after the index offense was investigated. In these registration systems, additional characteristics such as age, nationality and place of residence could be found as well. Based on their criminal

history two groups could be distinguished: boys who sexually offended only once (single sex offenders) and boys who sexually offended more than once (multiple sex offenders). With respect to recidivism, distinction will be made between sexual offenses, non-sexual violent offenses and non-sexual non-violent offenses.

Data Analyses

The data were processed and analyzed with use of SPSS (Statistical Package for the Social Sciences, version 15.0). For all calculations the level of statistical significance was set at .05. First, descriptive statistics were performed to determine the prevalence of psychopathology, the global assessment of functioning and the criminal careers of the subjects (criminal history and recidivism). Second, differences between subgroups of juvenile sex offenders (by type of offense and number of offenses) were for categorical variables analyzed using Chi-square tests (or Fisher Exact when expected cell counts less than 5), and for continuous variables with t-tests or ANOVA's (analysis of variance, with Bonferroni correction for multiple comparisons). Finally, regression analyses were performed for predicting single versus multiple sex offending and non-recidivism versus recidivism. Variables with a p-value < 0.2 in the bivariate analysis were included as predictors.

Results

Prevalence rates and functioning

Prevalence rates of psychiatric disorders and scores on the clinical global assessment of functioning scale (CGAS) are shown in table 1. Three quarters of juvenile sex offenders met criteria for at least one psychiatric disorder, with comorbidity (> 1 disorder in the same person) being present in more than half of the subjects.

While a history of sexual abuse was reported by twelve percent and a history of parental physical abuse in more than one third, none of the participants met criteria for PTSD.

The mean CGAS score for the group was 60 (SD 12), with almost 70% having a score below 61, which is an indication for psychiatric treatment.

Table 1. Prevalence of psychiatric disorders

K-SADS-PL	Total		Group offenders		Solo peer offenders	
	(N = 106)		(N = 58)		(N = 29)	
	N	%	N	%	N	%
Any Disorder	79	75	39	67	24	83
Comorbidity	57	54	23	40	20	69
Any internalising Disorder	41	39	18	31	11	38
<i>Any anxiety Disorder</i>	35	33	18	30	8	30
<i>Any affective Disorder</i>	13	12	1	2	4	14
DBD	60	57	30	52	20	69
<i>CD</i>	42	40	19	33	16	55
<i>Early onset</i>	22	21	7	12	8	28
<i>Late onset</i>	20	19	12	21	8	28
<i>ODD</i>	49	46	24	41	15	52
ADHD	33	31	10	17	12	42
SUD	13	12	3	5	6	22
Parental physical abuse	39	37	19	33	12	41
History of sexual abuse	13	12	3	5	1	3
CGAS < 61	68	64	31	53	21	72
Mean CGAS (SD)	60 (12)		63 (11)		59 (12)	

* significant difference at the .05 level, # a trend towards significance at the .10 level, NS = not significant
a significant difference between child molesters and group offenders, b significant difference between child molesters and solo offenders, c significant difference between solo offenders and group offenders

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K-SADS-PL	Child molesters (N = 19)		Post Hoc		
	N	%	χ^2 ; df = 2; p		OR (95% CI)
Any Disorder	16	84	3.60; NS		
Comorbidity	14	74	10.37; *	a	4.3 (1.4-13.4)
				c	3.4 (1.3-8.7)
Any internalising Disorder	12	63	6.23; *	a	3.8 (1.3-11.3)
<i>Any anxiety Disorder</i>	9	47	2.26; NS		
<i>Any affective Disorder</i>	8	42	21.78; *	a	4.7 (4.7-365.5)
				b	4.5 (1.1-18.3)
				c	9.1 (1.0-85.8)
DBD	10	53	2.48; NS		
<i>CD</i>	7	37	4.135; NS		
<i>Early onset</i>	7	37	8.24; *	a	2.0 (1.2-3.4)
<i>Late onset</i>	0	0			
<i>ODD</i>	10	53	1.21; NS		
ADHD	11	58	12.99; *	a	6.6 (2.1-20.6)
				c	3.3 (1.2-9.3)
SUD	4	21	5.98; *	a #	4.9 (1.0-24.3)
				c #	4.8 (1.1-20.8)
Parental physical abuse	8	42	.899; NS		
History of sexual abuse	9	47	26.566; *	a	16.5 (3.8-71.8)
				b	25.2 (2.8-224.8)
CGAS < 61	16	84	7.074; *	a	4.6 (1.2-17.7)
Mean CGAS (SD)	51 (12)		$F_{(2,103)}: 7.847; *$	a, b	

Comparison of sex offender subgroups (see table 1)

Although subgroups did not differ in presence of psychopathology, comorbidity was least present in group offenders.

As for specific psychiatric disorders, child molesters showed higher rates than group offenders of internalizing disorders, affective disorders, early onset CD, ADHD, and SUD. All child molester with CD were diagnosed with the early onset subtype. Finally, they more frequently had a history of sexual abuse as compared to group offenders.

In comparison with solo peer offenders, child molesters showed a higher prevalence of affective disorder and were more frequently sexually abused.

As compared to group offenders, solo peer offenders had higher rates of comorbidity, higher prevalences of affective disorder, ADHD and SUD.

Finally, as for global functioning, child molesters were characterised by an overall lower CGAS score in comparison to both the solo and group offenders and by a larger number of individuals scoring < 61 than in the subgroup of group offenders.

Although 40% of the juvenile sex offenders committed another sexual offense before the index offense, no sexual recidivism was found at follow-up (see table 2). More than half of participants re-offended non-sexually and approximately one third violently.

Differences between multiple sex offenders and single sex offenders

Presence of psychopathology and comorbidity was higher in multiple sex offenders as compared to single sex offenders. With respect to specific psychiatric disorders, multiple sex offenders showed higher rates of internalizing disorders, anxiety disorders, DBD, CD and ODD than single sex offenders. A history of parental physical abuse was significantly higher in the group of multiple sex offenders.

Finally, as for global functioning, multiple sex offenders were characterised by an overall lower CGAS score and by a larger number of individuals scoring < 61 as compared to single sex offenders (table 3). Logistic regression analysis showed that being a multiple sex offender was predicted by the presence of any disorder (OR: 17.3; 95% CI: 4.8-63.2). When the covariate any disorder, because of its overlap

Table 2. History of offending and recidivism

	Total group		Group offenders		Solo peer offenders		Child molesters		χ^2 ; (df = 2); p
	N	%	N	%	N	%	N	%	
Prior to index									
> 1 sexual offense	41	40	18	32	15	52	8	44	3.253; .197
Non-sex offense	37	36	24	43	9	31	4	22	2.939; .230
Violent offense	25	24	16	29	7	24	2	11	2.260; .323
Recidivism									
Sexual offense	0	0	0	0	0	0	0	0	-
Non-sex offense	58	56	36	64	15	52	7	39	3.916; .141
Violent offense	33	32	21	38	8	28	4	22	1.824; .401
									F; (df); p
Time at risk (months)	28 (SD 14)		30 (SD 13)		23 (SD 13)		30 (SD 16)		2.907 _(2,98) ; .059

with the other covariates, was excluded as possible predictor, being a multiple sex offender was predicted by DBD (OR: 7.9; 95% CI: 3.3-19.1) and any anxiety disorder (OR:3.3; 95% CI: 1.2-8.9).

Predictors of recidivism

Because sexual recidivism did not occur in the follow up period, the analysis was only performed for non-sexual recidivism. Bivariate analysis revealed an association between violent recidivism and any disorder (χ^2 : 4.986; $p < 0.05$). For the dependent non-sexual recidivism the independents any disorder, CGAS < 61 and a history of sexual abuse were included in a regression analysis. None of these variables predicted non-sexual recidivism. For the dependent violent recidivism the independents any disorder, conduct disorder, DBD, CGAS < 61 and a history of sexual abuse were included in a regression analysis. Violent recidivism was predicted by the presence of any disorder (OR: 3.5; 95% CI: 1.1-11.3).

Table 3. Single versus multiple sex offenders

K-SADS-PL	Single sex offenders (N = 48)		Multiple sex offenders (N = 55)		χ^2 ; p	OR (95% CI)
	N	%	N	%		
Any disorder	24	50	52	95	26.295; *	17.3 (4.8-63.2)
Comorbidity	16	33	40	73	16.033; *	5.3 (2.3-12.4)
Any internalising Disorder	13	27	27	49	5.226; *	2.6 (1.1-5.9)
<i>Any anxiety Disorder</i>	10	21	24	44	6.027; *	2.9 (1.2-7.1)
<i>Any affective Disorder</i>	6	13	7	13	0.001; NS	1.0 (0.3-3.3)
DBD	15	31	43	78	22.948; *	7.9 (3.3-19.1)
<i>CD</i>	10	21	31	56	13.504; *	4.9 (2.0-11.8)
<i>Early onset</i>	4	8	18	33	0.992; NS	
<i>Late onset</i>	6	13	13	23		
<i>ODD</i>	12	25	35	64	15.422; *	5.3 (2.2-12.3)
ADHD	11	23	20	36	2.203; NS	1.9 (0.8-4.6)
SUD	4	8	9	16	1.499; NS	2.2 (0.6-7.5)
Parental physical abuse	11	23	26	47	6.606; *	3.0 (1.3-7.1)
History of sexual abuse	6	13	7	13	0.001; NS	1.0 (0.3-3.3)
CGAS < 61	21	44	44	80	14.466; *	5.1 (2.1-12.3)
Mean CGAS (SD)	66 (11)		55 (10)		$T_{(101)}$: 5.349; *	

* significant difference at the .05 level, NS = not significant

Discussion

In the current study, psychiatric disorders in (subgroups of) juvenile sex offenders and their predictive validity for frequency of offending and recidivism were investigated. This study was designed because previous findings in juvenile delinquents did not leave doubt about the necessity of developing mental health service for these youths (Teplin et al 2002). Findings of our study show that this applies to the very specific subgroup of juvenile sex offenders as well, as three quarters were found to meet criteria for at least one psychiatric disorder, with more than half having comorbid disorders and two thirds being functionally impaired. Furthermore, rates were different between subgroups of sex offenders, and our findings indicate that the psychiatric 'profile' of sex offenders differs from other groups of delinquents. Sexual recidivism was of low frequency, which did not allow to investigate the predictive validity of mental health problems. However, a cross-sectional relationship was found between frequency of sex offending and specific child psychiatric conditions. This study indicates not only that the mental health needs of juvenile sex offenders deserve special attention but also that further research is needed to guide mental health policy.

Although our findings emphasize the need of child and adolescent psychiatric care being provided to juvenile sex offenders, it does not explain the relation between mental disorders and sexual offending. Moreover, specific conditions (depression, anxiety) could actually be a reaction to the sexual offenses and its consequences (Vermeiren 2003). The current study suggests that juvenile sex offenders constitute a different group from general delinquents with relatively low prevalence rates of CD and SUD and high rates of ADHD and anxiety disorder. Underlying risk factors for sexual offensive behavior might therefore less be sought in externalizing disorders as DBDs but more in ADHD and internalizing problems. The lower prevalences of CD and SUD reflect that many sex offenses are not committed in the context of a problematic behavior pattern. Juvenile sex offenders are frequently regarded as socially isolated (Van Wijk et al 2007a) and in some of these boys the sexual deviant behavior may be driven by the inability to accomplish normal sexual relationships, which could explain the higher prevalence of anxiety disorders. Nevertheless, this

specific subgroup of delinquents seem to have specific mental health needs, but since no conclusions can be drawn with regard to causal or time-related paths, further (longitudinal) research on this subject is needed.

Interestingly, compared to rapists and group offenders, child molesters showed higher rates of internalizing disorders and sexual abuse. As previously mentioned, no conclusions can be drawn on the relationship between disorders and the offenses committed. For treatment purposes, it may be relevant however to find out whether these conditions were present before or as a consequence of the offense. If present before, feelings of depression or anxiety may well have increased vulnerability towards offending. Child molesters reported to be frequently sexually abused themselves, which may have led to these internalizing problems and not to PTSD. If feelings of depression or anxiety have arisen as a result of the offense, these conditions may well be a congruent reaction to a shameful situation. Given the aversion from society towards juvenile sex offenders, and child molesters in particular, this was expected to some extent. In that case, it should be seen whether the conditions are temporary and in little need of treatment. Also, it should be investigated whether they are predictive of non-recidivism, as suggested in other groups of offenders (Vermeiren et al 2002).

The remarkable high prevalence of ADHD in child molesters might be an indication that impulsivity plays a role in some of these offenders. Although these high rates of ADHD may be trauma-related as well, while it has been suggested previously that ADHD symptoms in delinquent youth are rather an expression of experienced trauma than of longer existing ADHD (Vermeiren 2003). It has been indicated that ADHD in delinquent youth goes together with an early onset of disruptive behavior (Loeber et al 1995). Indeed, all child molesters diagnosed with CD were diagnosed with early onset CD ($n = 7$) and five of these boys met criteria for ADHD. According to the current findings, although based on a small sample size, child molesters seem to constitute a group with severe psychiatric problems which might have been underestimated in previous research and has possible consequences for (early) intervention. Further longitudinal research is warranted to investigate the relation between these specific psychiatric problems of child molesters and outcome.

The rate of sexual recidivism was, although in accordance with previous research (Caldwell 2002), low in the current sample. Based on their clinical experience Becker and Kaplan (1988) suggested three offense pathways for juvenile sex offenders: a dead end pathway, a delinquent pathway, or a deviant sexual pathway. Yet it is still unclear onto which pathway the subjects are proceeding because of the short follow up. In some boys the sexual offense seems to be a one-time incident, while most boys seem to proceed to general delinquent behavior. However, there is still the possibility that they may reoffend sexually in due time, or have already reoffended but were not registered in the police systems. In these juveniles, supervision from parents or others can play a role in not reoffending. In the period of independence that adulthood brings along these boys might be at risk for reoffending. The fact that 40% of the subjects already perpetrated multiple sex offenses at the time of the index offense, may indicate that these boys were already on the sexual deviant or the general delinquent pathway at time of the index offense. A longer follow up period is needed to construe these findings further.

Findings of this study should be considered in light of some limitations. First of all, because of the relatively low prevalence of juvenile sex offending, it is difficult to include large groups of sex offenders. For that reason, specific subgroups such as child molesters, were small in the present study. This may well explain the wide range some of the ORs.

Second, at follow up recidivism was determined only from official registration systems. Offenses unknown to police, the so-called dark number, are unknown. However, reliability of self-report questionnaires may be questioned as well, as recidivists should not be expected to report unregistered offenses willingly.

Third, as this study was cross-sectional, no conclusions can be drawn with regard to causal or time-related paths.

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Chapter 4

Autism spectrum disorder symptoms in juvenile suspects of sex offenses

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Abstract

Objective To investigate autism spectrum disorder symptoms in juvenile suspects of sex offenses.

Method A group of 175 juvenile sex offenders (all males, mean age 14.9 ± 1.4) was compared with a matched normal control group ($n = 500$, mean age 14.0 ± 1.4 years) and a group of children with autism spectrum disorder (ASD) ($n = 114$, mean age 14.2 ± 1.9) with respect to autistic symptoms as measured by means of a standardized questionnaire, the Children's Social Behavior Questionnaire (CSBQ). Furthermore, specific subgroups of sexual offenders, i.e. child molesters, solo peer offenders and group offenders were compared with regard to levels of ASD symptoms.

Results Significantly higher levels of ASD symptoms were found in juvenile sex offenders than in normal controls, while levels were lower than in the ASD group ($F: 148.259$; $p < 0.05$). Solo peer offenders and child molesters were higher on several subscales as well as on core autistic symptoms than group offenders ($F: 5.127$; $p < 0.05$).

Conclusions Symptoms of ASD are higher in juvenile suspects of sex offenses as compared to the normal population, which argues for considering specific diagnostic assessment in this population, especially in solo offenders and child molesters.

Keywords sex offense, juvenile, autism spectrum disorder

Introduction

During adolescence, in order to develop a healthy adult sexual lifestyle, boys and girls are challenged by several key developmental stages, such as the development of a sexual identity and managing physical and emotional intimacy. The psychosocial and biological commotion this creates enhances the likelihood that some youngsters unwillingly get involved in or are subjected to sexual harassment and coercion (Smallbone 2006). Displaying appropriate sexual behavior requires appropriate social and sexual skills and awareness of personal and other people's boundaries. Lack of these skills may lead to inappropriate, intrusive and even offensive sexual behavior, while simultaneously increasing the risk of self victimization. As such risks are likely to be more pronounced in persons with social-relational problems, it carries substantial relevance to study this issue in adolescents who have sexually offended another person.

