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ADOLESCENT SEXUAL OFFENDING

Prevalence, risk factors and outcome

Cecilia Kjellgren

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ABSTRACT

The purpose of this thesis is to explore the prevalence of sexually offending behaviour among female and male adolescents in Sweden. One aim is to identify potential risk factors associated with sexually offending behaviour and a further aim to examine the outcome in early adulthood for a sample of sexually offending adolescent males.

Three different samples were used for this thesis. A sample of Norwegian and Swedish female and male high school students (more than 9,000) participated in a population based study and responded to a number of items concerning sexual interests and behaviours, conduct problems, health, peer and parental variables. Five percent of male and one percent of female students reported sexually coercive behaviour defined as penetrative sexual behaviours and masturbation.

Risk factors in particular associated with sexual coercion were identified by contrasting the sexually coercive youth with those who reported non-sexual conduct problems as well as with controls. A number of general risk factors as well as sexuality specific risk factors were identified among sexually coercive females as males. The male sample was used to further explore the link between being sexually abused and being sexually abusive. The association was confirmed also when controlling for other potential influencing factors.

The second sample was used to examine the one-year incidence of all reports to Social Services in Sweden on sexually offending adolescents. The total incidence rate was .06% among the 12-17 year old male population. Comparing the findings of self-reports and cases reported to authorities it could be concluded that the underestimation of adolescent female and male sexual offending is substantial.

A third sample of clinically assessed sexually offending male adolescents (M=15 years) was used for a follow up study. They were on average 21 years old by follow up, six years after assessment. One fifth reported sexually reoffending since the assessment. Risk assessments carried out in connection with the index offence were good in identifying those at high risk of sexually reoffending. One third of the males of the sample reported learning disabilities or neuropsychiatric disorders, and this was particularly prevalent among those who sexually reoffended. In addition more than half of the males had been convicted of a non-sexual crime by the time of follow up.

Keywords: sexually offending adolescents, sexual coercion, prevalence, risk factors, assessment, sexual reoffending

SVENSK SAMMANFATTNING

Huvudsyftet med avhandlingen är att studera förekomsten av att ungdomar, flickor och pojkar, begår sexuella övergrepp. Vidare att undersöka om specifika riskfaktorer har ett samband med att man tvingar någon till sex. Syftet är vidare att genom en uppföljning av en klinisk grupp undersöka utfallet med avseende på bl a hälsa, social anpassning och återfall i sexualbrott för en grupp unga män som i tonåren begått sexuella övergrepp.

Tre undersökningsgrupper har använts i avhandlingen. Norska och svenska gymnasieelever deltog i en populationsstudie om *Ungdomars sexualitet, attityder och erfarenheter*. Mer än 9.000 flickor och pojkar i åldrarna 17-19 år svarade på ett antal frågor om sexuella intressen och beteenden, uppförandeproblem, hälsa och kamrater. Fem procent av pojkarna och en procent av flickorna svarade att de hade tvingat någon till sex, definierat som penetrerande sex och onani.

Riskfaktorer för ett sexuellt tvingande beteende kunde identifieras genom att jämföra svaren från de som tvingat någon till sex med de som uppgav icke-sexuella uppförandeproblem och vidare med kontrollgrupp. Ett antal generella riskfaktorer var gemensamma för ungdomar med sexuella och icke-sexuella uppförandeproblem och vidare kunde sexualspecifika riskfaktorer identifieras hos både flickor och pojkar med ett sexuellt tvingande beteende.

För pojkar som rapporterade att de tvingat någon till sex analyserades sambandet mellan att ha varit utsatt för sexuellt övergrepp och att själv begå ett sexuellt övergrepp. Sambandet kvarstod även när effekten av andra påverkande faktorer kontrollerades.

Förekomsten av anmälningar om unga sexualförövare till socialtjänsten i Sverige undersöktes och en ettårs incidens på .06% bland 12–17-åriga pojkar identifierades. Vid jämförelse av gymnasieungdomars självrapporter om sexuellt tvång respektive antalet till socialtjänsten anmällda unga sexualförövare identifierades ett omfattande mörkertal.

En klinisk grupp av riskbedömda ungdomar som begått sexuella övergrepp (M=15 år) följdes upp efter i genomsnitt sex år. En femtedel hade begått nya sexualbrott efter riskbedömningen. Riskbedömningarna som genomfördes i samband med sexualbrottet i tonåren fungerade väl som stöd för att identifiera de som var i hög risk att återfalla i sexualbrott.

Mer än en tredjedel av undersökningsgruppen hade varit inskriven i särskola eller hade en neuropsykiatrisk diagnos, mer förekommande bland de som återföll i sexualbrott. Mer än hälften av de unga männen var dömda för ett eller fler icke-sex brott efter den kliniska riskbedömningen fram till uppföljningen.

PAPERS INCLUDED IN THE THESIS

- I. Kjellgren, C., Priebe, G., Svedin, C.G., & Långström, N. (2009). Sexually coercive behavior in male youth: Population survey of general and specific risk factors. Accepted for publication: *Archives of Sexual Behavior*.
- II. Kjellgren, C., Priebe, G., Svedin, C.G., Mossige, S., & Långström, N. (2009). Female youth who sexually coerce: Prevalence, risk, and protective factors in two national high school surveys. Accepted for publication: *The Journal of Sexual Medicine*.
- III. Seto, M.C., Kjellgren, C., Priebe, G., Mossige, S., Svedin, C.G., & Långström, N. (Submitted). Sexual victimization and sexually coercive behavior: A population study of Swedish and Norwegian male youth.
- IV. Kjellgren, C., Wassberg, A., Carlberg, M., Långström, N., & Svedin, C.G. (2006). Adolescent sexual offenders: A total survey of referrals to Social Services in Sweden and subgroup characteristics. *Sexual Abuse: A Journal of Research and Treatment*, 18, 357-372.
- V. Kjellgren, C. & Svedin, C.G. (Manuscript). Males who sexually offended during adolescence. A six-year follow up of a clinical sample.

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ABBREVIATIONS

ASO	Adolescent Sex Offenders
ASR	Adult Self-Report
AUDIT	Alcohol Use Disorder Identification Test
CI	Confidence Interval
CP	Conduct problem youth
DUDIT	Drug Use Disorder Identification Test
NC	Normal control youth
SCL-90	Symptom Checklist-90
SCL-25	Short version of Symptom Checklist-90
SEX	Sexual coercive youth
SORM	Structured Outcome Assessment and Community Risk Monitoring
SPSS	Statistical Package for the Social Sciences
YSR	Youth Self-Report

INTRODUCTION

After years of clinical work with never-ending numbers of child, adolescent and adult victims of sexual abuse I felt the necessity of extending my work to also address the need for prevention. Developing interventions for adolescents with sexually offending behaviour seemed to be a hopeful and promising approach. When I started to learn about sexually offending adolescents in 1992 there was no research on the subject nor was there any treatment program available for helping this group of youth in Sweden. Developing research on sexually offending adolescents might provide further knowledge into the practice in this important field of potential sexual abuse prevention.

Sexual offending behaviours among adolescents raise societal concerns. The main reason is the potentially negative impact on victims of sexual abuse. Some studies have in particular examined the consequences for victims being sexually abused by a young person (e.g., Cyr, Wright, McDuff, & Perron, 2002; Kilpatrick, Ruggiero, Acierno, Saunders, Resnick, Best, 2003). The results of these studies indicate that sexual abuse can be as harmful when committed by an adolescent as when committed by an adult.

Another concern that has been raised on the basis of the data from adult offenders (Abel & Rouleau, 1990; Knight & Prentky, 1993; Marshall, Barbaree & Eccles, 1991) is that a substantial number of sex offenders self-report the onset of deviant sexual interests during their adolescence. Consequently it has been argued that raising the level of awareness about sexual problem behaviour among young people could help to prevent future sexually offending.

No less important is the concern of the young person who actually acts out his or her sexual behaviour in an unwanted and harmful way. Some sexually abusive youths will live with the memory of having caused harm by sexually offending behaviour during their youth. This may also affect their ability to establish healthy sexual relationships in adulthood. It is also important to identify the vulnerability and the needs of sexually offending adolescents and to address the emotional and non-sexual behaviour problems of the adolescents in addition to addressing the sexually offending behaviour.

This thesis explores different aspects of adolescent sexual offending. Different samples have been used that complement one another and thus help to widen the approach. Population based samples, a national sample based on the total of reports to authorities as well as a clinical sample. The prevalence and characteristics of sexual coercion and sexual offending by adolescents are examined by a study of

self-reports as well as by the study of reports to authorities. The differences between and similarities of male and female sexual offending youths are examined and discussed.

Risk factors that are associated specifically with sexual offending are examined by using the information from non-sex conduct problem youth as comparisons. This makes it possible to distinguish risk factors specifically associated with sexually coercive behaviour in contrast with those risk factors that are more generally associated with conduct problems.

Finally by following a clinical sample of young adult males who sexually offended as adolescents, information on the outcome of a number of variables could be identified and examined.

The findings of the papers both confirm and contradict findings from previous research and add new perspectives from which to view some previous research. The results are potentially of use in developing practice and directions for future work with sexually offending adolescents.

OVERVIEW OF THE RESEARCH FIELD

The phenomenon of sexually offending adolescents was occasionally mentioned by researchers in the 1950s and 1960s (eg., Atcheson & Williams, 1954; Maclay, 1960). In 1980 a number of studies were presented focusing on different aspects of sexually offending behaviour among youth. In the beginning, researchers included sexualised and promiscuous behaviours as particular types of sexual offending behaviour. Along with the changing societal conceptions about adolescents' sexuality, the theories and concepts of what constitutes sexual offending behaviour among adolescents have changed over the years.

In the early research as well as in the clinical practice in the United States, sexually offending adolescents were approached in a manner similar to the way adult sex offenders were approached (Zimring, 2004). The practices that had evolved in work with adult sex offender were also used in the work with adolescents. This approach was criticised by several researchers (Becker, 1998; Chaffin & Bonner, 1998; Zimring, 2004). By only employing the models from work with adult sex offenders a number of potential developmental factors typical of the phase of adolescence had not been taken into account (Jones, 2003).

Concepts

The criterion to be used in determining sexually offending adolescents is partly influenced by the laws present in jurisdictions of different countries (Barbaree & Marshall, 2006). Barbaree and Marshall proposed that a juvenile sex offender is a person who has been convicted of sexual offence and old enough to be held criminally responsible for the crime. In jurisdictions where the age of criminal responsibility is higher, for example 15 as in the Nordic countries, delinquent behaviour of an adolescent may be recorded or reported within the authority of Social Services rather than the police (Nordic Social-Statistical Committee, 2008).

In the United States and Canada, 12 is the most common age of criminal responsibility (Barbaree & Marshall, 2006) and is therefore used as the lower age bound for the group classified as sexually offending adolescents. In Britain the age of criminal responsibility is 10 years and this age is consequently used as the lower age bound for the group in both research and in clinical practice (Masson & Erooga, 1999). In Sweden, the age of criminal responsibility is 15 years and hence in some Swedish studies 15 was used as the lower age bound (Långström, 1999).

The most commonly used upper age bound seems to be set at the age of majority, typically 18 years. The most frequently used age interval in studies of sexually offending adolescents therefore seems to be 12-17 years. The age bound roughly coincides with the age of puberty and consequently (Barbaree & Marshall, 2006) could also correspond with developmental changes occurring in this interval.

Different sexually offending behaviours have been reported among adolescents (Ryan, 1997). A variety of victim groups have been subjects of the research as well as being subjects in the clinical literature (Becker & Hicks, 2003). Some research on sexually offending adolescents includes sexual abuse committed by a young person against victims of any age or gender where as other studies have focused on abuse against specific groups, as victims of peer or partner abuse (e.g. Koss & Dinero, 1988; Koss, Gidycz, & Wisniewski, 1987).

Definitions

A definition of the concept sexually offending adolescents that is widely used is that suggested by Ryan, Lane, Davis and Isaac (1987):

the juvenile sexual offender is defined as a youth, from puberty to the legal age of majority, who commits any sexual act with a person of any age, against the victim's will, without consent, or in an aggressive, exploitive or threatening manner

The terminology used for sexually offending adolescents has previously been discussed in the scientific as well as in the professional literature. A range of phrases has been used including juvenile sex offenders, adolescent sex offenders and young sex offenders. It has been emphasized that there is a risk that labelling young people as sex offenders will result in their being associated with adult sexual offenders. This may lead to stigmatizing and inhibit efforts to change the sexually offending behaviour (Boyd & Blomfield, 2006). This may be a particular risk when legislation designed to deal with adult sex offenders is also applied for youth under the age of majority.

Thakker, Ward and Tidmarsh (2006) argued for not using the term "offender" and instead recommended that emphasis be put on the behaviour and on the use of the phrase "adolescents who sexually offend". In the English and Australian literature "young people who sexually abuse" has been a suggested phrase (Boyd & Blomfield, 2006; Erooga & Masson, 1999).

Definitions used in this thesis

In agreement with suggestions from Thakker and colleagues (2006) the phrasing *adolescents who sexually offend* is preferable and is the phrasing used predominantly in this thesis.

Still different definitions have been used in the thesis depending on differences across the study groups. The focus is mainly on sexually offending behaviour in adolescents, ages 12 to 18. However in the population based studies used in paper I-III, females as well as males age 17-20 report on life-time prevalence of sexual coercion. As most of the participants are over the age of majority the phrase *sexually coercive youth* consequently is used in those papers. In paper 4 and 5 the adolescents are not identified through criminal convictions but through reports to Social Services because of their sexually offending behaviour. Sexual coercive or sexually offending behaviour was not restricted to certain relations, such as peer or partner abuse in any of the papers of this thesis.

Male adolescent sexual offending

The sexually offending behaviour can range from noncontact offences, voyeurism and exhibitionism to contact offences like touching, rubbing and penetration (Becker & Hicks, 2003). More recent studies have also identified the additional sexually offending behaviours linked with the new technologies, behaviours such as sexual exploitation and possession of child pornography on the internet, behaviours reported for young people as well as adults (Cooper, Galbreath, & Becker, 2004; Moultrie, 2006).

In some of the U.S. self report studies the sexually offending behaviour has been referred to as “sexual coercion” with no further description of potential behaviour. If not otherwise specified, “sexual coercion” may include a range of hands off as well as hands on behaviour. Maxwell, Robinson and Post (2003) pointed out the difficulty of knowing the nature and severity of the sexual behaviours reported from such studies.

Adolescents who sexually offend have sometimes been characterised on the basis of the age of the victim (Fehrenbach, Smith, Monastersky, & Deisher, 1986; Hendriks & Bijleveld, 2004; Hunter, Hazelwood, & Sleisinger, 2000) and if they have been co-offending or not with peers (Bijleveld & Hendriks, 2003; Holmstrom & Burgess, 1980).

Child vs. peer offenders

Some researchers have suggested that sexually offending adolescents fit into one of two categories (Barbaree, Hudson & Seto, 1993), those who offend against children and those who offend against peers or adults. The term “child offender” is used when the offender is at least five years older than the victim and the term “peer offender” when the difference in age between offender and victim is less than five years (Hunter et al., 2000). Hunter and colleagues found that child offenders were more likely to have male victims, to use less physical force than peer/adult offenders. These researchers also found in turn that peer/adult offenders were more likely to offend against females who were strangers or acquaintances and to commit their offending in a public area (Hunter et al., 2000) as compared with child offenders. In a similar comparison Hendriks and Bijleveld (2004) found that levels of neuroticism and psychopathology were significantly higher in the child abusing group, and those in this group were also significantly more likely to have been bullied, to have a lower self image and less contact with their peers. Significantly child-abusing adolescents more frequently had abused males and were more likely to be related to their victims. Peer abusing adolescents were more likely to have assaulted a stranger and to use significantly more physical violence than the child-abusing group. Seto and Lalumière (2006) explored the links with non-sexual conduct problems among adolescent sex offenders. They found that child offenders had fewer conduct problems than peer offenders.

Group vs. single offenders

Adolescents who sexually offend together with one or more peers have been identified as group offenders. O’Brien and Bera (1986) suggested in their typology of adolescents who sexually offend that the group influenced offender was one of seven categories. They suggested that one or more individuals may act as a leader of the group while others are acting as followers. The sexual offence may be an attempt to impress and to gain approval from peers. It was suggested by Holmstrom and Burgess (1980) that a main purpose with gang rape, perhaps the most common group sex offense, could be to demonstrate shared male dominance and bonds by watching, taking turns, and humiliating the victim.

Few studies have contrasted group offenders with single adolescent sex offenders. However, Bijleveld and Hendriks (2003) compared group and single adolescent sex offender from a forensic sample.

They studied the files of 32 group offenders and 51 single offenders who had undergone psychological assessment for Dutch juvenile courts. Group adolescent offenders were found to be younger, more often of minority ethnicity and had

committed more sexual offences than single offenders. Single offenders scored significantly higher than group offenders on neuroticism, impulsivity, and sensation-seeking and significantly lower on sociability. No significant differences in IQ were found. They also found that adolescent group sex offenders were less likely to be victims of sexual abuse, and were less likely to have committed sexual offences previously.

Theory and etiology

The most commonly presented theoretical models were developed on the basis of sexually offending adults and then adapted for the understanding of sexually offending youth. Ward, Polaschek and Beech (2006) have contributed an extensive presentation of the theories on sexual offending. They distinguish between three different levels: the multifactorial, the single factor and the micro-level or offence process theories.

They present six different multifactorial theories, some of which have often been cited as being useful for the theoretical understanding of adolescents who have sexually offended (Seto & Lalumière, 2009).

Three of the theories are briefly presented.

Finkelhor's four preconditions to sexual offending (Finkelhor, 1984).

Finkelhor's model may be the most commonly cited of all theories of child sexual abuse. The theory sets forth the conditions that must be present for an offender to sexually abuse a child. This four preconditions model was based on a review of the literature on offenders and victims of sexual abuse.

The four preconditions are;

1. *The motivation to sexually abuse:*
 - a) Emotional congruence: emotional needs are met by the child.
 - b) Sexual arousal: sexual aroused by the child.
 - c) Blockage: inability to meet emotional and sexual needs in adaptive ways.
2. *Overcoming internal inhibitors:*

Internal inhibitions such as the recognition that the behaviour is wrong and illegal may be overcome by alcohol, stress, or impulse disorder.

3. *Overcoming external inhibitors*

External impediments that might prevent sexual abuse must be overcome. This includes forming a relationship with a child or with the family of a child or spending time in locations with children.

4. *Overcoming the resistance of the child*

This may include building a close emotional relationship with a child, bribery, use of threats and use of physical force.

Marshall and Barbaree's Integrated Theory (Marshall & Barbaree, 1990; Marshall & Marshall, 2000).

Marshall and Barbaree presented an integrated model for the development of sexual offending behaviour.

The development of vulnerability

The theory suggests that individuals who experience bad childhood events (e.g., harsh discipline, abuse or neglect) are likely to be influenced by distorted internal working models of relationships, particularly, with respect to sex and aggression. This may result in poor social skills and self-regulation skills from an early age.

Vulnerability and the challenge of adolescence

The onset of adolescence is a particularly critical time. It is at this stage where individuals are most receptive to acquiring enduring sexual scripts, interests and attitudes. They begin to desire a more sexual quality within some of their relationships. A young person from a disrupted background may experience failures to establish intimate relationships based on mutual sexual attraction and may be rejected. This may result in lowered self-esteem, anger and negative attitudes toward females. Negative emotions may impact the sexual desires and the development of deviant sexual fantasies. Masturbation to these fantasies will increase their strength. The young person may seek sex either forcefully or with a younger and more vulnerable child.

Situational factors

Vulnerability factors interact with more temporary factors such as stress, intoxication and the presence of a potential victim to impair an individual's ability to control their behaviours, resulting in a sexual offense. The reinforcing effects of deviant sexual activity and the development of cognitive distortions help to maintain offending.

The Integrated Theory of Sexual Offending (ITSO)

Ward and Beech (2006) presented The Integrated Theory of Sexual Offending bringing together theories from three different levels; the multifactorial theories, the single-factor theories, and the offence process theories. They suggested an integrated framework to explain onset, development, and maintenance of sexual offending.

They suggest that three sets of factors continuously interact; biological factors (genetic predispositions and brain development); ecological niche factors (social, cultural, and personal circumstances); and neuropsychological factors. According to their theory sexual offending occurs through the ongoing confluence of *distal* and *proximal* factors that interact in a dynamic way.

The first factor, *biological factors*, includes a set of factors such as brain development and neurobiological functioning.

The second factor, *ecological niche*, also expressed as the social and cultural roles of the offender and *habitat*, the environment in which a person lives. Psychological vulnerabilities are thought to function as a predisposition making it more probable that an individual will struggle to effectively meet specific challenges and make it likely that he or she will commit a sexual offence at some future time. Different circumstances can be regarded as a distal as well as proximal dimension of risk.

The third factor, *neuropsychological functioning*, includes three interlocking neuropsychological mechanisms: 1. *The motivational/emotional system* - deficits here manifested as problems in intimacy, 2. *The action selection and control system* - deficits here manifested in self-regulation problems, and 3. *The perception and memory system* – deficits manifested as maladaptive belief systems (i.e., pro-offending attitudes, distorted sexual scripts).

Four clusters of problems or symptoms have been found among sexually offending adults: emotional problems, social difficulties, cognitive distortions, and sexual

interests. Ward and Beech suggest that biological, ecological and psychological vulnerabilities interact to generate the clusters of clinical phenomena.

Ward and Beech further suggest that the neuropsychological factors represent the critical area for the development of the understanding of sexually abusive behavior. It is when the integrity and function of these mechanisms are compromised that the clinical phenomena are in operation, increasing the risk of sexually abusive behaviour.

Female adolescent sexual offending

Sexual offences committed by females have been ignored or unrecognized (Becker, Hall, & Stinson, 2001). There has also been limited attention given in the research literature to female adults as adolescent sexual offenders (Johansson-Love & Fremouw, 2006). As suggested by Denov (2001; 2003) the traditional sexual scripts do not include female sexual aggression. The dominating script in the field of sexual abuse has been concerned with male offenders and female victims excluding the image of females as sex offenders initiating sex with males (Byers & O'Sullivan, 1998). Those traditional scripts have a significant influence on leading observers to give less attention to females who sexually offend and to making possible disclosures of offending. Denov (2003) suggests that the societal perception of females as sexually passive and innocent has an effect on the implicit denial of females as potential sexual aggressors. This may be expressed in different areas as: victim perception of female sexual offending, perception among professionals on female sexual offending, and the nature of interest within the legal system.