Disturbances in social interaction and communication are a common feature of children and adolescents with autism spectrum disorders (ASD). According to Realmuto and Ruble (1999), socially unacceptable behaviors are part of the core characteristics of autistic individuals, which may lead to social misjudgment and for some to socially inappropriate (sexual) behavior. In clinical practice, parents of children with ASD frequently express their concerns about the sexual behavior of their children (Van Bourgondien et al 1997; American Academy of Pediatrics 1996). As a result, they are apprehensive about them being abused or engaging themselves in sexually inappropriate behavior. Ruble and Dalrymple (1993) described a broad spectrum of inappropriate sexual behaviors as reported by parents of adolescents with ASD, including touching intimate body parts or even masturbating in public, removing their clothes in public, touching members of the opposite sex inappropriately, talking about inappropriate subjects, looking up shorts and down shirts, and touching parents in an inappropriate way. Not surprisingly, Hellems et al (2007) found that intervention is warranted in one third of a group of institutionalized male ASD patients because of their sexual developmental and behavior problems. Notwithstanding these studies, literature on the relationship between (sexually) offensive behavior and ASD is scarce. Only a few case reports

describe criminal offending by individuals with ASD (Baron Cohen 1988; Wing 1981), including offenses of a sexual nature (Milton et al 2002; Kohn et al 1998; Chesterman and Rutter 1994). It has been suggested that lack of empathy, lack of social understanding, the pursuit of obsessional interests, the misinterpretation of rules and the failure to recognize the implications of their behavior either for themselves or for others are associated with violent attacks of people with autism spectrum disorder (Howlin 2004; Scragg and Shah 1994).

The above mentioned studies indicate that in ASD patients there may be an increased likelihood of sexual offending. From this finding, however, we can not conclude that the prevalence of autistic symptoms is increased in the group of juvenile sex offenders. Prior studies, however, have indicated that sex offenders, specifically the subgroup of child molesters, have poorly developed social skills (Van Wijk et al 2006; Barbaree et al 1998; Hsu and Starzynski 1990; O'Brien and Bera 1986) and it is suggested that sex offending might be associated with developmental disorders (Van Wijk et al 2007a). As these studies were based on clinical impressions or clinical file analysis, further study of this issue is warranted. This study aims to investigate autism spectrum disorder symptoms in juvenile suspects of sex offenses. ASD symptomatology in juvenile sex offenders will be compared to normal controls and to a clinical adolescent ASD sample by means of a standardized instrument investigating the core symptoms dimensionally. Furthermore, differences in ASD symptoms between specific sexual offender subgroups will be investigated.

Method

Subjects

In this study a sample of juvenile sex offenders ($N = 175$) was investigated and compared to control groups from different studies (Hartman et al; 2007a; 2007b; 2006): normal controls ($N = 500$) and autistic individuals (PDD-NOS ($N = 91$), high functioning autism ($N = 23$)).

Juvenile sex offenders

As the police in the Netherlands are obliged to refer all 12 to 18 year olds suspected of having committed a sex crime to the Child Protection Board (CPB), regional CPB offices were the primary site of inclusion. Four (out of twenty two) regional offices of the Child Protection Board were selected for participation because of their location in rural and urban regions in the Netherlands. Part of this group was admitted to a juvenile justice institution (JJI) subsequent to their arrest. Male juvenile suspects of sex offenses admitted to the four (out of eleven) JJIs, where the selected CPB offices usually referred to, were asked to participate as well. Exclusion criteria were an IQ below 70 and insufficient command of the Dutch language. The study was approved by the Ethics Committee of the VU University Medical Center Amsterdam, the Netherlands. After completely describing the study to the subjects, informed consent was obtained from both subjects and their legal guardians.

A total of 309 boys were eligible, of whom 226 (73%) agreed to participate in the study (mean age 14.98, $\pm$ 1.39). Responders did not differ from non-responders with respect to age ($F = .232$; $p = .817$) or offense characteristics, such as gender of victim ($\chi^2 = .782$; $p = .676$), age of victim ($\chi^2 = .130$; $p = .719$) and type of offending (solo versus within a group: $\chi^2 = .887$; $p = .346$). Responders more often were of non-Dutch ethnicity than non-responders (59% versus 44%, $\chi^2 = 4.198$; $p < 0.05$). For reasons such as not being able to contact the parents, parents' insufficient command of the Dutch language, and lack of time at the police station when boys were taken into custody, assessment of autistic symptomatology was not possible for an additional 51, resulting in a final group of 175 (all male, mean age 14.94 $\pm$ 1.4).

Control groups

A sample of 500 age-matched boys (mean age 14.0 $\pm$ 1.4 years) was drawn from a larger normative sample of 2507 children recruited through schools in the Netherlands from urban as well as rural areas (Hartman et al 2007a; 2007b). This sample was used as a normal control group.

Furthermore, participants were compared with 114 age-matched boys with pervasive developmental disorders, PDD-NOS ($n = 91$, mean age 14.08 ± 1.8) and high functioning autism ($n = 23$, mean age 14.70 ± 2.1). These boys originated from a sample of 2271 clinically referred children with various emotional, behavioral and developmental problems (Hartman et al 2006). Children with PDD-NOS visited an outpatient clinic for child and adolescent psychiatry in Groningen, the Netherlands. Children diagnosed with High Functioning Autism (HFA) were recruited through 'Autism Teams', from different parts in the Netherlands, which specialize in the assessment and treatment of these children. Through extensive diagnostic procedures DSM-IV classifications were made by child and adolescent psychiatrists. Children with PDD-NOS had problems with social interaction and communication severe enough to have a negative impact on daily functioning. Many of them had restricted repertoires of activities and interests. All of them had an IQ higher than 70 as estimated on the basis of IQ-tests, school functioning, or clinical impression. None met the DSM-IV criteria for Autistic Disorder, Asperger's Disorder or other specific PDD categories. Children who met criteria for autistic disorder or Asperger's Disorder and whose IQ was higher than 70 were diagnosed with high functioning autism.

Instruments

File information

Offense characteristics, such as age and gender of the victim and number of (co)offenders were retrieved from both police records and CPB files. Based on offense characteristics juvenile sex offenders were divided into 3 subgroups:

- 1) child molesters: offenders who were suspected of having sexually abused children (below 12 years of age) who were at least four to five years younger than the offender himself ($n = 37$).
- 2) solo peer offenders: offenders who were suspected of having raped or sexually assaulted peers (at least twelve years old) or older persons on their own ($n = 58$).
- 3) group offenders: offenders who while participating in a group were suspected of having raped or sexually assaulted peers (at least twelve years old) or older persons ($n = 80$).

Autistic symptoms

Symptoms of autism spectrum disorder were investigated by means of the Children's Social Behavior Questionnaire (CSBQ, Hartman et al 2007a; 2007b; 2006). The CSBQ is filled out by parents or caregivers who are involved in the education and development of the child and consists of 49 items describing a broad range of features which are typically seen in children with autism spectrum disorder, especially in its milder forms. To allow identification of specific symptom patterns of ASD, six subscales relating to specific behavior/emotional problems can be differentiated:

1. Tuned: behavior/emotions with respect to adaptation to the social situation. It measures troublesome behavior that is also seen in typically developing children, but which manifests itself in an extreme form in PDD. Boys who have a high score on the tuned scale exhibit emotions and behavior that is not optimally tuned to the social situation. They show sudden changes of mood, are disobedient, are difficult to be corrected, make painful remarks to others, are stubborn, are unstoppable and make a fuss over little things. Example of items within the Tuned subscale are: "over-reacts to everything and everyone" and "quickly gets angry".
2. Social: aspects related to social contact, social interest and social reciprocity. It refers to both initiation of contact and reaction to social overtures by others. Examples of items within the Social subscale are: "lives in a world of his own" and "makes no eye contact".
3. Orientation: orientation in time, place, or activity. This scale refers to the ability to keep an overview of what goes on and where one is headed. A high score on this subscale implies a lack of overview over a situation or an activity and having no sense of time and a lack guidance of a persons' own behavior. Example of items within the Orientation subscale are: "gets lost easily" and "has difficulties doing two things simultaneously"
4. Understanding: characteristics related to understanding the rules of communication and the social use of language. Boys with high scores on this subscale are considered to be exceptionally naive, they talk confusedly, frequently do not understand what is said, say irrelevant things. Example of items within the Understanding subscale are: "does not understand jokes" and "take things literally"

5. Stereotyped: items describing specific stereotypical behavior, making odd movements with fingers and hands, smelling objects and being unusually sensitive to certain sounds and being pleased by certain movements. Examples of items within the Stereotyped subscale are: “flaps arms and hands when excited” and “sways to and fro”.
6. Change: items referring to fear of and resistance to changes. Children with a high score on this scale are strongly attached to definite routines and show strong resistance when new or different situations come up. Example of items within the Change subscale are: “panics in new situation or if change occurs”

Table 1. CSBQ-subscales and items referring to core-symptoms

Social
<ul style="list-style-type: none"> - Does not look up when spoken to. - Acts as if others are not there. - Lives in a world of his/her own. - Makes little eye contact. - Dislikes physical contact, e.g., does not want to be touched or hugged. - Does not seek comfort when he/she is hurt or upset. - Does not initiate contact or play with others. - Has little or no need for contact with others. - Does not respond to initiatives by others, e.g., does not join in or play along when asked. - Cannot be made enthusiastic about anything; does not particularly like anything. - Does not show his/her feelings in facial expressions and/or bodily posture. - Does not appreciate it when someone else is hurt or sad.

AUTISM SPECTRUM DISORDER SYMPTOMS

The subscales social, understanding, stereotyped behavior and change refer (listed in table 1.) to the three core symptoms of ASD as described in DSM-IV TR. The two remaining subscales of the CSBQ, tuned and orientation provide information on associated symptoms that are, along with the core symptoms, frequently seen in children with ASD. The CSBQ has good psychometric properties with regard to validity and reliability (Hartman et al 2006).

Understanding	Stereotyped	Change
<ul style="list-style-type: none"> - Talks confusedly; jumps from one subject to another in speaking. - Only talks about things that are of concern for himself/herself. - Does not fully understand what is being said to him/her, i.e. tends to miss the point. - Frequently says things that are not relevant to the conversation. - Does not understand jokes. - Takes things literally, e.g., does not understand certain expressions. - Is exceptionally naive; believes anything you say. 	<ul style="list-style-type: none"> - Flaps arms/hands when excited. - Makes odd, fast movements with fingers or hands. - Sways to and fro. - Is unusually sensitive to certain sounds, e.g., always hears certain sounds earlier than other people. - Is extremely pleased by certain movements and keeps doing them, e.g., turning around and around. - Smells objects. - Constantly feels objects. - Is fascinated by certain colors, forms or moving objects. 	<ul style="list-style-type: none"> - Panics in new situations or if change occurs. - Remains clammed up in new situations or if change occurs. - Opposes change.

Table 2. Mean CSBQ-scores for juvenile sex offenders and clinical subgroups

	NC		JSO		PDD-NOS		HFA	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Tuned	3.56	3.95	6.82	5.63	12.20	6.10	11.70	5.70
Social	2.25	3.13	4.79	4.43	8.74	4.93	11.40	5.49
Orientation	1.54	2.22	3.46	3.59	5.87	3.66	5.87	3.32
Understanding	2.10	2.28	3.79	3.44	6.23	3.85	7.87	2.97
Stereotyped	0.75	1.39	1.76	2.53	1.81	2.46	4.52	3.72
Change	0.53	1.08	1.08	1.57	2.21	2.12	2.78	1.73
CSBQ total	10.71	11.08	21.70	17.02	37.05	14.59	44.13	15.53
Core symptoms	5.62	6.23	11.42	9.53	18.99	9.00	26.57	9.92

a Significant difference between JSO and NC

b Significant difference between JSO and PDD-NOS

c Significant difference between JSO and HFA

Statistical procedure

The data were processed and analyzed using the SPSS (Statistical Package for the Social Sciences, version 13.0). For all calculations, the level of statistical significance was set at .05. First, differences between the group of juvenile sex offenders and normal controls were analyzed by means of t-tests. Second, differences between (subgroups of) juvenile sex offenders, normal controls and clinical subgroups were analyzed using ANOVA (analysis of variance) followed by post-hoc multiple comparison tests (with Bonferroni correction for multiple comparisons). Third, Cohen's d was used to measure effect sizes between subgroups of juvenile sex offenders and normal, PDD-NOS and HFA groups. Effect sizes of .20 to .49 were considered small, .50 to .79 medium, and .80 or greater large (Cohen 1988).

AUTISM SPECTRUM DISORDER SYMPTOMS

	F (df); p	Post Hoc Comparisons
Tuned	107.828 (3,785) < 0.05	a,b,c
Social	115.166 (3,785) < 0.05	a,b,c,
Orientation	81.274 (3,785) < 0.05	a,b,c,
Understanding	84.838 (3,785) < 0.05	a,b,c,
Stereotyped	39.875 (3,785) < 0.05	a,c
Change	55.535 (3,785) < 0.05	a,b,c
CSBQ total	148.259 (3,785) < 0.05	a,b,c,
Core symptoms	134.418 (3,785) < 0.05	a,b,c,

Tuned: behavior/emotions not optimally tuned to the social situation; social: reduced contact and social interest; orientation: orientation problems in time, place, or activity; understanding: difficulties in understanding social information; stereotyped: stereotyped behavior; change: fear of and resistance to changes; core symptoms: sum of subscales social, understanding, stereotyped behavior and change.

Results

Juvenile sex offenders versus control groups

Juvenile sex offenders scored in between normal controls and the PDD-NOS and HFA groups (see table 2) on total scores and most subscale scores. Post-hoc tests showed that juvenile sex offenders as a group had significantly higher scores than the normal control group and significantly lower scores in comparison with the HFA group and the PDD-NOS group. Only on the subscale stereotyped behavior, was no difference found between the PDD-NOS group and juvenile sex offenders.

Juvenile sex offender subgroups

Comparison of the juvenile sex offender subgroups revealed that the groups of child molesters and solo offenders had significantly higher scores on the total and core symptom scores as well as the subscales tuned and orientation compared to group offenders. In addition, child molesters had significantly higher scores on the subscale understanding, while solo offenders had significantly higher scores on the subscale change compared to group offenders (see table 3).

Table 3. Mean CSBQ-scores for juvenile sex offender subgroups

	Group offender		Solo peer offender		Child molester		F (df); p
	Mean	SD	Mean	SD	Mean	SD	
Tuned	5.16	4.58	8.21 *	6.36	8.22 *	5.63	6.800 (2,172) < 0.05
Social	3.93	3.93	5.47	4.77	5.59	4.68	2.868 (2,172) .060
Orientation	2.46	2.92	4.28 *	3.84	4.32 *	4.04	5.968 (2,172) < 0.05
Understanding	2.99	3.01	4.09	3.78	5.08 *	3.35	5.253 (2,172) < 0.05
Stereotyped	1.43	2.08	2.03	3.00	2.05	2.62	1.294 (2,172) .277
Change	0.66	1.23	1.48 *	1.78	1.35	1.69	5.568 (2,172) < 0.05
CSBQ total	16.62	14.00	25.55 *	18.73	26.62 *	17.60	7.042 (2,172) < 0.05
Core symptoms	9.00	8.05	13.07 *	10.45	14.08 *	9.93	5.127 (2,172) < 0.05

* Significant difference vs. group offenders

Tuned: behavior/emotions not optimally tuned to the social situation; social: reduced contact and social interest; orientation: orientation problems in time, place, or activity; understanding: difficulties in understanding social information; stereotyped: stereotyped behavior; change: fear of and resistance to changes; core symptoms: sum of subscales social, understanding, stereotyped behavior and change.

Comparison of subgroups of juvenile sex offenders and normal controls revealed that juvenile sex offenders had significantly higher scores on the total and core symptom scores and all subscales compared to normal controls, with an exception for group offenders on the subscale change.

When comparing the different subgroups of juvenile sex offenders to the PDD-NOS subgroup, significant differences were found for the total score ($F(3,262) = 23.817, p < 0.05$), core symptoms ($F(3,262) = 16.986, p < 0.05$) and all subscales (tuned: $F(3,262) = 22.086, p < 0.05$; social: $F(3,262) = 16.582, p < 0.05$; orientation: $F(3,262) = 13.046, p < 0.05$; understanding: $F(3,262) = 12.657, p < 0.05$ and change: $F(3,262) = 11.093, p < 0.05$) except for stereotyped behavior. Compared to the PDD-NOS subgroup, group offenders had significantly lower scores on the total CSBQ and all subscales except for stereotyped behavior. Solo offenders displayed lower scores than the PDD-NOS group on the total CSBQ and subscales tuned, social, orientation and understanding. As for child molesters, only their scores on the subscales tuned and social and on the total CSBQ were lower compared to the PDD-NOS group.

When conducting the same procedure for the different subgroups of juvenile sex offenders compared to the HFA group, significant differences were found on all subscales (tuned: $F(3,194) = 9.863, p < 0.05$; social: $F(3,194) = 16.230, p < 0.05$; orientation: $F(3,194) = 7.287, p < 0.05$; understanding: $F(3,194) = 13.835, p < 0.05$; stereotyped behavior: $F(3,194) = 7.908, p < 0.05$; change: $F(3,194) = 11.728, p < 0.05$) and the total CSBQ ($F(3,194) = 17.497, p < 0.05$) as well as the core symptoms score ($F(3,194) = 21.030, p < 0.05$). Group offenders had significantly lower scores on all subscales and on the total and core symptoms CSBQ-scores in comparison with the HFA group. When comparing the two other subgroups of juvenile sex offenders with the HFA group, both solo peer offenders and child molesters scored significantly lower on the total and core symptoms CSBQ-scores and on all subscales except for tuned and orientation.