There may be degrees of discomfort among professionals about approaching female sexual offending that could in turn lead to minimization and denial of such behaviour. The professional approach to female sex offenders among psychiatrists and police officers was explored by Denov (2001) through interviews and observations. It appeared to Denov that the professionals made efforts either consciously or unconsciously to transform the female sex offender and her offence and to realign both offender and offence with more culturally acceptable concepts of female behaviour. This ultimately led to a denial of the problem. Still it has been reported that female sexual offending can result in as serious consequences for the victim as male sexual offending (Saradjin & Hanks, 1996).

Victim underreporting could be one consequence of insufficient recognition of the behaviour from professionals (Johnson & Shrier, 1987). Adolescent female offenders are probably at least as under recognized as female adult offenders.

No comprehensive theory has been presented for female adults or adolescents who sexually offend (Gannon & Rose, 2008), but typologies have been presented and some basic convergences have been established according to Gannon and Rose (2008). The authors further summarise their views that suggested typologies should include: women who engage in sexual activity with adolescents, who offend alongside a co-perpetrating male, who target pre-pubescent children and women who offend as part of a wider criminal career.

Prevalence and incidence

In a meta analysis of 120 studies of adolescents, college students and adult populations, Spitzberg (1999) identified a number of victims (female and male) self reporting having been raped. He noted that a disproportionately small number of men reported having perpetrated a rape. The prevalence of reports of being a victim of sexual abuse or sexual coercion did not correspond with numbers of offenders taking responsibility for such behaviour. As concluded by Kolivas and Goss (2007), there is a gap between the prevalence rates of victims reporting sex crimes and the self reported perpetration rates. Men's reported rates differed significantly from the level of sexual victimization reported by women (Kolivas & Goss, 2007). They further report that the average rape perpetration rate collected using an anonymous self-report survey were three quarters to two thirds less than the average victimisation rate.

Prevalence usually refers to the number of offenders or victims over a long time period such as life-time or to offences occurring from a certain age onward. The incidence usually refers to the number of offences that have been reported during a certain time period such as one year. The prevalence or incidence of sexual offending committed by adolescents can be obtained from different sources (as suggested by Weinrott, 1996) such as registers of criminal convictions or apprehensions, social services' child protection records and youth service records, victim surveys and offender self-report surveys.

Females

The proportion of females as offenders may be uncertain as the subject of females as offenders has not been studied carefully as suggested in the previous section. Following the traditional script, some studies of college populations limited the questionnaires to males committing the sexual offences and females only seen as victims. Some studies restricted the victim group for young female offenders to child victims. Such factors probably increase uncertainty in any estimate of the

relative frequency of females compared with males among sexually offending adolescents.

Reports to authorities

A victim of a sexually offending adolescent may be identified through the Child Welfare Records. In some countries the young offending person may also be referred to social services and consequently registered. Weinrott (1996) found for those children reported to Child Welfare being victims of sexual abuse that 13% were victims of an offender under the age of 19.

A sample of sexually offending adolescents was identified in the county of Oxfordshire, England (James & Neil, 1996) through information gathered from professionals in health, child psychiatry, Social Services, probation and police units. They calculated a prevalence rate of 0.15% among the male youth population. Taylor (2003) identified 227 children and young people reported to the Social Services during six years because of child sexual abuse, eight percent were girls.

Forensic samples and/or criminal convictions

Criminal convictions of sexually offending individuals may give a conservative estimate of the prevalence of adolescent sexual offending. Of those who sexually offend some will be reported to the police, a part will be further prosecuted and a few will finally be convicted (Abel & Rouleau, 1990).

The U.S. Department of Justice has reported (Snyder, 2008) that about one fifth of sexual assaults in the U.S. are committed by offenders under the age of 18. Among the total of juveniles arrested for sexual offences 9% were females. Among those juveniles arrested for forcible rapes 2% were females.

Data on reported crime incidents from the U.S. National Incident Based Reporting System (NIBRS) showed that a majority (66%) of adolescent victims were sexually assaulted by an acquaintance, and nearly half of those committing the offence were between 12 and 24 years old (Snyder and Sickmund, 1999).

Of all in Sweden who were registered as suspects of committing a sexual crime in 2008, 12% were adolescents 15 to 17 years old (in the age of criminal responsibility) (BRÅ, 2009). Among all those suspected of committing rape offences against victims under the age of 15, one fourth were adolescents. Among

the adolescents suspected in Sweden of committing sexual crimes between 1999-2008, 2-3% were females (BRÅ, 2009).

Population based surveys of victim reports

Population based surveys carried out with anonymous self-reports may picture the prevalence more accurately considering the proportion of non-disclosure of sexual abuse (Kolivas & Gross, 2007).

Koss and colleagues (1987) identified in a national college sample that 44% of the female students had experienced sexual coercion and 2% unwanted sexual intercourse after the age of 14. In a high-school based sample (Lodico, Gruber, & DiClemente, 1996) 7.8% of the students on average 16 years, reported that they had experienced sexual coercion by a friend or date.

Priebe and Svedin (2008) used the Baltic Sea Regional Study of Adolescents' Sexuality (Mossige, Ainsaar, & Svedin, 2007) to examine the prevalence of self-reports of being a victim of sexual abuse and to examine the characteristics of the abuse. Priebe and Svedin (2008) found among 3rd year high school students that one third of those who were victims of sexual abuse reported an age difference between victim and offender of less than five years. The results of the Norwegian sample (Mossige et al., 2007) indicated that victims of sexual abuse commonly reported that offenders were of age 15-19 years.

Population based surveys of self-reported sexual coercion

U.S. surveys using self-reports among high school students have explored sexually coercive behaviour among females and males (Borowsky, Hogan, & Ireland, 1997; Lodico et al., 1996). These researchers reported sexual coercion prevalence rates of 2.8 - 4.8% among male and 0.8 - 1.3% among female high school students.

Characteristics associated with adolescent sexual offending

Males

A number of studies have examined the factors identified with sexual offending behaviour among adolescents (reviewed by Epps & Fisher, 2004). The results are partly disparate and the finding with a broad range of factors illustrates the heterogeneity of sexually offending adolescents. Factors that have been associated with adolescent male sexual offending in clinical samples are: exposure to physical abuse (Benoit & Kennedy, 1992; Richardson, Graham, Bhate, & Kelly, 1995) having been subject to sexual victimisation (Becker, Cunningham-Rathner, & Kaplan, 1986; Worling, 1995) having experienced family characteristics such as violence and instability (Awad, Saunders, & Levene, 1984; Fehrenbach et al., 1986) had experienced insecure childhood attachment (Marshall, 1989) and school problems such as academic under achievement (Awad et al., 1984; Davis & Leitenberg, 1987).

Suggested risk factors identified among population samples include witnessing intrafamilial abuse, substance abuse, gang membership, and suicidal behavior (Borowsky et al., 1997), early debut of sexual activity (Koss & Dinero, 1988), sexual victimisation (Lodico et al., 1996, Koss & Dinero, 1988, Borowsky et al., 1997), and use of pornography (Bonino, Ciairano, Rabaglietti, & Cattellino, 2006).

Females

The characteristics of female adolescents who sexually offend have not been broadly examined. The small selected samples that have been studied limit the validity of the research. Past sexual victimization has been suggested to play a significant role in the development of sexual offending behaviour among females (Fehrenbach & Monastersky, 1988; Mathews, Hunter, & Vuz, 1997; Bumby & Bumby, 1997). Furthermore, females were more likely to come from dysfunctional homes than were males with whom they were compared (Mathews et al, 1997, Bumby et al, 1997). Bumby and Bumby (1997) found that female adolescents also often suffered from emotional and psychological difficulties, anxiety, depression and posttraumatic stress disorder (PTSD). They reported significantly higher rates of drug abuse and promiscuity than the males in the comparison group (Bumby & Bumby, 1997), and fewer reported sexual partners among females than among the comparison males (Miccio-Fonseca, 2000).

Two population based studies (Borowsky et al., 1997; Lodico et al., 1996) found that sexually coercive behaviour among female students was associated with sexual victimization. Borowsky and colleagues (1997) further identified frequent use of illegal drugs, steroid use, gang membership, suicide risk behaviour and excessive “hanging out” among sexually coercive females.

Gender comparison

Kubik and colleagues (2002) found few differences in psychosocial and criminal histories, sex offence behaviour, antisocial behaviour, and variables related to clinical presentation and treatment when they compared sexually offending adolescent females (n=11) with a group of age-matched males with sex offense histories. Mathews and colleagues (1997) compared 67 11-18 year old juvenile females with a documented sexual perpetration history with a group of 70 juvenile male sexual offenders of the same age. The majority of these female adolescent sex offenders demonstrated repetitive patterns of sexual offending with multiple victims, suggesting psychosexual disturbances equivalent in severity to the comparison group of males.

Sexual abuse

One single factor that has raised particular attention in the research and clinical field is the prevalence of being a victim of sexual abuse among adolescents who themselves sexually offend. There is an agreement that sexual abuse is a harmful experience (Becker, 1998; Watkins & Bentovim, 1992). Several explanations have been proposed for the tendency of the sexually abused to themselves then go on to sexually abuse others, explanations based on what sometimes is termed *the sexually abused - sexual abuser cycle* (Maxfield & Widom, 1996; Widom & Morris, 1997).

The prevalence rates of sexual victimisation among sexually offending adolescents found for males are in range 19-49% (Mathews et al., 1997). The prevalence rate among sexually offending adolescent females of being sexually abused is 50-100% across studies (Hunter, Lexier, Goodwin, Browne, and Dennis, 1993; Mathews et al., 1997; Oliver, 2007).

Identifying the true prevalence of being a victim of sexual abuse among sexually offending adolescents has been problematic (Awad et al., 1984). Worling found (1995) that the mean frequency of being sexually abused among sexually offending male adolescents reported before treatment were substantially lower than the frequency obtained after treatment. Over-reporting has also been identified and

could be understood as an effort to moderate the responsibility for the abusive behaviour, as discussed by Barbaree and Langton (2006).

Sexual offending and conduct problem behaviours

As suggested by Becker (1988), the sexually offending behaviour may be part of a broader antisocial repertoire for some of the adolescents. Ryan and colleagues (1996) found that 63% of a large sample of sexually offending adolescents also committed non-sexual offences. When differentiating sub groups of sexual offending adolescents it was found (Seto & Barbaree, 1997) that those offending against peer and adults in contrast with those offending against children are more persistently antisocial.

Sexually offending juveniles (reviewed by van Wijk, Vermeiren, Loeber, 't Hart-Kerkhoffs, & Bullens, 2006) were compared to non-sex offenders of 17 samples. The groups were compared on demographics, family characteristics and individual characteristics. Differences between the subgroups were found for personality characteristics, behavioural problems, history of sexual abuse, nonsexual offending, and peer functioning.

A meta-analysis of 57 clinical or forensic studies (Seto & Lalumière, 2009) adolescent sex offenders (n = 3,155) were compared with adolescent non-sex offenders (n = 9,678). They examined the variables; age for 1st criminal justice contact, extent of criminal involvement, conduct problems, antisocial tendencies, substance abuse, childhood abuse and exposure to violence, family problems, sexuality, psychopathology and cognitive abilities.

Comparing the subgroups, they found following factors were supported as playing a significant role for sexually offending adolescents: being victim of sexual abuse, exposure to sexual violence, exposure to sex or pornography, social incompetence, mood problems, and atypical sexual interests.

Seto and Lalumière (2009) concluded that sexual offending cannot be understood as a simple manifestation of general antisocial tendencies.

Learning disabilities

Youth with learning disabilities are over-represented within population studies (James & Neil 1997; Manocha & Mezey 1998) and clinical samples of sexually offending adolescents (Almond, Canter, & Salfati, 2006; Hawkes, Jenkins, & Wizard, 1997; O'Callaghan, 1998). While the samples mentioned were typically

adolescent males, Matthews and colleagues (1997) found in a sample of sexually offending adolescent females that one fourth had learning disabilities.

There could be an identification bias from base-line that learning disabled youth are more likely to be observed and detected because they are more closely observed than those who are not learning disabled comparisons. Limited opportunities for social development and social isolation are suggested risk factors among learning disabled youth (O'Callaghan, 2004). Sexually offending adolescents with learning disabilities tend to repeat their behaviour, tend to be at risk for habituation and to be more opportunistic (Lane & Lobanov-Rostovsky, 1997). They have been found to be more impulsive in their sexually offending and more naive when confronted (Thompson & Brown, 1997).

Some of the factors mentioned associated with sexually offending adolescents with learning disabilities may result in their over-representation in the statistics. However the prevalence of sexual offending among learning disabled may also be under-reported because of unwillingness among carers close to the young person to acknowledge sexual abuse committed by a young person with learning disabilities.

Sexual reoffending

Research has shown that adolescents who have committed sexual offences comprise a diverse group (Beckett, 1999; Hunter, Figueredo, Malamuth, & Becker, 2003). Becker and colleagues (1986) suggested that there might be three different future pathways for young people who have sexually offended: to commit no further crimes, to commit both sexual and non-sexual offences, or to commit only sexual offences. As previously concluded by Moffitt (1993) some adolescents with an anti-social behaviour may be life-course-persistent and some have a behaviour limited to adolescence. Recent reviews of research have found that the most prevalent of the future delinquent paths is to commit non-sexual offences (Gerhold, Browne, & Beckett, 2007; Worling & Långström, 2006).

Different and sometimes unclear definitions of sexual reoffending have been used in research, as reviewed by Fortune and Lambie (2006). Some studies have based recidivism rates on subsequent incarceration (Brannon & Troyer, 1995). Massop (1995) argued that using only one source may be insufficient and suggested that arrest and conviction records should be complemented with self reports. Further as concluded by Fortune and Lambie (2006) the variations in used definitions make comparisons of reoffending rates difficult.

A number of studies have presented data on sexual and non-sexual reoffending among sexual offending adolescents (reviewed by Worling & Långström, 2006; McCann & Lussier, 2008). Worling and Långström (2006) identified 22 follow-up investigations with sexual reoffending rates ranging from 0% to 40% across studies. Mean follow up periods varied from 6 months to 9 years. The inconsistent findings of sexual reoffending rates may be a function of differences in methodology, and measures used as previously mentioned (Fortune & Lambie, 2006).

The recidivism rate was 15% when criminal charges were used as an estimate of sexual reoffending. When examining the rate of any criminal charge, sexual and non-sexual reoffending, the rate was 54%. Similarly, McCann and Lussier (2008) found in their meta-analysis that juvenile sex offenders were three times more likely to commit non-sexual crimes than sexual crimes in the future.

Assessment of risk of sexual reoffending

Unstructured clinical assessments of sexual reoffending among adults have been found to have low reliability (Hanson & Bussière, 1996; Hanson & Morton-Bourgon, 2009).

Structured judgements to identify the potential risk of an adolescent to sexual reoffend have been used for the last ten years. There is not enough follow-up research on adolescents available yet to establish a validated tool (Worling & Långström, 2006). Identified risk factors could however inform clinical decisions and be seen as a use of empirically guided clinical judgments (Hanson, 2000). Faniff and Becker (2006) identified two goals for developing specialized assessment service for adolescent sex offenders: to assist in treatment planning and to identify juveniles at high risk of sexual reoffending. In addition to the identification of the adolescent's unique strengths, concerns, and treatment needs, current best-practice guidelines suggest that the risk of reoffending should be addressed in any assessment (Association for the Treatment of Sexual Abusers, 2001).

Specialized assessment for adolescent sex offenders have been reviewed by Faniff and Becker (2006). They conclude that data are available to support the use of two risk assessment instruments with juveniles: the Juveniles Sex Offender Assessment Protocol-II (J-SOAP II; Prentky & Righthand, 2003) and Estimate of Risk of Adolescent Sexual Offense Recidivism (ERASOR; Worling & Curwen, 2001).

A wide range of risk factors has been proposed to be associated with the risk of sexual reoffending. By reviewing the published literature Worling and Långström

(2003) categorised suggested risk factor for sexual recidivism into four categories; empirically supported, promising, possible, and unlikely. Worling and Långström (2003) identified six well supported risk factors for sexual reoffending: deviant sexual interests, prior adult sanctions for sexual assault, past sexual offences against two or more victims, sexually offending against a stranger, social isolation and uncompleted offence-specific treatment.

However, some of the risk factors that are commonly recognized as being associated with risk as; denial of sexual offence, lack of victim empathy and penetrative sexual assaults were unlikely to be associated with risk of sexual reoffending in the review.

PURPOSE AND AIM OF THE THESIS

The purpose of this thesis was to explore the prevalence of adolescent sexual offending, sub group characteristics, risk factors, and the outcome by follow up, four years or more after the clinical risk assessment.

The aim was to explore the prevalence as well as the incidence of sexual offending and sexual coercion among female as male adolescents. Prevalence was explored by examining self-reported sexual coercion in two population-based high-school samples and by reviewing the one-year incidence of reports to Social Service on sexually offending adolescents in Sweden.

A further aim was to identify a number of risk and protective factors of both the sexually coercive females as well as males. The risk and protective factors were examined by comparing those sexually coercive with non-sexual conduct problem youth as well as comparing with control youth.

A further aim was to explore the association between being a victim of sexual abuse and to sexually abuse others.

Another aim was to examine the outcome on a number of variables for a clinical sample of adolescents who sexually offended, doing so at least four year after the clinical assessment. Yet another goal was to further examine the outcome on sexual and non-sexual reoffending for the sample. The final aim was to examine if the risk estimates made at the time of the clinical assessment did identify those who reported sexually reoffending or not.

Research questions:

- What is the national one-year incidence of sexually offending behaviour among adolescents being reported to authorities in Sweden?
- Could subgroup characteristics be identified?
- What is the lifetime prevalence of sexual coercion among adolescent high school students?
- When comparing sexually coercive youth with those reporting non-sex conduct problems what risk and protective factors could be identified?

- Could any sexuality specific risk factors be identified, associated with sexual coercive behaviour?
- Comparing sexual coercive behaviour among male and female adolescents are there any differences and similarities?
- Following a clinical group of sexually offending adolescents into early adulthood: did some of them continue with their sexually offending behaviour?
- Are there any certain factors associated with sexual reoffending behaviour?
- Did clinical risk assessments predict better than chance those who sexually reoffended?

SUBJECTS AND METHODS

Five different samples were used in the papers of this thesis (see table 1). In papers I-III different subsamples of a Baltic Sea Regional Study on Adolescents' Sexuality were used. In paper IV a sample of reports to Social Services in Sweden was used and in paper V a clinical sample was prospectively followed.

Table 1. Papers and information on participants.

	Paper I	Paper II	Paper III	Paper IV	Paper V
Source	self reports	self reports	self reports	Social Services reports	young adult males
N participants	1,933	4,363	3,949	197	39
Gender	males	females	males	males	males
Age	17-20	17-20	17-20	12-17	17-26
Sample	Swedish senior high school students	Norwegian and Swedish senior high school students	Norwegian and Swedish senior high school students	Adolescents reported to Social Service because of sexual offending behaviour	Males risk assessed during adolescence because of sexual offending behaviour
Statistics	Chi-2 test, One-way ANOVAs, OR and multivariate logistic regression	Chi-2 test, One-way ANOVAs and OR	Chi-2 test, One-way ANOVAs, OR and multivariate logistic regression	Chi-2 test, One-way ANOVAs and OR	Fisher's Exact Test, t-test and OR

The study used in papers I, II and III

The Baltic Sea Regional Study on Adolescents' Sexuality (Mossige et al., 2007) was carried out in 2003-2004 in seven countries (Estonia, Iceland, Lithuania, Norway, North-West Russia, Poland and Sweden). About 20,000 participants, on average 18 years old, took part in the international study. The survey explored adolescents' sexuality and experiences of sexual abuse, their sexual coercive behaviour and sexual exploitation.

The prevalence of sexual abuse, characteristics, and health among the students of the Swedish sub sample has been reported in four papers (Priebe, 2009).

Subjects

The Swedish and (in paper II and III) the Norwegian sub samples of the Baltic Sea Regional Study on Adolescents' Sexuality (Mossige et al., 2007) were used. Participants were third-year high school students. Students from the nine largest urban areas in Norway and from two major and three smaller cities in Sweden were selected.

The sampling procedure was designed to ensure proportional representation of third-year high-school students from study programs in each sampled area. The majority of youth age 18 in both countries attend high school, in Norway, 74% (Statistics Norway, 2009) and in Sweden, 91% (Statistics Sweden, 2007).

In Sweden permission to conduct the study was obtained from the director of the schools in the selected communities. Then each school principal was informed and eligible students were approached. Students gave their consent to participate in the study after considering both oral and written information. They were not financially compensated. A member of the research team visited each class during school hours and administered questionnaires after reminding the students about their anonymity. The students completed the paper-and-pencil questionnaire in their class rooms. Research staff supervised the completion to ensure that the students did not influence each other. Completed questionnaires were placed in unmarked envelopes individually sealed by each participant. The response rate was 77%. Eligible but non-participating students were absent from school on the day of the survey or actively chose not to participate.

In Norway permission to conduct the study was obtained from education officers in the selected areas and from principals at each school. Each school appointed a study coordinator who took part in a half-day seminar on study aims and coordinator tasks. Students received written information about the study. They were not financially compensated. Participants completed questionnaires in classrooms. Study coordinators supervised data collection so that students did not influence each other, placed the completed questionnaires in unmarked envelopes individually sealed by each participant. The response rate was 82%. Eligible but non-participating students were absent from school on the day of the survey or actively chose not to participate.

Measures

The self-report questionnaire was developed for The Baltic Sea Regional Study on Adolescents' Sexuality. It contained 65 items covering sociodemographic conditions, sexual victimization, social relations, conduct problems, depression,

substance use, and a set of normative and deviant sexual cognitions, attitudes and behaviours. Items tapping sexual victimization and sexually coercive behaviour were unconditional and not restricted to specific relationships such as peer or partner abuse. The questionnaire was partly based on a format previously used in Norway (Mossige, 2001).