To qualify these findings further, table 4 summarizes how the three subgroups of juvenile sex offenders compare to normal controls, PDD-NOS and HFA subgroups in terms of effect sizes. These effect sizes qualify the findings from the ANOVAs by showing that in terms of autistic symptomatology, group offenders resemble normal

controls while solo offenders and child molesters can be situated in between both normal controls and clinical groups, in some respect showing similar characteristics to PDD-NOS and HFA individuals.

Table 4. Effect sizes of juvenile sex offenders compared to normal controls, PDD-NOS and HFA subgroups

	Group	Solo	Child	Group	Solo	Child	Group	Solo	Child
	Compared to normal controls			Compared to PDD-NOS			Compared to HFA		
Tuned	0.40	1.09	1.14	1.29	0.64	0.67	1.35	0.56	0.62
Social	0.52	0.97	1.03	1.07	0.67	0.65	1.73	1.19	1.16
Orientation	0.40	1.12	1.16	1.02	0.43	0.41	1.13	0.43	0.41
Understanding	0.37	0.80	1.26	0.93	0.56	0.31	1.63	1.06	0.87
Stereotyped	0.45	0.79	0.86	0.17	0.08	0.10	1.22	0.77	0.80
Change	0.12	0.81	0.72	0.88	0.37	0.43	1.56	0.74	0.84
CSBQ total	0.51	1.23	1.37	1.43	0.70	0.67	1.92	1.04	1.04
Core symptoms	0.52	1.10	1.29	1.17	0.62	0.53	2.07	1.31	1.26

Note. Effect sizes Cohen's d . An effect size of $d \geq .20$ is characterized as small, $d \geq .50$ as medium, and $d \geq .80$ as large (Cohen 1988).

Tuned: behavior/emotions not optimally tuned to the social situation; *social:* reduced contact and social interest; *orientation:* orientation problems in time, place, or activity; *understanding:* difficulties in understanding social information; *stereotyped:* stereotyped behavior; *change:* fear of and resistance to changes; *core symptoms:* sum of subscales social, understanding, stereotyped behavior and change.

Discussion

The objective of this study was to investigate the occurrence of autistic spectrum disorder symptoms dimensionally in juvenile suspects of sex offenses compared with normal controls and children with an autistic spectrum disorder (ASD). Levels of ASD symptoms of juvenile sex offenders were found to be between those of normal controls and clinical subgroups. When comparing subgroups of sex offenders, child molesters and solo peer offenders had higher levels of ASD symptoms than group offenders. These findings argue for further investigating the possible relationship between sexual offending and ASD phenomena.

Juvenile sex offenders had higher levels of ASD symptoms than normal controls, but lower levels than the PDD-NOS and HFA subgroups. In particular, when using a cut-off of the mean score for the clinical subgroups, almost one out of five juvenile sex offenders were at or above the PDD-NOS mean score and one out of eight at or above the HFA mean score. As recent estimates of autism spectrum disorder are in the range of 6.5-6.6 per 1000 for the normal population (Myers et al 2007; Fombonne et al 2006; Dosreis et al 2006), the proportion of juvenile sex offenders with levels of ASD symptoms that are similar to PDD-NOS and HFA boys may be considered very high. Although it can not be concluded from this that autistic disorders occur at high rates in juvenile sex offenders, as no independent diagnostic assessment was performed, further clinical and scientific investigation of this phenomenon is a necessity.

Not only core ASD symptoms as measured by the subscale social, but also other core symptomatology as measured by the subscales understanding, stereotyped behavior and change were high in juvenile sex offenders compared to normal controls. On the subscale stereotyped behavior no difference (e.g. a similar high score) was found compared to the PDD-NOS group. It has been suggested previously that lack of empathy, lack of social understanding, the pursuit of obsessional interests, the misinterpretation of rules and the failure to recognize the implications of their behavior either for themselves or others are associated with violent attacks by people with autism spectrum disorder (Howlin 2004;

Scragg and Shah 1994). More specifically, an impairment in the understanding of social information is thought to lead to the misinterpretation of another person's intents and feelings and therefore can lead to undesirable sexual behavior, while stereotyped and repetitive behavior may result in touching private parts in public, touching other people or being interested in the opposite sex in a rigid, stereotyped or compulsive way. The profile of restrictive, repetitive and stereotyped behavior and lack of social understanding found in the present study may support that these impairments are related to (sexually) offensive behavior in ASD patients. Thus, although it can not be concluded that autistic disorders occur at high rates in juvenile sex offenders, as a diagnostic interview is required to diagnose accurately, the elevated levels of autistic symptoms are a strong indication for considering further diagnostic assessment.

In addition to elevated levels of core ASD symptomatology (subscales social, understanding, stereotyped behavior and change), the subscales tuned and orientation were also higher in sexual offenders than normal controls. While related to ASD, these characteristics are also seen in children with oppositional defiant disorder (ODD) and attention deficit hyperactivity disorder (ADHD) (Hartman et al 2007a; 2007b). For example, in the Hartman et al study, scores on the tuned and orientation scales were 12,63 and 7,05 in ADHD, compared to 12,36 and 6,42 in PDD-NOS, and 12,13 and 7,71 in HFA, respectively. Neither HFA nor PDD-NOS differed from ADHD on these scales (Hartman et al 2006). So the high scores on these subscales do not unambiguously imply an indication for PDD symptomatology and could possibly be explained by a co-occurrence of ADHD and ODD symptomatology in this group of juvenile sex offenders.

As for differences between subgroups, when observing the particular subscales that represent core symptomatology of ASD, it was seen that juvenile sex offender subgroups had higher scores compared to normal controls. Moreover, compared to the PDD-NOS subgroup no differences (e.g. similar high scores) were found on the scales stereotyped behavior (all three subgroups of juvenile sex offenders), change (solo offenders and child molesters) or understanding (child molesters). Thus, two

out of three of the DSM-IV-TR core symptoms for ASD (measured by the subscales stereotyped behavior, fear and resistance to change and understanding social information) were separately seen in all subgroups of juvenile sex offenders but they were all seen together in the group of child molesters. Thus, when only core symptoms were considered, child molesters did indeed show most pronounced ASD symptoms.

Based on the literature (Van Wijk et al 2007a; Barbaree et al 1998; O'Brien and Bera 1986) it was expected that symptoms of ASD would be highest in the group of child molesters. However, in the present study, similar levels were also found for solo peer offenders. In prior research socially inadequate behavior and isolation were described as a child molester specific characteristic (Van Wijk et al 2007a; Hsu and Starzynski 1990). The present findings suggest that solo offending rather than the age of the victim, is related to ASD symptomatology.

Limitations

While findings of this study address an issue of substantial relevance, they should be considered in light of some shortcomings. First, as only self-report questionnaires were used and no independent diagnostic assessment was performed, clinical ASD diagnoses could not be made. Because the assessment of ASD is complex and time-consuming it was not possible to organize clinically based categorical diagnostic assessment in a large scale epidemiological study like the one presented here. Secondly, selection bias may explain the high rates of ASD symptoms in juvenile sex offenders. Because juvenile sex offenders with ASD problems are likely to get caught or referred more easily than offenders without these particular symptoms, they may be over-represented in studies like ours. Third, although sex offenders, and particularly solo peer offenders and child molesters, were demonstrated to bear social relational vulnerabilities, directionality of the findings is still unclear. As this study was cross-sectional, no conclusions can be drawn with regard to causal or time-related paths.

The occurrence of ASD symptoms is high among juvenile suspects of sex offenses compared to the normal population. Because it was not feasible to use a diagnostic

interview to determine an ASD diagnosis, the present findings are based on questionnaire data. With this limitation in mind, the proposed association between sex offending and developmental disorders clearly seems to apply.

Clinical implications

When assessing juvenile suspects of sex offenses, diagnostic psychiatric assessment should be conducted, including the evaluation of disorders within the autistic spectrum. By means of instruments like the CSBQ, social impairments can be assessed systematically. Exploring various emotional and behavioral aspects of ASD may give direction to further diagnostic assessment and treatment programs. Eventually, not only adequate care may be provided, but rates of recidivism might be curtailed as well. Results of the present study indicate that symptoms of ASD may be associated with sexually offensive behavior. When considered with findings from studies in ASD subjects, this may support that sexual development should be an important topic in persons with ASD, especially in the adolescent phase. However, as we cannot make any definitive conclusions on the developmental relationships between these phenomena, further (longitudinal) research on this subject is needed. This should also include studies on the occurrence of sexually offensive behavior in ASD subjects by means of standardized instruments.

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Chapter 5

Juvenile group sex offenders: a comparison of group leaders and followers

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Abstract

Objective The aim of this study was to investigate group sex offenses with regard to the role of leaders versus followers and to compare both groups on levels of psychopathology, intelligence, psychosocial and offense-related characteristics.

Methods Eighty-nine adolescent group sex offenders (mean age 14.9 SD 1.4) referred by the police to the Dutch child protection agency were examined. Psychopathology, intelligence and psychosocial and offense related characteristics were assessed by means of standardized instruments, and criminal careers of the subjects were ascertained from official judicial records.

Results While leaders and followers were similar on many characteristics, some remarkable differences were found. During their sexual acts, followers reported using excessive force more frequently than leaders. Further, leaders reported more emotional problems, while followers were characterized by higher levels of problems in the social relational domain.

Discussion As our findings indicate that juvenile group sex offenders constitute a group with specific mental health needs, diagnostic investigation is important in order to recognize risk factors and (treatable) problems. The absence of some expected differences between leaders and followers could be due to the method of classification or because group offending constitutes a dynamic process without clearly defined roles for individuals.

Background

In the Netherlands, a series of recent serious group sex offenses by juveniles has made this phenomenon subject of intense debate among justice authorities, policy makers, and scientists. When consulting the literature, surprisingly few empirical findings could be found on the subject, especially concerning the characteristics of the adolescent offenders themselves. Therefore, this study will focus on individuals committing group offenses, subdivided into leaders and followers, as this may provide valuable insights into the dynamics behind this group process.

As it is estimated that of all juvenile sex offenses 11-80% is committed in groups (Bijleveld et al 2007), there is substantial relevance in focusing on this phenomenon. Furthermore, studies in adults on crime related characteristics have elicited substantial differences between group offenders and solo offenders. For example, group rapists were shown to differ from individual rapists by higher rates of substance abuse, more nightly attacks and more severe sexual assault outcomes; as well as lower levels of weapon possession and use, and less victim resistance (Ullman 1998). Similarly, Gidycz and Koss (1990) described adult group sexual assaults as more violent than soloist sexual assaults. As these studies focussed on adults samples only, results cannot be generalized to juveniles and further investigation of younger samples is therefore necessary.

With respect to their future criminal careers, juvenile sex offenders seem to have idiosyncratic outcomes. Based on their clinical experience Becker and Kaplan (1988) suggested three offense pathways for juvenile sex offenders: 1) a dead end pathway, in which the sexual offending comes to an end and consequently discontinues; 2) a delinquent pathway, in which the young person continues to engage in sexual offensive behavior as part of a broader pattern of engagement in nonsexual crimes and antisocial behavior; or 3) a deviant sexual pathway, in which the young person continues in sexual offensive behavior, consolidating in a paraphilic pattern of sexual arousal. It has been suggested that most rapists will proceed onto the delinquent pathway.

Until now, little attention has been paid to the specific roles individual group members play during sexual acts. Interestingly, some earlier studies have found that sex offender groups are frequently lead by one initiator who instigates the sexual offending, while the other group members are 'used' to facilitate the offense (Looije et al 2004). Further study on this issue is warranted, as this may indicate that a substantial part of youngsters taking part in group sex offenses are actually followers or followers without pro-active involvement. The reason they participate is hence either group pressure (O'Brien and Bera 1986) or imitation of the leader (Bruinsma 1996). In addition to environmental conditions mediating this process, it is likely that leaders carry distinct individual characteristics compared to followers. For example, while leaders may exhibit more severe conduct problems, followers may be characterized by social impairment and subsequent lack of resistance to group pressure (Hochstetler 2001). Because of the lack of research on this point, our study's focus was on comparing leaders and followers.

As society is repulsed by juvenile group sex offenses and because of the lack of knowledge about this phenomenon, the aim of this study was to investigate the characteristics of group sex offenders, and to compare leaders and followers of group sex offenses with respect to levels of psychopathology, intelligence, psychosocial and offense-related characteristics. It was hypothesized that leaders will exhibit higher levels of conduct problems and lower levels of other psychopathology, while followers would have more social impairment.

Methods

Setting and subjects

Participants in this study were 109 male juvenile sex offenders referred to the Child Protection Board (CPB). As the police in the Netherlands are obliged to refer all 12 to 18 year olds suspected of having committed a sexual crime to the CPB, regional CPB offices were the primary place of inclusion. Four CPB regional offices, situated both in rural and urban regions in the Netherlands, were selected for participation. Because part of this group was admitted to a juvenile justice institution (JJI) subsequent to their arrest, male juvenile suspects of sexual offenses referred to four

JJI's were asked to participate as well.

Group offenders participating in this study were individuals suspected of having raped or assaulted peers or older persons as part of a group. Exclusion criteria were an IQ below 70 and insufficient command of the Dutch language. In total, 140 group offenders were eligible for participation, 109 (78%) of whom agreed to participate in the study. The study was approved by an internal review board: the ethics committee of the VU University Medical Center Amsterdam, The Netherlands. Written informed consent was obtained from all participants and their parents or legal guardians.

Measurements

Sociodemographic characteristics.

Sociodemographic information (e.g. age and ethnic origin) were retrieved from CPB files.

Raven's Standard Progressive Matrices (SPM).

Intelligence was assessed by means of the SPM, which is a multiple choice test of abstract reasoning and was originally developed by Dr J.C. Raven in 1938 to measure the ability to form perceptual relations and to reason by analogy independent of language and schooling. Research showed that SPM has good psychometric quality with regard to test-retest reliability ($r = > .80$) (Raven et al 2000).

Global assessment of risk and protective factors (BARO).

The BARO (Basis Raads Onderzoek: Basic Protection Board Examination) is an assessment tool designed on request of the CPB in order to standardize and improve the quality of CPB assessments. Psychometric properties of the BARO were described as good, with its discriminative validity being good to excellent ($AUC = .79$) for predicting the presence of psychopathology (Doreleijers et al in preparation; Bailey et al 2006; Doreleijers et al 2002). The BARO covers nine domains of problems and functioning: delinquent behavior, environmental conditions, psychosocial development, externalizing problems, internalizing problems,

substance use, functioning within the family, school and leisure-time functioning. For each of the domains, a number of individual questions need to be administered to the youth and his parent. At the end of the interview, each of the nine domains of the BARO can be rated with respect to concern: unknown, no, some, high and very high concern. Based on domain scores, an estimation of the seriousness of the youth's problems is made and advice to the justice authorities is formulated. For the purpose of this study, domains related to mental health problems (substance use, internalizing and externalizing problems) and daily functioning at home, school and in leisure time were selected. Domain scores were dichotomized into two levels of concern: 1) no or some concern versus 2) high or very high concern. The unknown variables were considered missing variables.

Global Assessment Instrument for Juvenile Sex Offenders (GAIJSO, Dutch original version: Screeningsinstrument voor Jeugdige Zedendelinquenten (SIJZ).

The GAIJSO ('t Hart-Kerkhoffs et al 2006; Van Wijk et al 2005) was designed by including risk factors for sex offending derived from the literature. The 25 items of the GAIJSO comprise two domains: sexual offense characteristics and psychosexual development. The 25 items had different response options depending of the type of the variable. The sexual offense-items are scored with information derived from the juvenile sex offender and from police files, and include items like: gender of the victim, relation between victim and perpetrator (family, relative, neighbour, unknown person), use of force, confession/denial of the offense, impulsivity of the offense and the use of force and type of offending (solo versus group). For those having committed a group offense, information derived from police records as well as self reported information of the offender on to their role in the group offense was used for classifying leaders versus co-offenders. The psychosexual development-scale contains information on the youngster: sex education and previous sex offenses. For this study characteristics related to the sexual crime and items on sex education and previous sex offenses were considered relevant. The psychometric properties of the GAIJSO have not been established yet.

The Strengths and Difficulties Questionnaire (SDQ).

The SDQ is a brief behavioral screening questionnaire with self-report and parent versions, each consisting of 25 similar items. Items comprise five scales of five items each: emotional problems, conduct problems, hyperactivity/inattention, peer relation problems and pro social behavior. All items have three response options: not true, somewhat true, and certainly true. Reliability was reported to be satisfactory, whether judged by internal consistency (mean Cronbach alpha = .73), cross-informant correlation (mean = 0.34) or retest stability (mean = 0.62) (Van Widenfelt et al 2003; Goodman 2001)

Children's Social Behavior Questionnaire (CSBQ).