Items from the following instruments were included in the questionnaire:

The Parental Bonding Instrument (Parker, Tupling, & Brown, 1979) measures two dimensions of perceived parenting: parental overprotection and parental care. A 9-item version was used for this study (the original version had 25 items).

Depression. Six items from the SCL-90 (Derogatis, 1990) were used to assess depressive symptoms during the preceding week.

Gender stereotypic attitudes. Six items from Burt (1980) were used to assess participants' endorsement of stereotypic attitudes towards gender roles.

Rape myths acceptance. Five items (three items suggested by Burt, 1980 and two additional) addressed the acceptance of rape myths or empirically unfounded cognitions related to rape.

Paper I:

The Swedish sample of 1,933 male student participants 17-20 years was used for this study. They were on average 18.1 years ($SD=0.62$, $Mdn=18$).

Participants were divided into sexually coercive youth (with/without other conduct problems), non-sex conduct problem, and control youth. Sexually coercive youth (SEX) endorsed that they had "ever talked someone into, used pressure or forced somebody to masturbate them, to have sexual intercourse, oral sex, or anal sex." Non-sex conduct problems were addressed with six typical indicators of rule-breaking or aggressive behavior. Conduct problem participants (CP) endorsed ≥ 3 of six items: "ever violent conflict with teacher, ever theft of >140 USD, ever committed a burglary, ever stolen a car or motorbike, frequently being truant (≥ 5 times), or ever been away from (their parents') home an entire night without parents knowing where." The remaining students were classified as normal controls (NC). Risk factors were defined as characteristics associated with higher likelihood of sexually coercive (or non-sexual conduct-disordered) behavior compared to controls whereas protective factors were conceptualized as factors decreasing the

same likelihood, e.g., through direct personal or social controls against the occurrence.

Paper II:

The Norwegian and the Swedish sample of 5,059 female student participants 17-20 year old was used for the study. Out of 5,059 participants 4,363 (86.2%) also responded to questions regarding sexually coercive behaviour and could be included in the analyses. A total of 2,079 (47.7%) students were from Norway and 2,284 (52.3%) were from Sweden. They were on average 18.1 years ($SD=0.63$, $Mdn=18$).

First, sexually coercive and sexually non-coercive females were compared, the former endorsing that they had “ever talked someone into, used pressure or forced somebody to masturbate them, to have sexual intercourse, oral sex, or anal sex”. Second, only data from the Swedish subsample was used, since the Swedish version of the questionnaire distinctly identified individuals with non-sex conduct problems. Subjects were then divided into sexually coercive (with/without other conduct problems), non-sex conduct problems only, and normal control youth. Sexually coercive females were defined as described above whereas non-sex conduct problems were identified with six typical indicators of rule-breaking or aggressive behavior. Non-sex conduct problem subjects endorsed ≥ 3 of 6 items; “ever violent conflict with teacher, ever theft of >140 USD worth, ever burglary, ever stolen car or motorbike, being truant ≥ 5 times, ever been away from (parents’) home an entire night without parents knowing where. The remaining students were classified as normal controls.

Risk factors were defined as characteristics associated with higher likelihood of sexually coercive (or non-sex conduct-disordered) behavior compared to controls, whereas protective factors were conceptualized as factors decreasing the same likelihood, for example through direct personal or social controls.

Paper III:

The Norwegian and the Swedish sample of 3,949 male student participants 17-20 years old were used for this study. A total of 1,971 (50%) students were from Norway and 1,978 (50%) students were from Sweden. The Norwegian students were on average 18.0 years old ($SD=0.6$, $Mdn=18.0$) and the Swedish students on average 18.1 years old ($SD=0.6$, $Mdn=18.0$).

Measures used;

Independent variables and covariates:

Sexual victimization. A participant was considered sexually victimized if ever “sexually touched or pressured or forced into oral, anal, or vaginal intercourse against his will”.

Non-sexual antisocial behavior. Participants were asked if they had ever: stolen something worth more than the equivalent of approximately 140 USD; committed burglary by breaking and entering; or frequently been truant from school (defined as five or more times).

Substance use. Frequency of alcohol consumption (defined as at least half a beer, a glass of wine, or 4 cc of spirits) was reported on an 8-point Likert-type scale from “not applicable” to “almost daily; two or more times a week was chosen to indicate “regular alcohol use”. Participants also responded to if they had ever used cannabis or “hard” drugs, defined as cocaine, heroin, amphetamine, or party drugs such as ecstasy.

Non-coercive sexual behavior. Participants indicated age at the first time they had sexual intercourse, number of sexual intercourse partners, and pornography use. Almost daily use of pornography was coded from a 6-point scale ranging from “never” to “almost daily”. Specific questions addressed pornography depicting sex with violence or force, or sex between adults and children.

Dependent variable:

Sexually coercive behavior. Participants were considered sexually coercive if they “ever used pressure or forced somebody to be sexually touched, masturbate the participant, or have sexual intercourse, oral sex, or anal sex”; all coercive activities involved physical contact.

Paper IV

All Social Services offices in Sweden were included in a national study of the incidence of reported cases of sexually offending youth. In Sweden the child and adolescent units of local authorities have the responsibility to manage all young people’s need of societal protection or support, whether or not they are defined as victims of abuse or neglect or abusers in a particular case.

The survey was done during 2001-2002 in collaboration with the Swedish National Board of Health and Welfare, a controlling body of Social Service and Health providers and a major collector of Swedish official statistics. All local authorities in Sweden (n=289) were included in the survey of the occurrence of reports on adolescents (aged 12-17) who have been sexually offending. After reminders a total of 285 local authorities answered, resulting in a response rate of 99%. The request forms were directed to child and adolescent units at the Social Services agencies. Respondents to the questionnaire were certified social workers that were responsible for the particular case. They returned the completed questionnaires to the research team.

Methods

In the initial request the respondent at Social Services was asked if they had dealt with a case of an adolescent who had been sexually offending before the year 2000 and if they had handled a new case with a sexually offending adolescent reported in the year 2000. Out of the 285 local authorities 110 (39%) reported that they had dealt with a new report concerning sexually offending adolescents in 2000. The questionnaire concerning each individual adolescent who had been sexually offending was sent to those 110 local authorities. They all returned the questionnaires.

Definitions presented for the respondents:

Sexual abuse occurs when a person is subjected to a sexual act against his or her will. This could include physical contact “hands-on” offence exemplified by intercourse, attempted intercourse or fondling) or without physical contact “hands-off” offence, exemplified by exhibitionistic or voyeuristic behaviour or other forms of sexual harassment.

The female or male young offender should be 12 years or older and younger than 18 years of age when the alleged sexual abuse was reported to Social Services.

Measures

The questionnaire had 21 items (with predefined response alternatives except for age and ethnicity) covering easily rated offender (age, gender, minority ethnicity, and previous contact with the Social Services), offence (type of sexually abusive act[s], use of violence or force, presence of accomplice[s], previous abusive act[s]), and victim (offender-victim relationship, age and gender of the victim[s]) characteristics.

Definitions used in the paper

Child vs peer offender: offending against a child victim includes victims age 11 years or younger and those offending against a peer/adult victim include victims who were 12 years old or older.

Group vs single offenders: Group offenders were categorised as those who had ever committed sexual abuse together with at least one other person.

Local authorities

The demographic character and urbanization level of the local authorities were categorized in accordance with the official coding (Svenska Kommunförbundet, 2001) in four categories: Larger cities and suburbs, medium-sized cities, agricultural and manufacturing areas and rural or sparsely populated areas.

Paper V

A sample of previously risk assessed sexually offending adolescents was used for the follow-up study. These adolescents were 12 to 18 years old at the time of clinical assessment. The original sample consisted of 84 male adolescents. Four males had an address unknown in public registers and two males were deceased. Of the remaining 78 males, 39 did participate resulting in a response rate of 50.0%. The final sample were on average 15.0 years old ($SD=1.6$, range 12-18, $Mdn=15$) at the time of the index offence and on average 21.3 years ($SD=2.3$, range 17-26 years, $Mdn=21$) by the follow up interview. The mean time span from assessment to follow up was 6.3 years ($SD=1.2$, range 4-10).

Methods

The participants were invited by a letter to participate in the study. The general purpose, to follow up of individuals referred to Social Services during their adolescence, was presented in the letter. Participants were given more details about the study and about the study population by phone.

For those who agreed to participate a face-to-face interview took place in the area where the recipient lived.

Measures

A semi structured interview scheme SORM (Structured outcome assessment and community risk monitoring, Grann et al., 2005) was used. The interview contains questions about general risk and protective factors. Self-rating of the future risk of sexually offending was included as were violent reoffending and alcohol or drug addiction. In addition, items on sexual interests and experiences were included as were experiences of abuse and neglect during childhood.

An additional six questionnaires were completed after the interview:

Adult Self-Report (ASR) or *Youth Self-Report (YSR)* (Achenbach & Rescorola, 2003; Achenbach 1991) was used to identify psychiatric symptoms.

Depression/anxiety was measured by *SCL-25-S* (Symptom Check List, 25-item version, Derogatis, 1977).

AUDIT (Alcohol Use Disorder Identification Test) (Bergman, & Källmén, 2002) was used to identify alcohol use.

DUDIT (Drug Use Disorder Identification Test) (Berman, Bergman, Palmstierna & Schlyter, 2005) was used to identify use of drugs.

Conduct problems were measured using a self-report delinquency questionnaire of 18 items.

Present sexual interests and behaviours were explored by a 45-item questionnaire *Sexuality - common and less common sexual interests* (Bäsén & Långström, 2006). The questionnaire measures different sexual interests (including all paraphilias) reflected in behaviour as well as in thought and fantasies.

The National Register of Criminal Convictions was checked for 37 of the participating males who agreed to allow us obtain data on convictions.

Definitions used in paper V

Individuals were classified as *child offenders* if they had offended against a victim or victims younger than 12 years and who were 4 or more years younger than the offender, otherwise the individuals were classified as *peer offenders*.

Respondents were defined as having *learning disabilities* if they were attending, or had attended, primary and/or secondary special school for children and youth with learning disabilities.

Neuropsychiatric disorders diagnosed during childhood or adolescence among this sample were AD/HD, DAMP, MBD, and Tourette's syndrome.

Ethical considerations

For the population study (paper I-III) informed consent was obtained from the participating students based on their consideration of oral and written information. Students were informed that they were free to deny or terminate their participation at any point without explanation. The anonymous self-report paper-and-pencil questionnaire was completed during school hours. To ensure that participants did not influence each other they completed the questionnaire individually at the same time in the class room. A research assistant supervised the data collection. Questionnaires were handed out and returned in unmarked envelopes individually sealed by each participant. The participants received information about local counselling opportunities if their participation had caused feelings of distress.

The Norwegian Ministry of Children and Family Affairs and the Norwegian Social Science Data Service approved the Norwegian study. The Regional Ethical Review Board in Lund, Lund University, Sweden approved the Swedish study.

Reports to Social Services concerning sexually offending adolescents were examined in paper IV. The social workers within the local authority participating in the study responded on a questionnaire and completed information concerning the sexually offending adolescent without including any identification data.

The study was approved by the National Board of Health and Welfare.