Symptoms in the social relational domain that are considered to occur commonly in individuals with autism spectrum disorder (ASD) were investigated by means of the CSBQ (Hartman et al 2006), a questionnaire consisting of 49 items filled out by parents or caregivers. Psychometric qualities with regard to validity and reliability of the CSBQ have been evaluated as good. Estimates for internal consistency (Cronbach alpha = .94), test-retest ($r = .90$) and inter rater reliability (ICC: .89) were good (Hartman et al 2006). Six subscales can be differentiated:

1. Tuned: adaptation to the social situation,
2. Social: contact and social interest,
3. Orientation: with regard to time, place, or activity,
4. Understanding: understanding of social information,
5. Stereotyped: stereotypical behavior,
6. Change: fear of and resistance to changes.

The subscales social, understanding, stereotyped and change are considered to refer to the three core ASD symptom categories as described in DSM-IV TR. The two other subscales, tuned and orientation, provide information on other symptoms that are frequently seen along with the core symptoms in children with ASD.

Traumatic Events Screening Inventory (TESI C)

Information on trauma exposure was derived from a Dutch translation of a self report questionnaire; the TESI C (Ribbe 1996). By means of this questionnaire, participants were asked about ten traumatic experiences, the age of onset and the frequency of these events. The psychometric properties of the TESI C have not been established.

Criminal career

By means of official registration systems from the Dutch police (HKS: Herkenningssysteem/Police Identification Service) and the Dutch Ministry of Justice (JDS: Justitieel Documentatie Systeem/Justice Documentation System) the criminal history of the offenders prior to the index offense, as well as (sexual) recidivism rates (mean follow up period 36 months SD 15 months), were investigated.

Statistical procedure

The data were processed and analyzed using SPSS (Statistical Package for the Social Sciences, version 13.0). For all calculations, statistical significance was set at .05. Differences between leaders and followers were analyzed using Chi-square tests (or Fisher Exact when expected cell counts less than 5) in case of categorical variables, and T-tests in case of continuous variables.

Based on information from the GAIJSO, of all 109 participants (mean age 14.7 SD 1.4), 23 boys were classified as leaders (21%) and 66 boys (61%) as followers. Of twenty boys (18%) their role was unclear and they were therefore excluded from further analyses. With respect to recidivism: non-sexual offenses were subdivided into violent and non-violent offenses.

Results

Sociodemographic and crime characteristics

All participants ($n = 89$, mean age 14.9 SD 1.4) were males, of whom 13% had Dutch origin. Thirty three percent had Dutch Antillean, 15% Cape Verdean, 12% Moroccan, 8% Surinamese and 7% had Turkish ethnic origin. When comparing leaders and followers on sexual offense related characteristics (see table 1), the only difference found was that followers were reported to use excessive force more frequently ($\chi^2: 3.955$; $p < 0.05$).

For this study, participants were derived from 29 group offense cases, with group size varying from 2-10 offenders.

Intelligence

Participants overall had a below average intelligence (mean IQ: 89.6 SD 10.5), with no difference between leaders (mean IQ: 88.0 SD 12.0) and followers (mean IQ: 90.0 SD 10.1).

Psychosocial and psychiatric characteristics

BARO-scores revealed high levels of concern in the domains externalizing problems, internalizing problems, school and spare time functioning (see table 2), with no differences being found between leaders and followers.

Table 1. Sociodemographic and sexual crime related characteristics

	Total group N = 89		Leaders N = 23		Followers N = 66	
	N	%	N	%	N	%
Female victim	85	96.0	21	91.3	64	97.0
Acquainted victim	71	79.8	20	87.3	51	77.3
Penetration	66	74.2	15	65.2	51	77.3
Denial	59	67.8	18	78.3	41	64.1
Impulsive offense	44	53.0	8	36.4	36	59.0
Use of force	54	69.2	13	65.0	41	70.7
Excessive violence	10	12.8	0	0	10	17.2
Insuff. sex education	52	60.5	14	63.6	38	59.4
Previous sex offenses	16	18.2	4	18.2	12	18.2

Table 2. BARO domains and traumatization

	Total group N = 89		Leaders N = 23		Followers N = 66	
	N	%	N	%	N	%
BARO externalizing	34	42.5	12	54.5	22	37.9
BARO internalizing	19	24.7	7	33.3	12	21.4
BARO substance use	4	5.3	2	3.6	2	10.0
BARO family	12	14.8	6	27.3	6	10.2
BARO school	22	27.2	8	38.1	14	23.3
BARO leisure time	34	41.5	10	45.5	24	40.0
Any trauma	70	78.7	20	87.0	50	75.8
Sexual trauma	5	6.0	3	13.6	2	3.2

JUVENILE GROUP SEX OFFENDERS

	χ^2 ; (df); p	Odds ratio	95% CI	
			Lower	Upper
Female victim	2.643; (1); .104	6.095	0.526	0.672
Acquainted victim	0.991; (1); .319	0.510	0.133	1.954
Penetration	1.293; (1); .255	1.813	0.645	5.096
Denial	1.563; (1); .211	0.495	0.162	1.510
Impulsive offense	3.331; (1); .068	2.520	0.920	6.901
Use of force	0.226; (1); .635	1.299	0.442	3.820
Excessive violence	3.955; (1); .047	1.417	1.215	1.652
Insuff. sex education	0.124; (1); .724	0.835	0.307	2.274
Previous sex offenses	0.000; (1); 1.000	1.000	0.286	3.494

C.I. = confidence interval

	χ^2 ; (df); p	Odds ratio	95% CI	
			Lower	Upper
BARO externalizing	1.802; (1); .180	1.964	0.728	5.299
BARO internalizing	1.165; (1); .281	1.833	0.605	5.559
BARO substance use	1.221; (1); .269	0.333	0.044	2.541
BARO family	3.714; (1); .054	3.313	0.938	11.703
BARO school	1.713; (1); .191	2.022	0.697	5.864
BARO leisure time	0.197; (1); .657	1.250	0.467	3.349
Any trauma	1.271; (1); .259	2.133	0.560	8.129
Sexual trauma	3.144; (1); .076	4.737	0.736	30.492

C.I. = confidence interval

Table 3. Mean SDQs-scores for (subgroups of) group sex offenders

	Group sex offenders N = 83	Leaders N = 21	Followers N = 62	T; (df); p	95% C.I.	
	Mean (SD)	Mean (SD)	Mean (SD)		Lower	Upper
Emotional problems	2.22 (3.95)	3.33 (2.73)	1.85 (1.66)	-2.343; (81); .027	-2.778	-0.179
Conduct problems	1.92 (3.13)	2.33 (1.91)	1.78 (1.31)	-1.239 (81); .226	-1.475	0.365
Hyperactivity/inattention	2.69 (2.22)	3.35 (2.49)	2.47 (2.17)	-1.564 (81); .122	-2.021	0.242
Peer relation problems	2.36 (1.76)	2.38 (2.01)	2.35 (1.69)	-0.058 (81); .954	-0.918	0.865
SDQs total score	9.20 (5.68)	11.40 (7.42)	8.46 (4.80)	-1.702 (81); .101	-6.511	0.613

*C.I. = confidence interval***Table 4. Mean SDQp-scores for (subgroups of) group sex offenders**

	Group sex offenders N = 69	Leaders N = 18	Followers N = 51	T; (df); p	95% C.I.	
	Mean (SD)	Mean (SD)	Mean (SD)		Lower	Upper
Emotional problems	2.38 (2.08)	1.89 (2.08)	2.55 (2.07)	1.171; (67); .246	-0.469	1.799
Conduct problems	2.32 (2.25)	2.78 (2.80)	2.16 (2.03)	-0.864; (67); .396	-2.105	0.863
Hyperactivity/inattention	3.31 (2.60)	2.93 (1.89)	3.45 (2.81)	0.877; (67); .385	-0.675	1.716
Peer relation problems	1.99 (1.67)	1.61 (1.42)	2.12 (1.74)	1.122; (67); .266	-0.398	1.421
SDQp total score	10.00 (6.16)	9.20 (5.83)	10.28 (6.31)	0.634; (67); .528	-2.310	4.462

C.I. = confidence interval

JUVENILE GROUP SEX OFFENDERS

Approximately eighty percent of the group offenders reported a history of at least one traumatic event. Sexual trauma in specific was reported in 6% (see table 2). No differences between subgroups of leaders and followers were found.

With respect to SDQ selfreport scores (see table 3), leaders had significantly higher levels of emotional problems compared to followers. Parent SDQ scores (see table 4) did not reveal significant differences between subgroups.

On the CSBQ, followers scored significantly higher than leaders on the subscales social, understanding, orientation, stereotyped behavior, the CSBQ total score and on the total score for the scales that are considered as core autism spectrum disorder (ASD) symptomatology (table 5).

Table 5. Mean CSBQ scores for (subgroups of) group sex offenders

	Group sex offenders N = 71	Leaders N = 19	Followers N = 52	T; (df); p	95% C.I.	
	Mean (SD)	Mean (SD)	Mean (SD)		Lower	Upper
Tuned	5.56 (4.64)	5.83 (3.73)	5.56 (4.95)	-0.212 ; (68) ; .833	-2.821	2.279
Social	4.17 (4.08)	2.60 (2.46)	4.72 (4.40)	2.518; (54); .015	0.431	3.804
Orientation	2.63 (3.08)	1.35 (1.32)	3.06 (3.39)	2.964; (64); .004	0.556	2.858
Understanding	3.16 (3.09)	1.74 (1.45)	3.68 (3.37)	3.398; (67); .001	0.803	3.089
Stereotyped	1.57 (2.20)	0.68 (1.11)	1.88 (2.40)	2.835; (63) ; .006	0.354	2.045
Change	0.76 (1.31)	0.47 (0.80)	0.86 (1.43)	1.074 ; (66) ; .287	-0.337	1.121
CSBQ total	17.98 (14.34)	12.49 (6.36)	19.77 (15.76)	2.723 (64); .008	1.941	12.630
Core symptoms	9.74 (8.36)	5.51 (3.06)	11.14 (9.09)	3.822 (66); .000	2.689	8.573

C.I. = confidence interval

Table 6. Criminal career

	Group sex offenders N = 84		Leaders N = 21		Followers N = 63	
	N	%	N	%	N	%
Prior to index						
> 1 sexual offense	25	29.8	6	28.6	19	30.2
Non-sex offense	36	42.9	11	52.4	25	39.7
Violent offense	24	28.6	9	42.9	15	23.8
Recidivism*						
Sexual offense	1	1.2	1	4.8	0	0
Non-sex offense	58	69.0	14	66.7	44	69.8
Violent offense	34	40.5	9	42.9	25	39.7

* mean follow up period 36 months SD 15 months

C.I. = confidence interval

Criminal career

Although a substantial part of the subjects committed one or more sexual offenses before the index offense, just one participant re-offended sexually during follow-up. However, more than two thirds of the group showed non-sexual (including violent) recidivism. Although it did not reach statistical significance, leaders had more extensive non-sex offense histories and more extensive violent offense histories (i.e. criminal history prior to the index offense, table 6). As compared to followers, leaders were not different in number of re-offenses (i.e. recidivism, table 6).

JUVENILE GROUP SEX OFFENDERS

	χ^2 ; (df); p	Odds ratio	95% CI	
			Lower	Upper
Prior to index				
> 1 sexual offense	0.019; (1); .890	0.926	0.312	2.752
Non-sex offense	1.037; (1); .309	1.672	0.619	4.518
Violent offense	2.800; (1); .094	2.400	0.848	6.795
Recidivism*				
Sexual offense	3.036; (1); .081	-	-	
Non-sex offense	0.074; (1); .785	0.864	0.301	2.480
Violent offense	0.066; (1); .797	1.140	0.419	3.101

Discussion

In this study, intelligence, offense-related, psychosocial and psychiatric characteristics of juvenile group sex offenders were investigated, as well as differences between leaders and followers taking part in these offenses. The offenses displayed were of high severity, consisting of assault or rape often accompanied by (excessive) violence. Group offenders, more often than expected in the normal population, had a non Dutch ethnicity and an intelligence score below average, while externalizing and internalizing problems, and a history of traumatization was reported for many. Although leaders and followers were similar on many characteristics, some interesting differences were found. First and surprisingly, followers reported using excessive force more frequently than leaders. Second, while leaders reported more emotional problems, followers were characterized by problems in the social relational domain. Just one individual re-offended sexually, and two-thirds non-sexually, with no differences on this aspect between leaders and followers.

To the best of our knowledge, this is the first study to investigate a large sample of juveniles who have committed group sex offenses. This phenomenon should not be considered a scarcity, as the many juvenile group sex offenders included in this study were referred to the CBP in a relatively short period. Because this harmful behavior often shocks the society, recognize risk factors and foci of intervention should be given larger attention. In a substantial proportion of subjects, high levels of concern on externalizing and internalizing problems, as well as histories of traumatization were found. Juvenile group sex offenders should hence be considered a group with substantial mental health needs. In order to explore whether findings of this group differ from other delinquent subgroups, group sex offenders should be compared to other subgroups of juvenile sex offenders and non-sexually delinquent youth.

In contrast to expectations, only a few differences were found between leaders and followers as identified within the group sex offender groups, which may bear some explanations. First, the method of classification of the subgroups of leaders and followers used in this study may not have been optimal. Although the method of classification by means of two sources seems solid and accurate, the information derived from police files and information from subjects may have been too subjective or just incorrect and therefore not a true report of reality. Second, in contrast to common opinion, there may be no or just little difference between so-called 'leaders' and 'followers'. In that case, group offending could rather be seen as a group dynamical process without clearly defined roles for individual group members. This could explain absence of obvious differences between members, making the hypothesized classification not being entirely valid. However, this does not exclude that dimensionally distributed characteristics play a role in the dynamic group process, with specific individuals tending to be higher or lower depending on the role in the group. Future research should explore these findings further and special attention should be given to the method of classification of leaders and followers.

Although differences between leaders and followers were limited, one remarkable finding was the higher level of emotional symptoms in leaders. Although prior studies on adult sex offenders revealed rapists exhibiting feelings of loneliness, depression or emptiness (Bijleveld and Hendriks 2003; Frenken 1995; Knight and Prentky 1990; Pithers 1990; Marshall 1989), we did not expect emotional symptoms to be higher in leaders as compared to followers. As time related associations were not investigated in this study, further research on emotional symptoms in juvenile group sex offenders is needed. Symptoms of depression may well be reactive to being caught and consequences by legal authorities, as has been suggested earlier in groups of non-sexual offenders (Vermeiren et al 2006). Reports on emotional symptoms differed between parents and youngsters, which may support this explanation. In contrast, parents of leaders observed more conduct problems (although the latter did not reach statistical significance) than the offenders themselves. Although it is common for parents to report higher levels of conduct problems and hyperactivity than youngsters themselves, and lower levels of internalising problems, this may in this case be influenced by other factors, related to the offense.

Warr (1996) has shown that 'instigators' suggest delinquent behavior to others, and it is through loyalty or fear of ridicule that the intentions of the instigator become the actions of the group. As expected, in the current study followers were higher in social behavior impairments than leaders, which may support the previous finding of followers lacking appropriate social skills (Hochstetler 2001). As a result, followers may be vulnerable to influences or intimidation by leaders and hence less able to resist group pressure. The more frequent use of excessive violence by followers may also be a consequence of their vulnerability. However, an alternative explanation may be that followers did not use more excessive violence, but were just more open to reporting such behavior because of their social incapacity, while leaders were 'wise' not to tell about this.

Although group delinquency can be regarded as collective behavior, individual group members might have distinctive motivations to join a group offense (De Wree

2004). The facilitating effect on offensive behavior of groups can however not be denied (Klein et al 2001). In most delinquent groups an instigator can be identified, as well as a fairly strong degree of role stability, while individuals often switch role when taking part in different groups. Offenders often switch from instigator to joiner, or vice versa when shifting from one group or offense to another. This suggests that instigation is not a permanent role and therefore not a consequence of some stable individual trait, but instead it seems a situational phenomenon arising from the interaction of group and individual characteristics (Warr 2002). The lack of differences between leaders and co-offenders found in the current study can be explained by the theory that most offenders switch between the role of instigator/leader and co-offender.

Only a small percentage of the subjects was of Dutch origin, which is in line with another study from the Netherlands (Bijleveld and Hendriks 2003). The overrepresentation of offenders of non-Dutch origin in the current sample is remarkable, and in parallel with ethnic distribution of other delinquent groups. The current study does however not allow us to speculate on the origin of this finding, but needs being explored in future studies.

At follow up, hardly any sexual recidivism was registered, while two thirds of the group offenders reoffended non-sexually (including violent offenses). Therefore, it is still unclear onto which pathway the subjects are proceeding. As shown previously (Caldwell 2002), the sexual offense may have been a one-time incident, with general delinquent behavior a more common pathway. The possibility of future re-offending should however not be excluded. Also, offending may already have happened but stayed unknown to police. As one third of the subjects already perpetrated multiple sex offenses at the time of the index offense, some may already have been on the sexual deviant or the general delinquent pathway.

Limitations

Findings of this study should be interpreted in the light of some limitations. First, because of the relatively low prevalence of sex offending, assessing large enough

subgroups is hampered. Therefore, the group of leaders has stayed quite small, which may partly explain the limited number of statistical significant differences found.

Secondly, all juvenile sex offenders who had participated in one group sexual assault were eligible for inclusion. Although including offenders of one sexual offense led to a detailed comparison of individual group members, several offense characteristics were similar for participants of the group, which may have diminished overall variability between subgroups.

Third, as this study was cross-sectional, no conclusions can be drawn with regard to causal or time-related paths. Especially when investigating offenders, in particular sex offenders, it may be intricate to conclude about directionality of associations, as being caught itself may have substantial impact on the way an individual reports.

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CHAPTER 5

Chapter 6

Offense related characteristics and psychosexual development of juvenile sex offenders

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Abstract

Objective This article reports on offense related characteristics and the psychosexual development in subgroups of juvenile sex offenders as measured by the Global Assessment Instrument for Juvenile Sex Offenders (GAIJSO). The predictive validity of these characteristics for persistent (sexual) offensive behavior in subgroups of juvenile sex offenders was investigated.

Methods One hundred seventy four sex offenders (mean age 14.9 SD 1.4) referred by the police to the Dutch Child Protection Board were examined. Offense related characteristics were assessed by means of the GAIJSO and the BARO (a global assessment tool for juvenile delinquents), and criminal careers of the subjects were ascertained from official judicial records.

Results Serious need for comprehensive diagnostics were found on the domains sexual offense and psychosexual development in juvenile sex offenders, especially in the group of child molesters. These youngsters displayed more internalizing and (psychosexual) developmental problems and their sexual offense was more alarming as compared to the other juvenile sex offender subgroups. Although one third of the juveniles had already committed one or more sex offenses prior to the index offense, at follow up (mean follow up period: 36 months SD 18 months) almost no sexual recidivism was found (0.6% of the entire sample). However, a substantial proportion of the entire sample of juvenile sex offenders showed non-sexual (55.6%) and violent recidivism (32.1%). Several predictors for a history of multiple sex offending and non-sexual recidivism were identified.

Conclusions This study revealed numerous problems in juvenile sex offenders. Assessment using the GAIJSO is helpful in order to identify indicators for extensive diagnostic assessment. In order to investigate the predictive validity for sexual reoffending a longer follow up period is necessary.

Background

It has been estimated that about 20% of all rapes and 20-50% of cases of child abuse are perpetrated by juveniles (Barbaree and Marshall 2006). Identifying those youngsters who are at risk for persistent sexual deviant and offensive behavior will avert more victimization at an early stage. However, in offending minors, despite the volumes of research on the characteristics of these juveniles, distinguishing transient incidental sexual misdemeanor from more persistent offensive (sexual) behavior may be difficult, because literature on this specific topic is scarce.

This article reports on sex offense related characteristics and the psychosexual development of subgroups of juvenile sex offenders. The predictive validity of these characteristics for persistent (sexual) offensive behavior, in subgroups of juvenile sex offenders, was investigated.

Sexual offending by juveniles is frequently considered to be experimental behavior as a part of normal sexual development. However, previous studies have shown that many adolescent sex offenders had prior victims (Becker 1994; Awad and Saunders 1991), and indicated that their behavior is similar to that of adult paraphilic sex offenders. Some juvenile sex offenders do seem to have paraphilic sexual impulses and behavior patterns (Galli et al 1999) and some adolescent sex offenders seem to have underlying deviant sexual arousal patterns or urges (DiLillo et al 2001), similar to that of adult sex offenders. Therefore, in the assessment of juvenile sex offenders it seems important to distinguish normal from deviant sexual development, in order to know which of these boys is at risk for repetitive sexual offending. On the one hand, this is necessary for better protection of potential future victims; on the other hand, because public policy is becoming increasingly punitive. To date, even many low risk adolescents are subjected to long term specific treatment programs and public registration, which may also have long term negative effects on the development of these youngsters (Trivits and Reppucci 2002).

The literature on juvenile sexual recidivism is scarce, and the identification of predictors of sexual reoffending is hampered by the relatively small sample sizes of these studies, differences in length of follow up and differences in the definition

of sexual recidivism. In 22 published follow up studies of juvenile sex offenders, sexual assault recidivism rates ranged from 0-40% and general (including sexual) recidivism was found in 11-89% (Worling and Långström 2006). However, it seems that juvenile sex offenders are generally more likely to reoffend non-sexually than sexually (Caldwell 2002; Hagan et al 1994). Variables that may predict future offending among juvenile sex offenders (e.g. offender age, criminal history and antisocial personality) also predict reoffending among juvenile non-sex offenders (Seto and Lalumière 2006; Caldwell 2002; Lipsey and Derzon 1998), and many of these variables reflect general antisocial tendencies (Seto and Lalumière 2006).

As to specific risk factors for sexual reoffending in juveniles, many risk factors are mentioned in the literature, but few have been empirically supported. Deviant sexual interest (Kenny et al 2001; Kahn and Chambers 1991) seems to be a strong predictor of sexual reoffense, especially in child molesters (Worling and Curwen 2000). Some studies elicited socially isolated juvenile sex offenders (Kenny et al 2001; Långström and Grann 1999), who displayed poor social skills turned out to reoffend sexually more often than those without such difficulties. Victim related characteristics such as not being a relative or friend (Långström 2002; Smith and Monastersky 1986), having assaulted more than one victim (Worling 2002), as well as deviant sexual interests, prior criminal sanctions for sexual assault(s) and drop out from offense specific treatment (Worling and Långström 2003) have been reported to be sexual reoffense predictors.

The BARO (Basis Raads Onderzoek: Protection Board Preliminary Investigation of Criminal Cases) (Doreleijers et al 2002); is a global assessment tool for juvenile delinquents (12-18 year olds) designed for the Child Protection Board (CPB) in order to standardize and improve the quality of CPB assessments. As the BARO itself does not provide information on specific risk factors for deviant sexual development and/or recidivism in juvenile sex offenders, a specific assessment paragraph for juvenile sex offenders was developed, to be used in addition to the BARO: the Global Assessment Instrument for Juvenile Sex Offenders (GAIJSO) [Dutch original version: Screeningsinstrument voor Jeugdige Zedendelinquenten

(SIJZ); ('t Hart-Kerkhoffs et al 2006; Van Wijk et al 2005). The GAIJSO collects information on offense related characteristics and risk factors for persistent (sexual) offensive behavior. It leads to insight into the characteristics of the sexual offense and to an estimation of the severity of the offense, as well as evaluating the psychosexual development of the offender. The BARO and GAIJSO together yield data to advise the justice authorities and indicates subsequent treatment. The GAIJSO has an advantage over other measures such as MASA which was originally developed for adult sex offenders (Johnson and Knight 2000), because it includes self report data as well as data from police files. Moreover, GAIJSO can easily be used in addition to the BARO, a global assessment tool for juvenile delinquents (12-18 year olds), which is used in several countries.

This article reports on offense related characteristics and psychosexual development, as measured by the GAIJSO, and the predictive validity of these characteristics for persistent (sexual) offensive behavior in subgroups of juvenile sex offenders.

Methods

Setting and subjects

As the police in the Netherlands are obliged to refer all 12 to 18 year olds suspected of having committed a (sex) crime to the CPB, a number of regional CPB offices were the primary site of inclusion. Four (out of 22) regional CPB offices were selected for participation based on their location in both rural and urban regions in the Netherlands. Part of this group was admitted to a juvenile justice institution (JJI) subsequent to their arrest. Male juvenile suspects of sex offenses admitted to four (out of 13) JJIs, to which the selected CPB regional offices usually referred, were asked to participate as well. Exclusion criteria were an IQ below 70 and insufficient command of the Dutch language. The study was approved by the Ethics Committee of the VU University Medical Center Amsterdam, The Netherlands. After explaining the study to the subjects, informed consent was obtained from them and their parents or legal guardians.

It should be noted that although participants were legally considered to be only *suspected* of committing a sexual offense (i.e. arrested/charged for a sexual

offense), for the sake of readability in this article they will be called sex offenders or sexual delinquents.

Measurements

File information

Offense characteristics such as age and gender of the victim and number of (co)offenders were retrieved from both police records and CPB files. Based on characteristics of the index offense, juvenile sex offenders were divided into three subgroups:

- 1) child molesters: offenders who had sexually abused children (below 12 years of age) who were four or more years younger than the offender himself (n = 30).
- 2) solo peer offenders: offenders who had raped or sexually assaulted peers (at least twelve years old) or older persons on their own (n = 54).
- 3) group offenders: offenders who had raped or sexually assaulted peers (at least twelve years old) or older persons in a group, consisting of (at least) two or more offenders (n = 90).

Global assessment of risk and protective factors (BARO) (Doreleijers et al 2002) Psychometric properties of the BARO were described as good, with its discriminative validity being good to excellent for predicting the presence of psychopathology (Bailey et al 2006; Doreleijers et al 2002). The BARO has been translated into German, English, Russian and Finnish. The validation study of the German version showed comparable properties. The BARO covers nine domains of problems and functioning: delinquent behavior, environmental conditions, psychosocial development, externalizing problems, internalizing problems, substance use, functioning within the family and school and leisure-time functioning. For each of the domains, a number of individual questions are administered to the youth and his parent. At the end of the interview, each of the nine domains of the BARO can be rated with respect to the degree of concern: no, some, high and very high concern (or: no information). Based on domain scoring, an estimation of the seriousness of the youth's problems is made and advice to the justice authorities is formulated. For the purpose of this study, domain scores were dichotomized into

two levels of concern: 1) no or some concern versus 2) high or very high concern. The unknown variables were considered missing variables.

Global Assessment Instrument for Juvenile Sex Offenders (GAIJSO)

(Van Wijk et al 2005).

The GAIJSO is developed to use in clinical practice, in order to estimate the severity of the sexual offense and to make an evaluation of the psychosexual development. The most important risk factors for sexual recidivism and deviant psychosexual development found in the literature have been included in the GAIJSO. The items were formulated by a group of Dutch clinical and scientific experts in the field of juvenile sex offenders. Altogether, this instrument consists of 25 items divided into two scales: the offense scale (15 items) and the psychosexual development scale (10 items). The sexual offense-items are scored with information derived from the juvenile sex offender and from police files. The psychosexual development-scale contains information derived from the youngster. Each item contains a group of semi-structured questions and has several response options (example of items: empathy: shows no, some, adequate empathy for the victim; violence: no violence (including verbal aggression), used 'enough' violence (including verbal aggression) to take control over the victim, used excessive violence to take control over the victim (for example: used a weapon or physically injured the victim). Deviant sexual development is defined as a development towards behavior in which sexual gratification is obtained through unusual practices that are harmful or humiliating to others (or self), criminal or socially repugnant. Deviant sexual fantasies are defined as sexual fantasies that can be part of a deviant sexual development and that can lead to criminal conduct in real life. At the end of each scale a global assessment is given of the level of concern regarding the sexual offense itself and the psychosexual development. The GAIJSO leads to a qualitative estimation of the necessity of requesting extensive diagnostic assessment. In order to adjust to the jargon of the CPB counselors, the word 'concern' has been chosen.

An interview with the perpetrator as to these items in addition to the BARO, completed with information derived from police files, results in an estimation of the severity of the sexual offense and an evaluation of the youth's psychosexual

development. This information can contribute to a well considered advice to the justice authorities and identifies indicators for extensive diagnostic assessment. The two domains of concern of the GAIJSO have six concern options: no, some, high or very high (or: unknown / unclear). For the analyses we clustered these options into no or some concern (not problematic or non-case) and high or very high concern (problematic or case). For these analyses we considered the unknown and unclear variables to be missing variables. All items of the GAIJSO are shown in table 1. The GAIJSO-interviews were done by a total of fifteen CPB counselors, who received training by the authors.

Table 1. Items GAIJSO

I. Sexual offense	II. Psychosexual development
1. Victim age	16. Sex education
2. Gender of victim	17. Sexual preoccupation
3. Relation victim and perpetrator	18. Deviant sexual fantasies
4. Nature of sexual act	19. Sexual excitement during offense
5. Type of offending (solo versus as part of a group)	20. Deviant sexual behavior
6. Place in group	21. Previous sex offenses
7. Offense history (frequency)	22. History of sexual victimization
8. Offense history (duration)	23. Sexualizing family
9. Confession to / denial of the offense	24. Deviant sexual attitudes / perversities
10. Taking responsibility	25. Global assessment care domain
11. Empathy	psychosexual development
12. Insight into risk situations and 'triggers'	
13. Planning / preparation	
14. Use of force	
15. Global assessment care domain sexual offense	

Recidivism

At follow up (T1, mean follow up period 36 months SD 18 months), the rate of (sexual) recidivism was determined through official registration systems from the Dutch police (HKS: *Herkenningssdienstsysteem*, Police Identification Service System) and the Dutch Ministry of Justice (JDS: *Justitieel Documentatie Systeem*, Justice Documentation System). From these registration systems, all (past) criminal activities (arrests, charges) were extracted for each juvenile sex offender in this study. Both sexual and non-sexual offenses were listed and of the non-sexual offenses violent offenses were listed separately. By means of these official registration systems, recidivism of the offenders as well as their criminal history prior to the index offense could be investigated.

Statistical analyses

The data were processed and analyzed using SPSS (Statistical Package for the Social Sciences, version 13.0). An extensive description of the population of juvenile sex offenders was done with descriptive statistics. Differences between subgroups were analyzed using Chi-square tests (or Fisher exact tests if necessary) in the case of categorical variables. ANOVAs (Analysis of variance) or student's t-tests were used in the case of continuous variables. Finally, logistic regression analyses (forward conditional method) were performed for predicting non-recidivism versus recidivism and single versus multiple sex offending. Variables with a p-value < 0.2 in the bivariate analysis were included as predictors.

Results

In total, 309 boys were eligible for the study, of whom 226 (73%) agreed to participate (mean age 14.98, SD 1.39). Non-responders did not differ from responders with respect to age ($t = .232$; (300); $p = .817$), or offense characteristics such as type of offending ($\chi^2 = .094$ (2); $p = .954$), gender of the victim ($\chi^2 = .782$ (2) $p = .676$) or age of the victim ($\chi^2 = .130$ (1); $p = .719$). However, responders were more often of non-Dutch ethnicity than non-responders (59% versus 44%, $\chi^2 = 4.198$; $p < 0.05$). Complete GAIJSO data were available for 77% of the responders ($n = 174$). Participants had a mean age of 14.9 years (SD: 1.4) and

almost forty percent of these boys were of Dutch origin. Child molesters were significantly more often of Dutch origin as compared to solo and group offenders.

Results for the nine BARO domains for juvenile sex offender(s) (subgroups) are shown in table 2. Based on the offense domain scores, extensive diagnostic assessment was deemed necessary in more than seventy percent of the juvenile sex offenders.

Significant differences between subgroups were found on the following domains: offense, development, internalizing problems. These differences were mostly accounted for by child molesters. As compared to solo offenders, more concern

Table 2. **BARO domains**

	Total group N = 174		Solo offenders N = 54		Group offenders N = 90		Child molesters N = 30		
<i>High/very high concern</i>	N	%	N	%	N	%	N	%	χ^2 ; (2, N = 174); p
BARO offense	106	71.6	26	60.5 _a	56	71.8 _{a,b}	24	88.9 _b	6.595; p < 0.05
BARO environment	65	43.9	16	37.2	34	43.6	15	55.6	2.274; .321
BARO development	54	37.0	16	38.1 _a	21	27.3 _a	17	63.0 _b	10.957; p < 0.05
BARO externalizing	67	45.6	20	46.5	33	42.9	14	51.9	.673; .714
BARO internalizing	44	31.2	12	29.3 _a	17	23.0 _a	15	57.7 _b	10.905; p < 0.05
BARO substance abuse	9	6.4	2	4.9	4	5.5	3	11.5	1.402; .496
BARO family	40	26.8	15	34.9 _b	12	15.4 _a	13	46.4 _b	12.099; p < 0.05
BARO school	42	28.6	13	31.0	20	25.6	9	33.3	.745; .689
BARO leisure time	59	39.9	13	30.2	34	43.0	12	46.2	2.425; .297

Note. Percents with same subscripts do not differ significantly at $p < 0.05$ by post-hoc 2x2 chi-square analysis. BARO: Global assessment of risk and protective factors.

was indicated for child molesters on the domain offense. Child molesters had more problems as compared to both other subgroups on the domains development and internalizing problems. Problematic familial circumstances were more frequently detected among child molesters as compared to group offenders.

Results of the GAIJSO are shown in table 3 and 4.