In study V previously risk assessed adolescents were a potential study group for the follow-up study. The assessments were completed by two professionals specialised in the field of sexually offending adolescents and 84 males were identified as a possible sample. With access of name and the identification number from the files present addresses could be identified for 78. They were invited by a letter to participate in the follow-up study. The general purpose of the follow up was presented in the letter; to examine present social adjustment and if possible interventions had been useful. For confidentiality reasons sexual offending or sexual behaviour was not mentioned in the letter. Respondents were informed of the entire purpose of the study by phone and once more before the face-to-face

interview started. Informants were informed about confidentiality and his rights to discontinue participation at any point. Written consent was signed by the participant before the interview started.

The Regional Ethical Review Board in Lund, Lund University, Sweden approved the study.

Statistics

The statistical programme SPSS (version 12.0-15.0) was used for the analysis of the data in the different studies. Prevalence rates of sexual coercion, sexual offending, sexual offence characteristics, as well results on a number of socio-demographic, health, and behavioural variables were examined.

Differences between groups were examined with χ^2 -tests or Fishers' Exact Test (discrete variables), t-tests, or one-way ANOVAs with Scheffe's post hoc testing (continuous variables). Odds ratios with 95% confidence intervals (95% CI) expressed the strength of the association of risk/protective factors when comparing subgroups (paper I, II). Unconditional multivariate logistic regression modeling was used to test the independent association of factors with sexually coercive behaviour compared to non-sexual conduct problem behaviour (paper I). Multivariate logistic regression models were used to report the size of the association between sexual victimization (and covariates) and engaging in sexually coercive behavior (paper III).

RESULTS

Sexually coercive behavior in male youth: Population survey of general and specific risk factors (paper I)

Aim

The aim of this study was to identify risk/protective factors for sexually coercive behaviour among male youth. To separate risk/protective factors common to various forms of antisocial behaviour from those distinctively associated with sexually coercive behaviour those self-reporting sexual coercion were compared with both non-sexual conduct problem youth and with normal controls without any of these two types of problem behaviour.

Summary of results

A total of 101 male youth (5.2%) reported any lifetime sexually coercive behavior (SEX) and 132 (6.8%) reported no sexually coercive behaviour but at least three out of six non-sexual conduct problems (CP). The remaining 1,700 males (87.9%) were defined as normal controls (NC).

SEX and CP males were both more likely to attend a vocational study program than were NC youth. SEX and CP were less often living with both parents than NC youth. SEX perceived parents as significantly more overprotective than did normal controls and also reported less parental care than both CP and NC males.

SEX and CP reported more daily smoking, more use of alcohol, and an earlier start of alcohol consumption compared to NC youth. SEX and CP youth had more often used cannabis and hard drugs and further reported significantly more aggression and risk taking than did NC.

SEX reported more gender stereotypic attitudes and rape myths than CP and NC. SEX and CP male youth were younger on average at the time of their first sexual intercourse and more likely to have had sexual intercourse with six or more partners than NC youth. Both antisocial groups more often reported sexual lust “almost all the time” compared to normal controls and SEX more so than CP youth. Penetrative sexual victimization experiences were more common among sexually coercive and non-sexual conduct problem youth than in normal controls.

Having sold sex was more frequent among both SEX and CP male youth compared to NC youth. Frequent use of porn and having watched violent porn was also more common among both SEX and CP compared to NC male youth.

SEX and CP groups endorsed more strongly that they had friends that watched porn often or liked to watch violent porn than did NC male youth. In addition, SEX youth reported friends liking violent porn and child porn experiences more often than did CP youth.

Fifteen variables were entered in a logistic regression model to estimate the independent contribution of risk/protective factors to sexually coercive behavior compared to non-sex conduct problems. Four factors were significantly and independently associated with sexual coercion compared to non-sexual conduct problems: academic study program attendance, pro-rape attitudes, sexual preoccupation, and less risk-taking.

Both general criminogenic and sexuality-specific risk factors were associated with sexually coercive behavior among male youth.

Female youth who sexually coerce: Prevalence, risk, and protective factors in two national high school surveys (paper II)

Aim

The aim of this study was to explore sexually coercive behaviour in a population-based survey of adolescent and young adult females in Norway and Sweden. An additional aim was to investigate risk/protective factors for sexual coercion by comparing females who reported being sexually abusive with those who did not. Finally, to separate risk/needs factors common to various forms of antisocial behaviour from those specifically associated with sexual coercion, the Swedish subsample was used to compare sexually coercive females with non-sexual conduct problem subjects and non-criminal controls.

Summary of results

Thirty-seven females (0.8%) reported that they had “ever talked someone into, used pressure or forced somebody to masturbate them, have oral or anal sex, or sexual intercourse”. Sexually coercive females were compared with the remaining 4,326 (99.2%) individuals.

Sexually coercive females reported their parents as significantly more overprotective and less caring than did normal controls. Furthermore sexually coercive young females were significantly more aggressive, depressive, and likely to have tried cannabis than normal control youth, and they began using alcohol earlier and used it more frequently than did controls. Sexually coercive females had had sexual intercourse with more partners, felt sexual lust, endorsed rape myths, had watched violent porn and sold sex significantly more often than controls. Penetrative sexual victimization (anal or oral penetration or intercourse) were more common among sexually coercive females. Regarding friends, sexually coercive females reported that their friends cared less about each other, watched porn more often, and liked violent porn more than did friends of normal controls.

To differentiate between potential risk/protective factors for conduct problem behaviour in general and those specific for sexually coercive behaviour, we used the Swedish sub-sample (N=2,253). Since this sample allowed the identification of youth with non-sexual conduct problem behaviours, these were contrasted with sexually coercive and normal control females, respectively.

Twenty-three female youth (1.0%) in the Swedish sub-sample reported sexually coercive behaviour involving victim contact and another 50 (2.2%) reported no sexually coercive behaviour but ≥ 3 non-sexual conduct problems. The remaining 2,180 female youth (96.8%) were defined as normal controls. Six-teen risk/protective factors found to differ significantly between sexually coercive and normal control females were tested across the three subgroups. Both sexually coercive and non-sex offenders reported poorer parental care, more aggression, earlier and more alcohol consumption, penetrating sexual victimization, more sex partners and selling sex more often than did normal controls.

Odds ratios were calculated to describe the size of differences specifically between sexually coercive and non-sexual conduct problem females. Significant differences were found for four of 16 tested variables; sexually coercive females had less often used cannabis, but reported more sexual preoccupation, pro-rape attitudes, and friends using violent porn than did non-sex conduct problem females.

Sexual victimization and sexually coercive behavior: A population study of Swedish and Norwegian male youth (paper III)

Aim

The aim of the study was to examine the association between sexual victimization and engaging in sexually coercive behaviour in two male high school student samples from Sweden and Norway. Building on prior research and results from univariate analyses, multivariate logistic regression were used to examine the influences of non-sexual antisocial behaviour, substance use, and non-coercive sexual behaviour covariates on the association between sexual victimization and sexual coercion.

Based on previous studies, we predicted that sexually coercive respondents would be more likely to report (1) sexual victimization; (2) non-sexual antisocial and substance use; and (3) more extensive non-coercive sexual behaviour. We also predicted that (4) the association between sexual victimization and sexual coercion would remain after controlling for non-sexual antisocial behaviour, substance use, and non-coercive sexual behaviours.

Summary of results

In the Swedish sample 361 respondents (18%) reported ever having been coerced into sexual contact at some time in their lives. Of these 104 (29%) were coerced into penetrative oral, vaginal, or anal intercourse. Thirty-six percent reported one or more of six antisocial and substance use behaviours. The mean age at their first intercourse was 15.6 years ($SD=1.6$, $Mdn=16.0$, $range=7-19$). Two-hundred-and-twenty-one participants (11%) admitted sexually coercive behaviour. Ten out of 12 correlations between sexual victimization and other variables were significant and moderate in size. Multivariate logistic regression was performed controlling statistically for antisocial and substance use behaviour variables as a block, non-coercive sexual behaviour variables as a block or both blocks together. In all three adjusted analyses, sexual victimisation remained independently and moderately strongly associated with sexual coercion.

In the Norwegian sample 439 respondents (22%) reported ever having been sexually victimised and of these 46% were coerced into oral, vaginal, or anal intercourse. Seventy-four percent reported at least one antisocial or substance abuse behaviour during past year. Their mean age at first intercourse was 15.9 years

(SD=1.8, Mdn=16.0, range 5-19). One-hundred-and-sixty-one participants (12%) admitted sexually coercive behaviour. All 12 correlations between sexual victimization and other variables were significant and small to moderate in size. Multivariate logistic regression was performed controlling statistically for antisocial and substance use behaviour variables as a block, sexual behaviour as a block or both blocks together. Similar to the Swedish sample results sexual victimization remained independently and moderately strongly associated with sexual coercion.

The results were consistent with the sexually abused sexual abuser hypothesis. There was a moderate and statistically significant association between sexual victimization and engaging in sexually coercive behaviour. There were also moderately strong associations between sexual victimisation and non-sexual antisocial behaviours, substance use, and non-coercive sexual behaviour, but the relationship between sexual victimisation and sexually coercive behaviour remained moderately strong after controlling for these other factors.

Adolescent sexual offenders: A total survey of referrals to Social Services in Sweden and subgroup characteristics (paper IV)

Aims

The main aim of this study was to explore the size and composition of the disclosed population of adolescent sex offenders in an entire country during one year. To obtain reliable data we collected data in a structured manner from all individual social workers involved in front-line work with actual cases involving adolescents who sexually offended. We explored possible variations of incidence across different levels of urbanization and tested the support for two typological subdivisions suggested previously: adolescent sexual offenders offending against child *vs* peer victims and group *vs* single offending adolescent sexual offenders, respectively.

Summary of results

The group of adolescent sexual offenders reported to Social Services in 2000 consisted of 197 boys (99%) and 2 girls (1%). Girls were excluded from further analysis because of the very small number. The mean age of the boys was 14.76 years ($SD=1.48$, $Mdn=15$ years, range 12-17). Fifty-three (26.9%) were of minority ethnicity. One-hundred-and-ninety-seven male adolescent sex offenders yielded a national one-year incidence of .060% (95% $CI=.052-.068$). The incidence of sexually abusive adolescents across the authorities varied from .00 to .91%. Significant differences in incidence were found across the four categories of local authorities, with rural and sparsely populated areas reporting the highest mean incidence (.10%) and those in city areas the lowest (.05%).

Most youth ($n=122$, 76.7%) had female victims, while 31 (19.5%) had male victims and 6 (3.8%) offended against both male and female victims. The modal age band was 6-11 years (45.2%) for male victims and 12-17 years (63.6%) for female victims. The adolescent offenders usually knew their victim(s) and only for 18 (9.6%) it was reported that the victim was unknown to the offender. Eighty-four of the sexually offending adolescents were previously known to Social Services for various reasons. Forty-three of these (51.2%) were known because of antisocial behaviour, 25 (29.8%) for a history of child abuse/neglect and 16 (19.0%) for a combination of both.

Child offenders (n=91) were compared with those classified as peer offenders (n=105) and found significantly more likely to have abused siblings and relatives than peer offenders. Peer offenders were significantly more likely to have been sexually abusive towards a stranger. Adolescents offending against both male and female victims had only child victims. In addition child offenders were significantly more likely to have abused more than one victim, and less likely to have offended together with accomplices than were peer offenders. Finally, child offenders were significantly more likely to have had prior contact with Social Services, particularly for their own victimization experiences.