Sexual offense (see table 3)

In almost one fifth of the sexual offenses the victim was a child. Approximately 55% of the offenses were perpetrated in a group. A quarter of the peer/adult group offenders were initiators or leaders of the offense. Of the total group, in about 14% the victim was male and in almost one quarter the victim was not known to the perpetrator. Forty five percent of the perpetrators admitted to have penetrated their victims. One quarter of the offenders was suspected of having committed more than one sexual offense and in almost 60% these offenses took place within a period of six months. Although about half of the subjects initially denied their participation in the offense, later in the interview, almost two thirds of the offenders did admit some responsibility. Almost 45% of the offenders did not show any empathy for the victim. Less than 20% of the perpetrators reported adequate insight into risk situations and 'triggers'. In about 40% the offenses were considered to be impulsive acts, because there seemed to be no preparation preceding the offense. Violence was used in more than half of the offenses, of which one fifth was excessive violence. According to the global assessment of the sexual offense, concern was indicated in almost 60% of the offenders (see table 3).

Psychosexual development (see table 4):

More than 60% of the boys received insufficient sex education. Sexual preoccupation was reported in almost 60% of the offenders and approximately 16% reported to have deviant sexual fantasies. Almost a quarter of the offenders admitted to exhibiting deviant sexual behavior, but only one fifth admitted to feeling sexual excitement during this deviant behavior. More than one fifth of the perpetrators said they had previously committed sexual offenses that were not

reported to the police. A history of sexual victimization of themselves occurred in almost 12% of the total group. More than 40% of the offenders displayed deviant sexual attitudes. Concern was indicated, on the global assessment of the psychosexual development, in about 40% of the offenders.

Table 3. GAIJSO sexual offense characteristics

	Total group N = 174		Solo offenders N = 54		Group offenders N = 90	
	N	%	N	%	N	%
Victim age > 4yrs younger	30	17.2	0	0 _a	0	0 _a
Male victim	24	13.8	7	13.0 _a	3	3.3 _a
Unknown victim	42	24.3	19	35.8 _b	21	23.3 _b
Penetration	95	54.6	18	33.3 _a	58	64.4 _b
Group offending (leader)	95	54.6	0	0 _a	90 (20)	100 _c (25)
≥2 sex offenses	60	34.5	24	44.4	22	24.4
≥2 sex offenses: < 6 months	30	57.7	10	43.5 _a	16	94.1 _b
Denial	92	54.4	25	49.0 _a	58	65.9 _b
Taking no responsibility	60	35.1	21	38.9	33	37.9
Lack of empathy	75	44.1	25	47.2	39	44.8
Insight into risks and 'triggers'	28	18.5	12	25.5	14	18.2
Impulsive offense	63	38.0	16	29.6	38	44.7
Use of force	87	54.0	21	42.0 _a	53	64.6 _b
Excessive violence	18	11.2	8	16.0 _b	10	12.2 _b
Global Assessment						
High/very high concern	103	59.5	26	49.1 _a	21	56.7 _a

Note. Percents with same subscripts do not differ significantly at $p < 0.05$ by post-hoc 2x2 chi-square analysis. GAIJSO: Global Assessment Instrument for Juvenile Sex Offenders.

OFFENSE RELATED CHARACTERISTICS AND PSYCHOSEXUAL DEVELOPMENT

Differences between subgroups of juvenile sex offenders (see tables 3 and 4):
More child molesters compared to solo offenders and group offenders were rated as high concern on the global assessment domains indicating a more alarming sexual offense and more precarious psychosexual development. As compared to the other two subgroups, child molesters more often had abused a male,

Child molesters N = 30			
	N	%	χ^2 ; (2, N = 174); p
Victim age > 4yrs younger	30	100 _b	174.000; p < 0.05
Male victim	14	46.7 _b	35.578; p < 0.05
Unknown victim	2	6.7 _a	8.965; p < 0.05
Penetration	19	63.3 _b	14.294; p < 0.05
Group offending (leader)	5	16.7 _b	157.191; p < 0.05
≥2 sex offenses	14	46.7	8.357; .015
≥2 sex offenses: < 6 months	4	33.3 _a	14.062; p < 0.05
Denial	9	30.0 _a	12.496; p < 0.05
Taking no responsibility	6	20.0	3.650; .161
Lack of empathy	11	36.7	.894; .640
Insight into risks and 'triggers'	2	7.4	3.743; .154
Impulsive offense	9	33.3	3.479; .176
Use of force	13	44.8 _{a,b}	7.615; p < 0.05
Excessive violence	0	0 _a	4.905; p < 0.05
Global Assessment			
High/very high concern	26	86.7 _b	11.890; p < 0.05

acquainted victim, more frequently admitted to feeling sexual excitement, and showed no excessive violence at all. As to their psychosexual development, more child molesters had a history of being victimized sexually compared to group offenders. Fewer solo offenders penetrated their victims as compared to child molesters and group offenders. Moreover solo offenders showed fewer deviant sexual fantasies compared to child molesters and group offenders. Compared to both other subgroups, group offenders denied the offense more frequently, showed more deviant attitudes and in cases of multiple sex offenses they offended more frequently in a shorter period of time. More group offenders than solo offenders used violence during the offense.

Table 4. GAIJSO psychosexual development problems

	Total group N = 174		Solo offenders N = 54		Group offenders N = 90	
	N	%	N	%	N	%
Insufficient sex education	106	60.9	34	63.0	55	61.1
Sexual preoccupation	100	59.5	29	54.7	49	57.0
Deviant sexual fantasies	26	15.7	1	2.0 _a	16	18.8 _b
Sexual excitement	33	20.5	8	15.1 _a	14	17.9 _a
Deviant sexual behavior	38	22.5	12	23.1	18	20.7
Previous sex offenses	37	21.3	17	31.5	15	16.7
Sexual victimization	20	11.5	7	13.0 _{a,b}	6	6.7 _a
Sexualizing family	13	7.5	3	5.6	6	6.7
Deviant attitudes / perversities	72	42.1	18	34.0 _a	45	51.1 _b
Global Assessment						
High/very high concern	65	38.2	17	32.7 _a	29	33.0 _a

Note. Percents with same subscripts do not differ significantly at $p < 0.05$ by post-hoc 2x2 chi-square analysis. GAIJSO: Global Assessment Instrument for Juvenile Sex Offenders.

Criminal career (see table 5):

Results regarding the criminal careers of juvenile sex offenders are given in table 5. Group offenders displayed more non-sexual and violent offensive behavior before the index offense and at follow up. Although a substantial proportion of the subjects committed more than one sexual offense before or at the time of the index offense, hardly any (0.6%) sexual recidivism was found at follow up. However, a substantial number (56%) of the juvenile sex offenders showed non-sexual and violent recidivism.

Child molesters N = 30			
	N	%	χ^2 ; (2, N = 174); p
Insufficient sex education	17	56.7	.324; .850
Sexual preoccupation	22	75.9	3.953; .139
Deviant sexual fantasies	9	30.0 _b	12.560; p < 0.05
Sexual excitement	11	36.7 _b	6.074; p < 0.05
Deviant sexual behavior	8	26.7	.472; .790
Previous sex offenses	5	16.7	4.882; .087
Sexual victimization	7	23.3 _b	6.310; p < 0.05
Sexualizing family	4	13.3	1.836; .399
Deviant attitudes / perversities	9	30.0 _a	6.189; p < 0.05
Global Assessment			
High/very high concern	19	63.3 _b	9.718; p < 0.05

Table 5. Criminal career

	Total group N = 162		Solo peer offenders N = 49		Group offenders N = 84		Child molesters N = 29		
	N	%	N	%	N	%	N	%	χ^2 ; (2, N = 162); p
<i>Prior to index</i>									
Sexual offense	52	32.1	19	38.8	23	27.4	10	34.5	1.936; .380
Non-sex offense	53	32.7	11	22.4 _a	35	41.7 _b	7	24.1 _{a,b}	6.373; .041
Violent offense	34	21.0	7	14.3 _{a,b}	24	28.6 _b	3	10.3 _a	6.221; .045
<i>Recidivism</i>									
Sexual offense	1	0.6	0	0	1	1.2	0	0	0.934; .627
Non-sex offense	90	55.6	23	46.9 _a	58	69.0 _b	9	31.0 _a	14.728; .001
Violent offense	52	32.1	12	24.5 _a	35	41.7 _b	5	17.2 _a	7.767; .021
F; (df); p									
TaR (months)	36 (SD 18)		33 (SD 20)		38 (SD 15)		38 (SD 22)		1.145; (2, 159); .321

Note. Percents with same subscripts do not differ significantly at $p < 0.05$ by post-hoc 2x2 chi-square analysis. TaR = time at risk (mean follow up period).

GAIJSO variables that were shown to be associated with non-sexual and violent recidivism in chi-square analyses ($p < 0.2$) were included in a logistic regression analysis (see table 6). Because sexual recidivism occurred in only one subject at follow up, this variable could not be included in the analysis. Non-sexual recidivism was predicted by group offending, taking no responsibility and insufficient sex education and was negatively associated with having a male victim. Furthermore, violent (non-sexual) reoffending was predicted by group offending, insufficient sex education and lack of empathy.

Based on their criminal history (as determined through official registration systems) two groups could be distinguished: boys who sexually offended only once and boys who sexually offended more than once (boys who committed more than one sexual offense before or around the time of the index offense: multiple sex offenders). Regression analysis showed that problematic psychosexual development and an impulsive offense distinguished multiple sex offenders from once only sex offenders (see table 6).

Table 6. Predictive value of various risk factors for non-sexual, violent and multiple sex offending

	<i>B</i>	<i>SE</i>	<i>B</i> (95% <i>CI</i>)
<i>Non-sexual recidivism</i>			
<i>Full model: chi-square 27.338, df 4, N = 140, Nagelkerke R² 0.237</i>			
Group offending	0.998	.386	2.982 (1.494-5.952)*
Male victim	-1.083	.558	0.338 (0.113-1.010)*
Taking no responsibility	1.160	.471	3.190 (1.409-7.223)*
Insufficient sex education	1.032	.394	2.806 (1.296-6.077)*
<i>Violent recidivism</i>			
<i>Full model: chi-square 19.912, df 3, N = 125, Nagelkerke R² 0.209</i>			
Group offending	1.419	.461	4.135 (1.676-10.199)*
Insufficient sex education	1.173	.471	3.233 (1.284-8.137)*
Lack of empathy	.847	.433	2.333 (0.999-5.449)*
<i>Multiple sex offending</i>			
<i>Full model: chi-square 33.212, df 2, N = 118, Nagelkerke R² 0.334</i>			
Problematic psychosexual development	1.854	.445	6.387 (2.667-15.291)*
Impulsive offense	1.122	.446	3.072 (1.283-7.355)*

Note. * $p < 0.05$.

Discussion

This study aimed to describe offense related characteristics and the psychosexual development of (subgroups of) juvenile sex offenders and the predictive validity of these characteristics for persistent (sexual) offensive behavior.

Assessment of (subgroups of) juvenile sex offenders by means of the BARO and GAIJSO revealed high to very high concern on several domains. The greatest need for extensive diagnostic assessment was seen in the group of child molesters.

These youngsters displayed more internalizing and (psychosexual) developmental problems and their sexual offense was more alarming as compared to the other juvenile sex offender subgroups.

Although a substantial proportion of the subjects committed more than one sexual offense before or around the time of the index offense, almost no sexual recidivism was found afterwards. However, a substantial number of the juvenile sex offenders showed non-sexual and violent recidivism. Group offenders displayed more non-sexual and violent offensive behavior before and after the index offense compared to solo offenders and child molesters. Non-sexual recidivism was predicted by group offending, taking no responsibility and insufficient sex education, and was negatively associated with having a male victim. Violent reoffending was predicted by group offending, insufficient sex education and lack of empathy. Insufficient sex education, as a predictor of non-sexual (including violent) recidivism, is probably an expression of a wider concept of insufficient education at school and/or at home. Being a multiple sex offender was predicted by problematic psychosexual development and an impulsive offense. Although it can not be concluded from this finding that these items predict sexual recidivism, further exploration of psychosexual development and impulsivity in relation to sexual reoffending, measured prospectively, is warranted.

Child molesters displayed more alarming results as compared to the other juvenile sex offender subgroups. Interestingly, compared to solo rapists and group offenders, child molesters showed higher rates of internalizing problems, a more alarming psychosexual development, and had more frequently a history of sexual abuse. For treatment purposes, it may be relevant to find out whether these

conditions were present before or as a consequence of the offense. If present before, feelings of depression or anxiety may well have increased vulnerability towards offending. Child molesters reported to be frequently sexually abused themselves, which may have led to these internalizing problems or to Posttraumatic Stress Disorder (PTSD). Hendriks and Bijleveld (2004) did not find a difference between child abusers versus peer abusers with respect to a history of sexual abuse. This discrepancy might be explained by the different subgroups used in the current study in which peer abusers were further subdivided into group peer abusers versus solo peer abusers. Child maltreatment (physical and sexual victimization) is related to PTSD and delinquency. PTSD positive delinquents are found to be most troubled in terms of impulse control and control of aggression (Steiner et al 1997). Further research on child molesters should include diagnostic assessment of PTSD, impulse control and conduct disorders. If feelings of depression or anxiety have arisen as a result of the offense, these conditions may well be a congruent reaction to a shameful situation. Given the aversion from society towards juvenile sex offenders, and child molesters in particular, this was expected to some extent. In that case, it should be seen whether the conditions are temporary and in little need of treatment.

According to Worling and Långström (2006), adolescents who commit sexual offenses are more likely to be apprehended for non-sexual reoffenses than for sexual reoffenses. In line with this finding the group of juvenile sex offenders studied displayed mostly non-sexual (non-sexual 55.6% and violent 32.1%) reoffenses. Van Wijk et al (2007b) found in their Dutch sample of juvenile sex offenders mostly non-sexual reoffenses as well. In agreement with the literature on adult sex offenders, Worling and Långström found a significant linear relationship between length of follow up period and sexual assault recidivism as well as for any criminal recidivism. The low rate of sexual recidivism in this sample might be due to the relatively short follow up period (mean follow up period: 36 months SD 18 months) and therefore a longer follow up period seems desirable.

With respect to the criminal careers of juvenile sex offenders, Becker and Kaplan (1988) distinguished, on the basis of their clinical experience, three pathways. After their first sex offense, juvenile sex offenders can proceed onto the dead end, delinquent or deviant sexual pathway. Yet it is still unclear onto which pathway the subjects are proceeding. Some boys seem to proceed onto the dead end pathway, and others might be on the general delinquent pathways. One third of the subjects had already perpetrated multiple sex offenses at the time of the index offense, which may indicate that the boys were already on the sexual deviant or the general delinquent pathway at the time of the index offense. A longer follow up period is needed to interpret these findings adequately.

Investigation of juvenile sex offenders is important in order to recognize causal relationships and (treatable) problems of juvenile sex offenders. Using the GAIJSO, specific sexual offense related characteristics can be investigated. The information on offender type (child molester versus rapist) and way of offending (solo versus in groups) alerts the professional to pay attention to specific problems associated with these types of offenders. The information assessed by means of the GAIJSO on problematic psychosexual development points the way to further diagnostic assessment and treatment, and prevention programs can directly address the problems observed. Assessment with the GAIJSO gives insight into the specific problems of juvenile sex offenders which remain underexposed after general assessment with the BARO or other instruments. Its supplementary value lies in the fact that the GAIJSO can be used to distill relevant information in a standardized way from police records. Moreover, it collects valuable information on the sexual offense and psychosexual development of a youngster in a semi-structured way. The information obtained is of added value to the report of the child welfare counselors. It contributes to a well considered advice to the justice authorities and is important in initiating immediate and appropriate care.

This study revealed numerous problems in juvenile sex offenders. Assessment using the GAIJSO gives insight into these specific problems of juvenile sex offenders, which remain underexposed after general assessment by means of the BARO or

other instruments. Several differences were found between subgroups of juvenile sex offenders, with the most alarming results in the group of child molesters. These findings should be further investigated in an international study with a follow up interval of at least five years.

Limitations

Findings of this study should be interpreted in light of some limitations. First of all, because of the relatively low prevalence of sex offending, it is difficult to assess large groups of sex offenders for research goals. For that reason, specific subgroups such as child molesters, were small in the present study.

A second limitation of this study is that there is no control group available of youngsters who (allegedly) did not commit a sex offense. Although, for instance, sixty percent of the young offenders showed sexual preoccupation and approximately sixteen percent had deviant sexual fantasies, it is unknown if this might be the *base rate* for every youngster, i.e., being age appropriate.

Third, at follow up, recidivism was determined only from official registration systems. Offenses unknown to police, the so-called dark number, are unknown. However, reliability of self-report questionnaires may be questioned as well, as recidivists should not be expected to report unregistered offenses willingly.

Fourth, the follow up period was relatively short, which might explain the low rate of sexual recidivism. In order to investigate the predictive validity for sexual reoffending, a longer follow up period seems desirable.

Fifth, the psychometric properties of the GAIJSO, as inter-rater reliability or test-retest reliability, have not been established yet, however, the current study does show the expected characteristics of juvenile sex offenders.

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CHAPTER 6

Chapter 7

Summary and general discussion

Introduction

The nature of problems related to sexual offending has been suggested to differ from problems related to other criminal behavior (Hanson and Bussière 1998; Hanson et al 1995). In the meantime, relationships between sexual offending and individual characteristics of juvenile offenders have remained largely unexplored, especially when considering mental health characteristics. Therefore, the overall aim of this thesis was to investigate psychiatric disorders and psychosocial and offense related characteristics in subgroups of juvenile sex offenders and the predictive validity of these characteristics for persistent (sexual) offensive behavior. Various studies have demonstrated that subgroups of juvenile sex offenders differed in many respects (Hunter et al 2003; Worling and Långström 2003; Becker and Hunter 1997; Hsu and Starzynski 1990). Based on these recurring differences, a distinction was made between offenders abusing young children (child molesters), those abusing peers without co-offenders (solo peer offenders) and those abusing peers as part of a group of offenders (group offenders). Currently, it is unknown whether there is a relationship between mental health problems and risk for sexual reoffending. Therefore, the role of psychiatric disorders in recidivism was studied. Five studies were conducted and specific aims and results are summarized below. Followed by a general discussion.

Summary

To provide a best estimate of the prevalence of psychiatric disorders in adult and juvenile sex offenders, **chapter two** presents a review of the literature. Eight articles met inclusion criteria. Eighty percent of the sex offenders in the studied samples met criteria for at least one psychiatric disorder, but the range of prevalence rates per diagnosis was remarkably wide. Large methodological differences between the reviewed studies hamper interpretation of most results. In any event, the review demonstrated the scarcity of solid research on mental disorders in sex offenders and several issues and questions concerning this specific delinquent population and sex offender subgroups remain unresolved and unanswered.

The following chapters all concern a sample of male suspects of sex offenses aged 12-18 years referred to four (out of twenty-two) regional Child Protection Board offices and four (out of thirteen) juvenile justice institutions in the Netherlands. Although participants were legally considered to be only suspected of committing a sexual offense (i.e. arrested for/charged with a sexual offense), for the sake of readability they are called sex offenders or sexual delinquents.

In **chapter three** the prevalence of psychiatric disorders in (subgroups of) juvenile sex offenders and its relation with criminal recidivism was investigated in a sample of 106 adolescent sex offenders (mean age 15.0 ± 1.5 years). Psychiatric disorders were assessed by means of a semi structured interview (K-SADS-PL), the level of functioning by means of the Children's Global Assessment of Functioning Scale (CGAS) and recidivism was ascertained from registration systems. Three quarters of the study sample met criteria for at least one psychiatric disorder and comorbidity was found in more than half of the subjects. Moreover, functional impairment (CGAS below 61) was found in almost two thirds of the juvenile sex offenders. Rates were different between subgroups of sex offenders, child molesters showing higher rates of internalizing disorders and having a lower overall level of functioning as compared to solo peer offenders and group offenders. Moreover, child molesters had a history of being sexually abused more frequently as compared to both other subgroups. Although none of the participants recidivated sexually, more than half of them re-offended non-sexually, and approximately one third committed violent offenses. Violent reoffending was predicted by the presence of any disorder, but not by any specific mental disorder. Compared to those who sexually offended only once, boys who had sexually offended more frequently showed higher rates of disruptive behavior disorder and anxiety disorder. Results of this study demonstrate the necessity of developing mental health services for at least certain juvenile sex offenders. The findings also support the relevance of differentiating juvenile sex offender subgroups. Screening and assessment of juvenile sex offenders is needed in order to provide mental health care to those identified with mental disorders. Although sexual recidivism was rare, it is necessary to respond to the fact that the majority re-offended non-sexually. Further investigation of (sexual) recidivism patterns (by means of self report questionnaires) in this sample is needed.

As it has been suggested that (sexual) offending and developmental disorders are possibly related (Van Wijk et al 2006), the objective of **chapter four** was to investigate autism spectrum disorder (ASD) symptoms in juvenile sex offenders by means of the Children's Social Behavior Questionnaire (CSBQ), a questionnaire to be filled in by parents. Juvenile sex offenders ($n = 175$, mean age 14.9 ± 1.4) were compared with respect to autistic symptoms with a matched normal control group ($n = 500$, mean age 14.0 ± 1.4 years) and a group of children with ASD ($n = 114$, mean age 14.2 ± 1.9). While levels of ASD symptoms were lower in juvenile sex offenders than in the ASD group, significantly higher levels were found in juvenile sex offenders than in normal controls. Furthermore, it was found that solo peer offenders and child molesters scored higher on several subscales as compared to group offenders. ASD core symptoms were most pronounced in child molesters as compared to other sex offender subgroups. This again indicates the need for differentiating subgroups of juvenile sex offenders. Foremost, our findings support the need for specific diagnostic assessment with respect to ASD symptoms in the juvenile sex offender population. Further study should investigate whether the higher levels of symptoms found in our study indicate that ASD occurs more frequently in the group of sex offenders.

A substantial proportion of adolescent sex offenses is committed in groups and while studies in adults have elicited substantial differences between group offenders and solo offenders, the study presented in **chapter five** aimed specifically to investigate the adolescent group sex offender subgroup. A sample of 89 group sex offenders (mean age 14.9 ± 1.4) was investigated. The main focus was on differences between leaders and followers with regard to psychiatric disorders, intelligence, and psychosocial and offense-related characteristics. Leaders and followers were similar in many respects. While leaders reported more emotional problems, followers were characterized by higher levels of problems in the social relational domain and by excessive use of force during the sexual act. Although some potentially relevant differences were found between leaders and followers, our findings did not support vast differences between the two groups, in contrast to what has been reported in the literature. Our inability to find differences may carry

methodological reasons, for example the method of classification (leader versus follower). Also, because offenders switch between the role of leader and follower roles may not be as clear as has often been suggested.

Chapter six reports on offense related characteristics and the psychosexual development of juvenile sex offenders as measured by the Global Assessment Instrument for Juvenile Sex Offenders (GAIJSO). This instrument is used in addition to the BARO, a global assessment tool for juvenile delinquents. The BARO is applied by the Child Protection Board to assess young offenders in order to advise the court whether or not extensive diagnostic assessment is indicated. The predictive validity of these characteristics for persistent (sexual) offensive behavior in subgroups of juvenile sex offenders ($n = 174$, mean age 14.9 ± 1.4) was investigated. Extensive diagnostic assessment was advised most frequently in the group of child molesters. In these youngsters there were indications of more internalizing and (psychosexual) developmental problems as compared to group sex offenders and solo peer offenders. Sexual recidivism was of low frequency and therefore it was impossible to investigate the predictive validity of offense related characteristics and psychosexual development. However, higher frequency of sex offending (i.e. being a multiple sex offender) was related to specific characteristics, like a problematic psychosexual development and the impulsive character of the offense. The information assessed by means of the GAIJSO points the way to further diagnostic assessment and treatment. It gives insight into the specific problems of juvenile sex offenders which remain underexposed after general assessment with the BARO or other instruments. Furthermore, it contributes to a well considered advice to the justice authorities and is important in initiating immediate and appropriate care.

Overall discussion

Over the past two decades, scientific research in the field of juvenile sex offending has revealed several important factors that are related to sexual offensive behavior in juveniles. Empirical data have confirmed the impressions of professionals in the field that family context, early sexual behavior and the experience of child sexual abuse

are important contributory factors in the development of abusive sexual behavior in juveniles (Barbaree and Langton 2006). Theoretical and empirical research on intimacy and attachment problems in adult sex offenders has broadened our understanding of the interactions between delinquent or criminal potential and sexuality (Smallbone 2006). Studies in the field have indicated that juvenile sex offenders constitute a heterogeneous group, but also that subgroups of juvenile sex offenders differ in socio-demographic, personality, psychiatric and developmental characteristics (van Wijk et al 2007a; Hunter et al 2000). Although individual characteristics are recognized to be of relevance for explaining the phenomenon of juvenile sex offending, previous research has neglected this issue, as was shown in the review in this thesis (chapter 2). While the focus of this thesis was primarily on individual characteristics within the mental health domain, it is recognized that risk factors for juvenile sex offending are multifactorial.

According to Grisso (2004), society should be concerned about adolescent offenders with mental disorders in order to meet its custodial treatment obligations. Public agencies have the legal and moral obligation to respond to the mental health needs of adolescents in their custody. The results presented in this thesis underline the need for involvement of child and adolescent psychiatric expertise in juvenile sex offenders. At least a subgroup of these youngsters has substantial mental health problems and are therefore entitled to receive proper treatment. Some conditions need further study, for example the higher level of ASD symptoms. If rates of autistic spectrum disorders are shown to be higher in juvenile sex offenders, this would argue for developing screening methods for this particular population.

Although the rates of psychiatric disorders found in the population under study call for the development of mental health services, it cannot be stated that improved care will affect the developmental course of these boys with respect to sexual (re)offending. Although a cross-sectional relationship was found between frequency of sex offending and specific child psychiatric conditions, the predictive validity of psychiatric disorders for sexual recidivism could not be established. As was found in other samples of juvenile sex offenders (Worling and Långström 2006;

Caldwell 2002), sexual recidivism was extremely rare, although the majority did re-offend non-sexually. This is an important finding in itself, as one may argue that it is inappropriate to consider these boys to be sex offenders. Labeling these youths as such may be counterproductive, as it can lead to an undesirable designation, with detrimental social consequences. Hence, it makes the necessity of specialized assessment and treatment of sexual offensive behavior disputable. Perhaps, we need to view these offenders as juveniles who committed a serious crime that in the majority of them may be a result of adverse development. Only registered sex offenses were investigated in this study. Offenses unknown to police, the so-called 'dark number', are unknown to us. It is possible that some boys stopped sexual offending once they had been detected by the authorities and that others continued their offensive behavior without getting caught. However, registration of non-sexual reoffenses for the majority of sex offenders could signify that the dark number explanation is more valid for sex offenses than for non-sex offenses. On the other hand, sexual offending occurs less frequently than non sexual offending, and only a small proportion of sexual offenses gets registered, which can also explain the lack of sexual reoffending in the current sample.

While juvenile sex offenders are comparable to general offenders in many respects, the current study does suggest some possibly relevant differences. The relatively low prevalence of CD and SUD reflects the observation that a subgroup of sex offenses is not committed in the context of a disruptive behavior pattern. However, the high prevalence of ADHD may suggest a relation with impulsivity. Juvenile sex offenders have also been described as socially isolated (Van Wijk et al 2006; Barbaree et al 1998; Hsu and Starzynski 1990; O'Brien and Bera 1986). In some, the sexual deviant behavior may therefore be driven by their inability to carry on normal sexual relationships. This may correspond to the relatively high prevalence of anxiety disorders and the rates of ASD symptoms found in our population. Yet, certain symptoms or disorders (such as depression and anxiety) found by our research aimed assessment could actually be a reaction to the sexual offense and its personal and legal consequences. Being labeled as a sex offender, especially as a child molester, causes serious emotional distress. Conditions such as depression

or anxiety may well be a congruent reaction to a shameful situation. Also the high rates of ADHD found in child molesters could be an expression of experienced trauma, rather than of longer existing ADHD (Vermeiren 2003). For this reason, it may be of relevance to conduct a follow-up study on this population.

Although the classification of sex offender subgroups was based on the empirically supported differences of solo versus group sex offenders and rapists versus child molesters, the validity of this classification is unknown. As only limited information on the sexual offense was available, and information from participants may well have been biased, the reliability of our findings cannot be ascertained. Despite these limitations, relevant differences were found between subgroups, many of which were expected considering previous studies in this field. Child molesters had the most mental health problems, followed by solo peer offenders. Although the group sex offenses in the study sample were of high severity, levels of psychopathology were remarkably low in group offenders. Underlying risk factors for sexual offensive behavior in these youngsters may better be sought in contributory factors like adverse environmental circumstances rather than in mental health problems.

As previous research suggested that sex offending might be associated with developmental disorders (Van Wijk et al 2007a), ASD symptoms were investigated in the current study. High rates of ASD symptoms were found and could be explained in two ways. First, there may be some selection bias. Presumably, because of lack of social understanding and misinterpretation of rules, juvenile sex offenders with ASD problems are more likely to get caught or referred than offenders without these symptoms; as a result they may be over-represented in studies like ours. Second, the instrument used was not intended to diagnose ASD and may not have been specific enough to accurately assess ASD because of some overlap with ADHD and ODD symptoms. However, despite these limitations, this thesis confirms previous studies in that there may be a relation between ASD and sexual offending (Helleman et al 2007; Silva et al 2004). The finding that ASD symptoms were most pronounced in child molesters argues for further investigating the possible relationship between ASD and child molesting. Because of disturbances in social

interaction and communication child molesters can find it difficult to build normal (sexual) relationships with peers and they might therefore make advances towards younger children. Together with lack of empathy, the pursuit of obsessional interests, the misinterpretation of rules and the failure to recognize the implications of their behavior, lack of social understanding can possibly increase their susceptibility to child molestation. According to Anckarsäter (2008), subjects on the autism spectrum have special and a higher level of care needs than most people, and they are at increased risk of coming to harm in socially demanding and tough settings. This may well apply to juvenile sex offenders, especially child molesters, with high levels of ASD symptoms in juvenile justice settings. However, only scant research has been conducted on the relationship between sexual offending and ASD, warranting further study. This study suggests that psychiatric problems present in child molesters may have been underestimated in previous research, resulting in possible consequences for (early) intervention. Further longitudinal research is warranted to investigate the relation between these specific psychiatric problems of child molesters and outcome.

Limitations

The findings of this thesis must be assessed in the light of some limitations. Although juvenile sex offending has a relatively low prevalence, we were able to assess a unique and large sample of this particular group of offenders. However, in the present study, specific subgroups, such as child molesters, were small. The sample studied was a selection of juvenile sex offenders and no assertions can be made with respect to the external validity, i.e. the significance for other groups of sex offenders. In this particular sample, we do not know if the subjects answered truthfully; social desirability is presumably present in this group of offenders. Although not necessarily a limitation, participants were legally considered to be only suspected of committing a sexual offense (i.e. arrested for/charged with a sexual offense). Results would probably have been different if, for example, only convicted sex offenders were included. With respect to ASD symptoms only self-report questionnaires were used and no diagnostic assessment was performed. Therefore clinical ASD diagnoses could not be made. Because the assessment of

ASD is complex and time-consuming it was not possible to organize clinically based categorical diagnostic assessment in a large scale epidemiological study like the one presented here. General psychiatric assessment by means of the K-SADS-PL was for the same reasons only performed in a subsample.

Clinical implications

The numerous psychiatric problems and disorders found in juvenile sex offenders demand proper and sufficient screening and assessment. This screening should be comprehensive and should preferably take place shortly after referral to the police. Specific diagnostic assessment with respect to ASD symptoms seems desirable; however, further study should investigate whether ASD indeed occurs more frequently in the group of sex offenders.

This study shows that besides environmental factors, as demonstrated in previous research, individual characteristics are important contributory factors in the development of sexual delinquency in juveniles. Results presented in this thesis underline the need for involvement of child and adolescent psychiatric expertise in juvenile sex offenders. In order to meet its custodial treatment obligation society needs to respond to the mental health needs of juvenile sex offenders in custody. Although treatment is necessary for those with mental disorders, we do not know in what way treatment will shape the future of juvenile sex offenders and if it will prevent future (sexual) offending. The low frequency of sexual recidivism is an important clinical finding and suggests that caution is warranted when labeling these offenders.

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Samenvatting

Introductie

Seksueel geweld heeft grote gevolgen voor de slachtoffers. Het eist voorts zijn maatschappelijke tol in termen van het vervolgen van daders en in de besteding van justitiële voorzieningen. Het merendeel van de zedendelicten wordt door volwassenen gepleegd. Een aanzienlijk deel, 20-50% van het kindmisbruik en 20% van de verkrachtingen, wordt gepleegd door minderjarigen (Barbaree en Marshall 2006).

De problemen die ten grondslag liggen aan zedendelinquentie lijken van een andere aard te zijn dan de problemen die gerelateerd zijn aan ander crimineel gedrag (Hanson en Bussière 1998; Hanson et al 1995). Tegelijkertijd is de relatie tussen zedendelinquentie en individuele kenmerken van jeugdige daders nauwelijks onderzocht, met name wanneer het gaat om de psychische problemen van deze jongeren. Het doel van het onderzoek zoals beschreven in dit proefschrift was dan ook het vóórkomen van psychiatrische stoornissen en psychosociale problemen onder jeugdige zedendelinquenten te onderzoeken. Bovendien werd de voorspellende waarde van de onderzochte kenmerken voor persisterend (zedendelinquent)gedrag nagegaan.

Eerder onderzoek toonde verschillen aan tussen subgroepen van jeugdige zedendelinquenten (Hunter et al 2003; Worling en Långström 2003; Becker en Hunter 1997; Hsu en Starzynski 1990). Gebaseerd op deze verschillen werd in dit proefschrift/onderzoek steeds onderscheid gemaakt tussen jongeren die jongere kinderen misbruikten (kindmisbruikers), jongeren die leeftijdgenoten of oudere slachtoffers misbruikten (solisten) en jongeren die, deel uitmakend van een groep, leeftijdgenoten of oudere slachtoffers misbruikten (groepsplegers).