Group offenders (n=69, 42.3%) who offended sexually together with one or more associates were significantly more likely to have abused an acquaintance than were single offenders. Group offenders were also significantly less likely to have child victims, more likely to have abused one (vs. multiple) victims, and significantly less likely than single offenders to have had prior contact with Social Services.

The present study was based on data from all reports of adolescent sexual offenders that became known to social workers within Swedish Social Services during one year. Therefore the study entailed less selection bias for studied subgroups than previous studies comparing highly and differentially selected clinical samples. The subgroups child offenders *vs.* peer offenders were compared resulting in equivalent findings that have previously been reported. However the group *vs.* single offender division had less validity among the adolescent sex offenders of this study.

Males who sexually offended during adolescence. A six year follow up of a clinical sample (paper V)

Aim

The aim of the study was to explore the outcome in early adulthood for males who sexually offended during adolescence and who had been clinically risk assessed. To explore the predictive validity of risk estimates for sexual as well as nonsexual reoffending and the outcome on variables as social adjustment, health, and relationships a clinical sample of adolescent males was prospectively followed.

Summary of results

The majority of the 39 young adult male participants sexually abused a child victim as the index offence. When comparing the risk levels from the clinical assessment twelve (37.5%) were suggested as being at high risk of sexual reoffending while the remaining 27 were suggested to be in non-high risk (moderate or low). Having a neuropsychiatric disorder or learning disabilities were significantly more prevalent among those assessed as being at high risk of reoffending.

Eight males (20.5%) self-reported or were convicted of sexual reoffending on average 2.6 years after assessment. All but two were assessed as being of high risk of sexual reoffending. Having learning disabilities and/or a neuropsychiatric disorder were significantly more frequent among those sexually reoffending than the non-reoffending males ($n=8$, 100% *vs* $n=8$, 25%, $p<.001$).

Examining the validity of the risk assessments by crosstabulating those identified as high vs non-high risk with sexual reoffending vs no-reoffending a significant difference was found (Fishers exact test; $p=.006$). The OR was 12.50 (CI=2.02-78.05) indicating that those assessed as being of high risk were significantly more likely to reoffend than were non-high risk males. Four single ERASOR risk factors identified by the clinical assessment were strongly correlated with later sexual reoffending; sexual preoccupation, having offended against more than one victim, having received prior sanctions for sexual offending and having offended against a child victim.

Self estimated risk of sexual reoffending within the coming two years was rated by participants and seven self-rated such risk. Those sexually reoffending were also significantly more likely to self estimate a risk of future sexual reoffending. Ten

individuals who sexually reoffended and/or self-rated a risk of sexual reoffending were identified as a potential risk group and were further studied and compared with individuals with the current factors not present, identified as a low risk group. Significant differences on nine variables were identified when comparing the potential risk group with low-risk individuals; they were more likely to target child victims, more likely to be assessed as being of high risk by assessment, more likely to receive present professional support, to be on pharmacological treatment, to have learning disabilities and neuropsychiatric disorders than the low-risk group. Further they were more likely to report having no sex with a partner last year and being a victim of sexual abuse.

Eight individuals reported one or more deviant sexual behaviours present during the last six months (exhibitionism, voyeurism, or sadism/masochism). When comparing the deviant sexual behaviour group with non-deviant comparisons four significant differences were identified; they reported more depressive and psychiatric symptoms, were more likely to report having frequent sex and rated sex as more important than comparisons.

In total 17 males (43.6%) raised concerns for future risk of harmful sexual behaviour, those identified by follow-up as the potential risk group (those who sexually reoffended and/or self-rated a risk of sexually reoffending) and those reporting deviant sexual behaviours.

In addition 22 (56.4%) received a non-sexual criminal conviction between the time of the clinical assessment and the time of follow up indicating the multifaceted problems among this clinical population.

DISCUSSION

Prevalence and incidence

Sexually offending among adolescents is a substantial problem as identified in this thesis. The different studies of the thesis confirm the previously suggested diversity of sexually offending youth (Beckett, 1999; Hunter et al, 2003) on offence and victim characteristics, the association with non-sex conduct problems, health, sexuality, peer and family variables. The prevalence of sexually offending males as females reported in the papers is another dimension that adds further information to previous knowledge on sexually offending youth in Sweden.

The identified one-year incidence did indicate that six of 10,000 adolescent males are reported to Social Services (paper IV) annually because of sexually offending behaviour. Social Services as a reliable source of information may distinguish across countries. Social Service in Sweden is the first line of societal identification and management of any antisocial behaviour among adolescents. With a 99% response rate among Social Services units in Sweden, one could expect that the total of reported cases quit truthfully mirrors the disclosed population in Sweden of that year.

Unfortunately the national incidence rate cannot be contrasted with other national studies since no such research, to my knowledge, has been presented. A limited study in one UK region found a one-year prevalence of sexually offending adolescents reported to authorities (James & Neil, 1996) of 0.15%.

The incidence rates were low yet the results confirmed the sub group division into child and peer offenders previously suggested (eg., Hunter et al., 2000; 2003). Furthermore the findings of the incidence study indicated that the level of urbanisation of the local authority did not influence the incidence of sexually offending among adolescents. The local authorities of rural and sparsely populated areas did report a higher incidence than big cities and suburbs.

Sexually coercive behaviour, identified as ever talked someone into, used pressure or forced somebody to masturbate them, to have sexual intercourse, oral sex or anal sex was reported by 5.2% of the males and 1.0% of the females of the Swedish sample.

Comparing the incidence rate identified by authority reports and the self-reported male sexual coercion, a large divergence is found. To estimate the approximate size

of all male sexual coercion, self-reports as well as the incidence rate of 0.06% might be used. If I assume that those who self-reported sexual coercion committed on average one sexually coercive act each and that these had been evenly distributed throughout ages 13 to 18 years. This would yield a yearly incidence of adolescent sexual coercion of $5.1\%/6=0.8\%$, suggesting a dark figure of at least 90% (i.e. $1-0.06/0.8$) for sexual coercion among male youth.

The gap between convictions of sexual offending and self-reported sexual offending has been discussed previously (Spitzberg, 1999). As identified in a number of previous studies the rate of non-disclosure of sexual abuse to professionals is extensive (BRÅ, 2008; Finkelhor, 1990; Koss & Dinero, 1988; Priebe & Svedin, 2008). It's unlikely that young people self report sexually coercive or offending behaviour to authorities. The consequences, as most commonly there was no one else present when the abuse was committed, the offending will not be reported.

Prevalence and gender differences

The results of the incidence study indicated further that just one percent of those reported to Social Service because of sexual offending behaviour were females ($n=2$). It is obviously more unlikely for adolescent females to be sexual offending during adolescence and possibly to be reported for a sexually offending behaviour than for males. Comparable proportions (1-2:100) of females to male adolescent suspects of sex crimes reported to the police are indicated in the annual Swedish crime statistics over the last ten years (BRÅ, 2009).

In total 124 adolescents of the Swedish population based sub-samples (study I and II) self-reported sexual coercion. The females ($n=23$) constituted 19% of all the sexually coercive youth. When contrasting the proportions of female to male authority reported sexually offending (1:100) with self-reports of sexual coercion (19:100) the share of females is clearly inconsistent. This suggests larger underreporting of female sexual offending behaviour.

The responding to sexually offending females could be affected by the societal norm, and also ruled by the most common condition of males being offender and females being victims, as suggested by Byers and O'Sullivan (1998). Those traditional scripts possibly influence the attention and disclosure of sexually offending adolescent females. This could impact the presence of a larger proportion of underreports among victims of sexually offending adolescent females than corresponding of adolescent males.

In paper II it was further identified that no victim of adolescent female sexual coercion was under the age of 12. This in disagreement with the typical victim of adolescent females that previously has been identified in clinical studies (Bumby & Bumby, 1997; Fehrenbach & Monastersky, 1988; Mathews et al., 1997). The findings of paper II could indicate that females are either sexually coercive less often against younger victims or less likely to admit this than male offenders are. Sexual coercion by female adolescents against peers or adults is even less likely than their offending against children to be reported to authorities.

Professionals tend to deny sexual offences committed by females (Denov, 2003), and to transform the behaviour into a sexual non-offending concept. This could potentially be strengthened when female sexual offending, as shown by the findings of this thesis, do not display the typical victim characteristics (Bumby & Bumby, 2004) previously suggested.

Risk factors for sexual offending

General and specific risk factors for sexually coercive male as well as female youth were identified in paper I and II. The findings suggest that established risk factors for antisocial behaviour also were present for youth with a sexually coercive behaviour. Factors as minority ethnicity, having separated parents, and attending a vocational study program were more common among sexually coercive male youth than male controls. However those risk factors were not more prevalent among sexually coercive females than among female controls.

In contrast, sexually coercive females and males responded mostly in similar fashion regarding received parental care and overprotection, aggression and depressive symptoms, alcohol and use of cannabis. Comparable finding of low perceived parental care and high overprotection, conceptualised as affectionless control parenting style has previously been reported for a clinical sample of adult male rapists and child offenders (Craissati, McClurg, & Browne, 2002).

Similar to our findings agreement across gender was found in a clinical sample of sexually offending adolescent females and males (Kubick et al., 2002). They identified similarities with respect to psychosocial and criminal histories, offence characteristics and level of coercion. With the exception of higher overall rates among female youth, this held also for being victim of penetrating sexual abuse.

The specific risk factors associated with sexually coercive behaviour were identified by comparing sexually coercive youth with both non-sexual conduct problem youth and with control youth. The findings of specific risk factors for sexually

coercive males agreed well with the findings identified for sexually coercive females. The sexually coercive youth were significantly more sexually preoccupied and reported more rape myth acceptance than comparison groups. Females in addition reported more frequent having friends using violent porn. The specific risk factors for both females and males; more preoccupation of sexual thoughts and more cognitive distortions in relation to sex strongly supports the idea that sexuality-related variables are necessary to consider for improved etiological understanding of young people who sexually offend.

Sexual victimisation was associated with female sexual coercion but the link with females reporting non-sex conduct problems was stronger. This underlines a non-specificity of sexual victimisation as correlated with later sexually abusive behaviour among females. This finding is in contrast with previous research on sexually offending female adolescents where sexual victimisation has been suggested to be one of the key risk factors. Still the finding suggests that being a victim of sexual abuse is a general risk factor associated with sexual or non-sexual conduct problem behaviour among female youth.

As discussed in a previous section the particular small samples identified of sexually offending adolescent females may be highly selected and represent an extreme subgroup. Taking the denial among professionals of female sexual offending into account it could be more likely that female sexual offending has to be more severe than male sexual offending to cause societal reactions. To increase the societal awareness of sexually offending adolescent females, information from population based studies could contribute by providing information on possible offending behaviours and risk factors among this group. However the relative contribution of risk/needs factors for the development of sexually coercive behaviours may differ between young males and females. Therefore, the development of gender-sensitive explanatory models for sexually abusive behaviour should be continued.

When exploring the association between sexual victimisation and sexual coercive behaviour (paper III) among males the *sexually abused sexual abuser* hypothesis was confirmed. A moderate and statistically significant association was found between sexual victimization and engaging in sexually coercive behaviour. There were also moderately strong associations between sexual victimisation and non-sexual antisocial behaviours, substance use, and non-coercive sexual behaviour, but the relationship between sexual victimization and sexually coercive behaviour remained moderately strong (although weakened) after controlling for these other factors.

Outcome for males who sexually offended during adolescence

The outcome on a number of variables for 39 young adult males, previously risk assessed during adolescence, was examined (paper V). The prevalence of non-sex criminal convictions and psychiatric symptoms agrees with previous follow up research on sexually offending adolescents (Långström & Grann, 2002; Worling & Långström, 2006, McCann & Lussier, 2008).

Empirically guided clinical assessment in accordance with the ERASOR (Worling & Curven, 2001) was used for the clinical assessment of the sample of sexually offending adolescents. Twelve individuals were evaluated as being at high risk by baseline risk assessment. Using a prospective design, risk assessed adolescent males was followed on average six years. The results indicate that the structured professional risk assessment was better than chance in predicting sexually reoffending. The OR was 12.50 (CI=2.2-78.05) indicating that high risk offenders were significantly more likely to reoffend sexually than were low and medium risk offenders.

However, six of those evaluated as being at high risk did sexually reoffend and six of them did not. For low frequency events such as sexual (re)offending it may be difficult to predict only the true positives, as discussed by Craig, Browne and Beech (2008). False positive risk predictions may, on the other hand, be correct at baseline but later prove to be incorrect due to interventions decreasing the predicted risk. One could assume the assessment guide treatment providers to plan and administer interventions for a young person in the direction to prevent future offending. The positive predictive accuracy was 50% and negative predictive accuracy was 74.1% resulting in a total of 62.0% correct predictions.

Two previously identified supported risk factors for sexual recidivism (reviewed by Worling & Långström, 2003) were significantly more common among those who sexually reoffended; Sexually offending against more than one victim and Prior sanction(s) for sexual offending. During follow up, it seems as in particularly some of those who sexually reoffended, were repeatedly sexually offensive. Sexual preoccupation was also significantly more common among those who reoffended sexually than among those who did not. Sexual preoccupation could be defined as intrusive sexual thoughts, or compulsivity in masturbation. Sexual preoccupation was supported as a risk factor for sexual coercion but not for conduct problem behaviours among both adolescent males and females in the population samples of high school students.

The ERASOR (Worling & Curven, 2001) was used for the majority of the clinical assessments of sexually offending adolescents. Although assessment practices have improved since 2004 the precision of risk predictions confirm previous promising results reported by Faniff and Becker (2006). The findings from the follow up indicate a particular risk for adolescents with learning disabilities or neuropsychiatric disorder to reoffend sexually. All the males who sexually reoffended had learning disabilities or a neuropsychiatric disorder. Among those who did not reoffend one fourth reported such impairment.

A few different aspects of this finding could be discussed.

Individuals with learning disabilities could be a more trusting and honest (O'Callaghan, 2004) and consequently more likely to self-report problem behaviours as potential sexual reoffending than are other young males. However two of the reoffenders were convicted and did not mention the sexual reoffending in the interview. A few of the sexual reoffenders were still in treatment by follow up and the openness proposed in treatment programs to talk about their sexual offending behaviour may have influenced their honesty by the interview.

It's been suggested (Lane & Lobanov-Rostovsky, 1997) that sexually offending learning disabled youth are more sexual preoccupied and repetitive in their behaviour; with thinking patterns that interfere with other activities. A difficulty for some of the males of these impaired groups could be in establishing and maintaining good relations with peers (cf. Siponmaa, Kristiansson, Jonson, Nydén, & Gillberg, 2001; O'Callaghan, 2004). According to previous research social isolation is also one of the supported risk factors that could be associated with sexual reoffending (reviewed by Worling & Långström, 2003).

Those who had indeed sexually reoffended were significantly more likely to self-rate any risk of sexually reoffending within the coming two years. The majority of the sample did agree on further register follow-up for criminal convictions, for Social Services and Health Care records until age 30. It may be possible to further follow this group and evaluate the validity of their self-rating of future risk.

Seventeen individuals (43.6%) raised some concern for future risk of harmful sexual behaviour; those who reoffended sexually or self-rated any risk of sexually reoffending and those who reported present deviant sexual behaviours, as exhibitionism, voyeurism, or sadism/masochism.

Several findings of this thesis underline the need to focus on sexuality-specific risk factors and sexual health among youth who sexually offend. Judging from the clinical follow up it appears that sexual dissatisfaction as well as hypersexuality may

be associated with a risk of sexual reoffending. In the interviews the majority of the respondents indicated a need for being given more possibilities to talk about their sexuality with professionals. The World Health Organization (2007) definition of sexual health might include also sexually coercive or offensive individuals. It seems possible that a number of young people referred to clinical service because of dysfunctional sexual behaviours need the support of professionals to achieve better sexual health.

Theory and the samples of this thesis

The Integrated Theory of Sexual Offending presented by Ward and Beech (2006) identifies three sets of factors that continuously interact: the biological factors, factors related to social and cultural roles and neuropsychological factors. They further add four clusters of symptoms that have been identified related to sexual offending: emotional problems, social difficulties, cognitive distortions and sexual interest.

The aim of the thesis was not primarily to test the application of a certain theoretical model. However when summarising the results of this thesis it appears that the population based studies and the results from the clinical follow up altogether agree with the multifactorial explanations of sexual offending. Biological factors and social factors, neuropsychological functioning and sexuality-specific interests and cognitions all seem to be present (Ward and Beech, 2006).

This thesis attempts to mirror the variety and complexity of sexual offending among adolescents, including a unique incidence study with Social Service authorities across Sweden, and self-reports of sexual coercion among a representative sample of Swedish high school youth. The last paper possibly represents some of the most worrisome sexually offending youth reported to authorities and referred for a specialised assessment.

The identification of sexual coercive behaviour among youth may improve the prevention of further sexual abuse, other antisocial behaviours and health risks.

METHODOLOGICAL CONSIDERATIONS

The population based study (paper I-III) had substantially smaller selection bias than prior studies reporting on highly selected clinical samples. The overall response rate was good and the statistical power reasonably high. In Norway and Sweden a high proportion of 18-year old youth (70-90%) attend high school. However it is likely that those absent because of truancy had more of the socio-demographic and individual risk factors for antisocial behaviour. This suggests that the result is a conservative estimate of the actual base rate of sexual coercion among general population female as male youth.

The sexual coercive behaviour was more accurately defined in the study including more severe hands-on penetrative behaviour as well as masturbating. The comparable U.S. studies included examination of a possible wide range of sexual coercive behaviours defined as “have you ever forced someone into a sexual act with you?”.

All studies requiring reporting by human subjects are subject to recall and other reporting biases, and probably more so when sensitive or detailed reporting is required (Widom & Morris, 1997). The population based survey used in paper I-III had a strong focus on sexual experiences and attitudes and focused normative and more deviant sexuality. The four items addressing sexually coercive behaviour were preceded by some 15 items covering sexual interests, orientation, experiences, and attitudes. This might have contributed to shape a wider context of sexuality not limited to deviance, which might in turn increase the reliability of responding (Finkelhor, 1984).

Under- or overreporting of sexually coercive behaviour could occur in self-reporting but is unlikely to affect the size of associations between risk factors and sexually coercive behaviour, unless such bias could be expected to vary with the presence or absence of the specific risk factor (cf. Arseneault, Moffitt, Caspi, Taylor, & Silva, 2000).

The relatively large number of comparisons increased the risk of Type I errors. Further, and similar to all studies using retrospective reports, the exact temporality regarding potential risk/protective factors and non-sexual and sexually coercive antisocial behaviour was difficult to determine. Identified associations between risk/protective factors and antisocial behaviours might be caused by uncontrolled confounding or underlying factors rather than being directly causal.

For the Social Service study (paper IV) there is a limitation arising because it was carried out when the problem with sexually offending adolescents was still not fully acknowledged. It is likely that otherwise maltreated adolescents (and therefore those perhaps seen as less personally responsible for their offending) were underreported in this study. Furthermore, it is evident that denying sexually abusive adolescents were less well represented in this study than they would have been in an anonymous self-report survey. No item of the questionnaire used in the study addressed when the sexually offending behaviour started so reporting delay may have led to misclassification. The number of items in the questionnaire was limited to a set of offender, offence, and victim variables that restricted further analysis of background factors, more detailed information of the offending behaviour and about the interventions organised for the adolescent. Anyway this approach with a limited number of items was chosen to increase the likelihood of a high response rate.

The clinical follow up study (paper V) had a number of limitations affecting its strengths. The small clinical sample used for the study is a clear limitation when interpreting the findings. Considering the limited number of follow-up studies that has reported other than register data on sexually offending adolescents, the findings may offer some essential information that could be replicated. Considering the reasons for inclusion, it may nevertheless be acceptable that half of the potential population participated in the study. The face-to-face interviews contributed to more information given from respondents than possibly could have been collected from registers or questionnaires.

MAIN CONCLUSIONS

Sexually offending youth is a substantial problem as measured within the Swedish youth population. Yet the majority of sexual offending among youth remains unreported and additional efforts are needed to identify those exposed to sexual offending by youth as well as to identify those who sexually offend. The approach of adolescents who sexually offend has to be improved on a general societal level as well as in clinical practice.

The offences committed by sexually offending females seem to be non-disclosed to a greater degree than those committed by males and need increased attention. The clinical practice that is available for the assistance of females in treatment need to be extended.

Potentially sexuality specific risk factors were identified that could be addressed in the clinical practice, similar for females and males. The findings by follow up of a clinical sample confirmed some previously suggested risk factors for sexually reoffending and add knowledge that learning disabilities and neuropsychiatric disorders was a prevalent condition for those who sexually reoffend.

The majority of the males of the clinical sample had received one or more non-sex criminal convictions after the clinical assessment and by the follow up. There is an advantage of using ERASOR as an empirically guided instrument when evaluating the risk of sexually reoffending among youth. Adolescents with impairment need a comprehensive treatment focusing on sexually offending behaviour and special needs.

Clinical implications

- Professionals need knowledge on adolescent sexual offending to be able to identify and approach such cases in their clinical practice.
- The identification of sexual behaviour problems at an early stage may comprise being more mindful about the particular sexuality-specific risk factors.
- Increased awareness and a better approach of sexually offending adolescent females need to be put into practice.

- Structured risk assessments could support the clinical practice in identifying adolescents of high risk of sexual reoffending.
- Sexually offending adolescents with additional impairment require a modified treatment focusing on the sexually offending behaviour and additional needs.
- Efforts need to be made to identify those exposed to sexual offending by adolescents.

Further research

Further research is needed on different aspects of sexual coercion and sexual offending among adolescents. The suggestions that are raised in particular by this thesis are:

- Further examine sexually offending adolescents by population based studies to identify and possibly validate previously suggested risk and protective factors.
- To include particular potential risk groups in population based samples, groups such as adolescents attending special schools because of learning disabilities and adolescents in residential care units attending schools within that unit.
- To perform long term follow-up studies of clinical samples examining the outcome on variables such as sexual and non-sexual reoffending, social adjustment and sexual health.
- Furthermore to evaluate the effects of the interventions received by sexually offending adolescents.
- Further research on sexually offending females to identify possible subgroups and identify risk factors among females who have sexually offended.

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