Bij de inventarisatie van de psychische stoornissen hadden symptomen van autisme spectrum stoornissen (ASS), specifieke aandacht. Ondanks dat de laatste tijd meer aandacht besteed wordt aan de relatie tussen (zedendelinquentie) en ASS is er weinig onderzoek naar dit verband gedaan. Enkele gevalsbeschrijvingen wijzen op een mogelijk verband tussen ASS en zedendelinquent gedrag (Milton et al 2002; Kohn et al 1998; Chesterman en Rutter 1994). Eerdere onderzoeken hebben aangetoond dat zedendelinquenten, met name kindmisbruikers, slecht ontwikkelde sociale vaardigheden hebben (Van Wijk et al 2006; Barbaree et al 1998; Hsu en

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Starzynski 1990; O'Brien en Bera 1986). Een enkele keer werd zedendelinquentie in verband gebracht met ontwikkelingsstoornissen zoals ASS (Van Wijk et al 2007a). Mede omdat voorgenoemde onderzoeken zich baseerden op klinische impressies of dossieronderzoek leek verder onderzoek op dit gebied van belang.

Hoewel er aanwijzingen zijn dat er mogelijk meer psychische problematiek aanwezig is bij zedendelinquenten, is niets bekend over een mogelijk relatie tussen psychische problematiek en het risico op herhaling van zedendelicten bij deze groep. Om die reden werd de rol van psychiatrische stoornissen met betrekking tot recidive bestudeerd.

Voor deze dissertatie werden vijf deelonderzoeken uitgevoerd. De specifieke doelstellingen en resultaten hiervan alsmede de algemene discussie worden hieronder samengevat.

Samenvatting

In **hoofdstuk 2** wordt een overzicht gegeven van de literatuur met betrekking tot het voorkomen van psychiatrische stoornissen bij volwassen en jeugdige daders van zedendelicten. Acht artikelen voldeden aan de inclusiecriteria. Van de onderzochte zedendelinquenten voldeed 80% aan de criteria van ten minste één psychiatrische stoornis, maar de spreiding per diagnose was opvallend groot. Grote methodologische verschillen tussen de onderzoeken bemoeilijkten de overall interpretatie van de resultaten, waardoor diverse vragen onbeantwoord bleven. Dit literatuuroverzicht maakt het gebrek aan degelijk onderzoek op het gebied van psychische problematiek en zedendelinquentie duidelijk zichtbaar.

De volgende vier hoofdstukken gaan allemaal over onderzoek bij jongens die verdacht werden van het plegen van een zedendelict in de leeftijd van 12-18 jaar en die verwezen waren naar vier (van in totaal 22) vestigingen van de Raad voor de Kinderbescherming en vier (van in totaal 13) justitiële jeugdinrichtingen in Nederland. Hoewel de deelnemers ten tijde van het onderzoek formeel slechts verdachten waren van het plegen van een zedendelict worden ze voor de leesbaarheid hierna zedendelinquenten of zedenplegers genoemd.

Hoofdstuk 3 rapporteert het onderzoek van 106 (gemiddelde leeftijd 15.0 ± 1.5 jaar) jeugdige zedenplegers naar het voorkomen van psychiatrische stoornissen (gemeten met behulp van een gestandaardiseerd interview, de K-SADS-PL) en het niveau van functioneren (CGAS). Recidive werd nagegaan via officiële justitiële registratiesystemen. Driekwart van de onderzochte jongeren voldeed aan de criteria van ten minste één psychiatrische stoornis en meer dan de helft voldeed aan de criteria van ten minste twee stoornissen. Een laag niveau van functioneren (CGAS < 61) werd gezien bij tweederde van de onderzochte groep. Subgroepen van jeugdige zedendelinquenten verschilden onderling van elkaar; kindmisbruikers hadden vaker internaliserende stoornissen en functioneerden op een lager niveau (CGAS) dan solisten en groepsplegers. Bovendien waren kindmisbruikers vaker zelf seksueel misbruikt in het verleden. Jongens die voor het onderzoek al meer dan één zedendelict hadden gepleegd hadden vaker gedragsstoornissen en angststoornissen in vergelijking met jongens die één zedendelict hadden gepleegd. Na 2-4 jaar werd via officiële registratiesystemen gekeken of de jongens in de tussenliggende periode na het onderzoek opnieuw een (zeden)delict hadden gepleegd. Alhoewel zedenrecidive niet voorkwam in de onderzochte groep binnen de 2-4 jaar na het onderzoek pleegde meer dan de helft van de jongens een ander, niet-zeden, delict en ongeveer een derde recidiveerde met een geweldsdelict. Geweldsrecidive werd voorspeld door de aanwezigheid van een psychiatrische stoornis, maar niet door een specifieke stoornis.

Omdat eerder onderzoek een mogelijke relatie suggereerde tussen (zeden)delinquent gedrag en autisme spectrumstoornissen (Van Wijk et al 2007a) werd het voorkomen van ASS-symptomen bij jeugdige zedendelinquenten onderzocht met behulp van de Vragenlijst voor Inventarisatie van Sociaal gedrag van Kinderen (VISK). Dit onderzoek is gerapporteerd in **hoofdstuk 4**. Het voorkomen van autistiforme kenmerken bij jeugdige zedendelinquenten ($n = 175$, gemiddelde leeftijd 14.9 ± 1.4 jaar) werd vergeleken met het voorkomen van dergelijke kenmerken met een normale vergelijkingsgroep ($n = 500$, gemiddelde leeftijd 14.0 ± 1.4 jaar) en met een vergelijkingsgroep van kinderen met ASS ($n = 114$, gemiddelde leeftijd 14.2 ± 1.9 jaar). Terwijl er bij jeugdige

zedendelinquenten minder ASS symptomen gevonden werden dan bij de kinderen met ASS, werden er significant meer gevonden bij de onderzochte groep dan bij de groep normale kinderen. Daarbij scoorden solisten en kindmisbruikers hoger op de VISK in vergelijking met groepsplegers. ASS kern symptomen waren het meest uitgesproken bij de kindmisbruikers in vergelijking tot beide andere subgroepen.

Omdat een aanzienlijk deel van jeugdige zedendelicten wordt gepleegd in groepsverband en onderzoek bij volwassenen heeft aangetoond dat er aanmerkelijke verschillen zijn tussen groepsplegers en solisten werd een groep van 89 groepsplegers van zedendelicten (gemiddelde leeftijd 14.9 ± 1.4 jaar) onderzocht (**hoofdstuk 5**). Hierbij werd met name ingegaan op de verschillen tussen leiders en meelopers van groepszedendelicten met betrekking tot psychiatrische problematiek, intelligentie en psychosociale en delictgerelateerde kenmerken. Hoewel leiders en meelopers veel gelijkenissen vertoonden, rapporteerden leiders meer emotionele problemen, terwijl meelopers meer problemen hadden op het sociaalrelatiele vlak en vaker excessief geweld gebruikten gedurende het zedendelict. Ondanks dat er enkele mogelijk relevante verschillen werden gevonden tussen leiders en meelopers, kon er met dit onderzoek, in tegenstelling tot wat op basis van de literatuur werd verwacht, geen duidelijk onderscheid gemaakt worden tussen leiders en meelopers van groepszedendelicten.

Delictgerelateerde kenmerken en de psychoseksuele ontwikkeling van jeugdige zedendelinquenten werden onderzocht met behulp van het Screeningsinstrument voor Jeugdige Zedendelinquenten (SIJZ) (**hoofdstuk 6**). Het SIJZ wordt gebruikt als supplement van de BARO voor zedenplegers. De BARO is een screeningsinstrument voor jeugdige delinquenten dat wordt gebruikt bij de Raad voor de Kinderbescherming om de rechtbank te adviseren of er al dan niet een indicatie is voor uitgebreide aanvullende diagnostiek.

De voorspellende waarde van delictgerelateerde kenmerken en de psychoseksuele ontwikkeling voor persisterend (zedes) delinquent gedrag werd onderzocht in subgroepen van jeugdige zedendelinquenten ($n = 174$, gemiddelde leeftijd 14.9

± 1.4 jaar). Uitgebreide aanvullende diagnostiek werd het meest geadviseerd in de groep van kindmisbruikers. In deze groep waren er aanwijzingen voor meer internaliserende en psychoseksuele ontwikkelingsproblemen in vergelijking tot solisten en groepsplegers. Zedenrecidive kwam weinig voor en daarom was het niet mogelijk om de voorspellende waarde van delictgerelateerde kenmerken en de psychoseksuele ontwikkeling nader te onderzoeken. Niettemin was het hebben gepleegd van meer dan één zedendelict voor het onderzoek gerelateerd aan specifieke kenmerken, zoals een impulsief zedendelict en een problematische psychoseksuele ontwikkeling.

Algemene discussie

De resultaten van deze dissertatie laten zien dat het belangrijk is om kinder- en jeugdpsychiatrische expertise te betrekken bij het beoordelen van jeugdige zedendelinquenten. In ieder geval een deel van de jeugdige zedendelinquenten heeft aanzienlijke psychiatrische problemen en heeft daarom recht op passende diagnostiek en behandeling. Op basis van de resultaten is echter (nog) niet te zeggen of verbeterde zorg het ontwikkelingsbeloop met betrekking tot zedendelinquent gedrag zal beïnvloeden. Er werd wel een relatie gevonden tussen het aantal zedendelicten dat gepleegd werd voor het onderzoek en specifieke psychiatrische kenmerken, maar de voorspellende waarde van psychiatrische stoornissen voor toekomstige zedenrecidieven kon niet worden vastgesteld. In overeenstemming met de literatuur (Worling en Långström 2006; Caldwell 2002), was immers het voorkomen van zedenrecidieven binnen de 2-4 jaar na het onderzoek extreem laag in de onderzochte groep, terwijl de meerderheid niet-zedenrecidieven pleegde. Dit is een belangrijke bevinding, omdat hiermee betwist kan worden of deze jongeren als zedendelinquenten beschouwd moeten worden. Het labelen van deze jongeren als zedendelinquent kan mogelijk zelfs contraproductief werken, omdat het kan leiden tot onwenselijke betiteling met schadelijke sociale consequenties. Bovendien maakt het de gespecialiseerde diagnostiek en behandeling van seksueel delinquent gedrag minder noodzakelijk. Dit wil overigens niet zeggen dat er geen behoefte is aan diagnostiek en behandeling bij deze groep jongeren, maar zoals in dit proefschrift aangetoond

hoeft dit niet perse specifiek gericht te zijn op het zedenaspect.

Ondanks dat zedendelinquenten op vele gebieden op niet zedendelinquenten lijken, werden met deze dissertatie ook aanwijzingen gevonden voor mogelijke relevante verschillen. De bevinding dat antisociale gedragsstoornis en middelenmisbruik relatief weinig voorkwamen bij jeugdige zedendelinquenten laat zien dat een subgroep van de zedendelicten niet gepleegd wordt in de context van een ontwrichtend gedragspatroon, alhoewel de relatief hoge prevalentie van ADHD een relatie met impulsiviteit suggereert.

Jeugdige zedendelinquenten worden in de literatuur ook wel omschreven als sociaal geïsoleerd. Bij sommigen wordt het seksueel delinquent gedrag mogelijk aangedreven door hun onvermogen om normale seksuele relaties te onderhouden. Dit lijkt bevestigd te worden door de relatief hoge prevalentie van angststoornissen en ASS symptomen in de hier onderzochte populatie. Echter, bepaalde symptomen zouden ook een reactie kunnen zijn op het zedendelict en de persoonlijke en juridische gevolgen hiervan. Depressie en angst zijn mogelijk een 'normale' reactie op een beschamende situatie. Om deze reden is het heel relevant om een follow-up onderzoek te doen in deze groep, zodat we beter kunnen onderscheiden wat oorzaak en gevolg is.

Hoewel de classificatie van de subgroepen van jeugdige zedendelinquenten werd gebaseerd op al eerder in de literatuur gevonden verschillen tussen solo versus groepsplegers en verkrachters versus kindmisbruikers, is de validiteit van de gebruikte classificatie onbekend. Bovendien was slechts beperkte informatie beschikbaar over het zedendelict en kan de informatie van deelnemers te eenzijdig zijn geweest, waardoor de betrouwbaarheid van de bevindingen niet gewaarborgd kon worden. Ondanks deze beperkingen werden relevante verschillen gevonden tussen de subgroepen die de validiteit van het onderscheid ondersteunen. Kindmisbruikers hadden de meeste psychische problemen, gevolgd door solisten. Hoewel de groepsdelicten in de onderzochte groep ernstig waren, was het voorkomen van psychiatrische stoornissen in deze subgroep laag. Onderliggende risicofactoren voor zedendelinquent gedrag bij deze groep jongeren zouden eerder

gezocht moeten worden in bijdragende factoren als een ongunstige omgeving dan in psychische problemen.

Zedendelinquent gedrag wordt in eerder onderzoek in verband gebracht met ASS. Inderdaad werden in het huidige onderzoek hoge percentages aan ASS symptomen gevonden. Een beperking van het huidige onderzoek is echter dat het gekozen instrument niet bedoeld is als diagnostisch instrument. Nader onderzoek is nodig om ASS daadwerkelijk te diagnosticeren. Een andere beperking van dit onderzoek is dat er mogelijk sprake is geweest van selectiebias. Vanwege hun sociale beperking is het denkbaar dat jeugdige zedendelinquenten met ASS eerder door de politie opgespoord worden waardoor jongeren met ASS kenmerken mogelijk oververtegenwoordigd zijn in dit onderzoek. Echter, ondanks deze beperkingen, bevestigt deze dissertatie de bevindingen van eerder onderzoek dat er een mogelijke relatie is tussen ASS en zedendelinquentie (Hellemans et al 2007; Silva et al 2004). De bevinding dat ASS symptomen het meest uitgesproken waren bij kindmisbruikers is een belangrijk argument om de mogelijke relatie tussen ASS en kindmisbruik verder te onderzoeken.

Klinische implicaties

De psychiatrische problemen en stoornissen gevonden bij jeugdige zedendelinquenten vragen om geschikte en voldoende screening en diagnostiek bij deze groep jongeren. Deze screening moet uitvoerig zijn en moet bij voorkeur plaatsvinden kort na aanhouding of in verzekering stelling door de politie. Specifieke screening en diagnostiek van ASS symptomen is wenselijk, zeker bij kindmisbruikers, maar verder onderzoek zal moeten aantonen of ASS inderdaad meer voorkomt onder zedendelinquenten.

Dit onderzoek toont aan dat naast omgevingsfactoren, zoals aangetoond in eerder onderzoek, psychiatrische en psychosociale problemen mogelijk belangrijk bijdragende factoren zijn in de ontwikkeling van jeugdig zedendelinquent gedrag. De resultaten van deze dissertatie onderstrepen het belang om kinder- en jeugdpsychiatrische expertise te betrekken bij jeugdige zedendelinquenten. Om tegemoet te komen aan wat Grisso (2004) noemt de 'custodial treatment

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obligations' (zorgplicht) moet de maatschappij antwoord geven op de psychische noden van jeugdige zedendelinquenten die in hechtenis zitten. Hoewel behandeling nodig is voor degenen die psychiatrische stoornissen hebben weten we niet of behandeling de toekomst van jeugdige zedendelinquenten zal veranderen en of behandeling zedenrecidive zal voorkomen. De lage frequentie van seksuele recidive is een belangrijke bevinding en voorzichtigheid lijkt dan ook geboden bij het labelen van deze jongeren als zedendelinquenten.

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Curriculum Vitae

CURRICULUM VITAE

Lisette 't Hart-Kerkhoffs was born on May 20th, 1975 in Amsterdam, The Netherlands. After graduating from high school (St. Ignatiusgymnasium Amsterdam) in 1994, she studied Spanish Language and Culture at the Centro de Lenguas Modernas of the University of Granada, Spain. After one year of Law school at the University of Amsterdam, she started her study of Medicine at the VU University Medical Center Amsterdam (VUmc). In 2003 she started as a research assistant at the Department of Child and Adolescent Psychiatry of the VUmc. In 2004 she obtained her Medical Degree. Thereafter she worked as an assistant psychiatrist at Triversum (Psychiatric Hospital for Children and Adolescents, Alkmaar). Up from October 2004 she worked as an PhD-student at the Department of Child and Adolescent Psychiatry of the VUmc. In 2007 she worked as a research assistant at the Department of Child and Adolescent Psychiatry/Psychotherapy of the University Hospital of Ulm, Germany. From April 2008 she combined working on her PhD with a residency in Psychiatry at GGZ InGeest (Psychiatric Hospital), Amsterdam. In October 2011 she will start her residency in Child and Adolescent Psychiatry at De Bascule (Academic Center for Child and Adolescent Psychiatry), Amsterdam.