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Adolescent sexual offenders:

A total survey of referrals to Social Services in Sweden and subgroup characteristics

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ABSTRACT

Sampling methodology (e.g. population-based *vs.* clinical samples, anonymous self-reports *vs.* data collected as part of mandated treatment) affects the validity of conclusions drawn from research addressing the etiology of adolescent sexual offending. Studies of unselected samples allow testing of the generalizability of etiological models suggested from investigation of selected clinical or forensic populations. Further, representative epidemiological data on adolescent sexual offending is needed for policy-making and the planning of services. We conducted a national survey of all adolescent sexual offenders (ASOs, 12-17 years) referred to Social Services during 2000. Social workers at all child and adolescent units in Social Service authorities throughout Sweden ($N = 285$, 99% response rate) completed a questionnaire about new ASO referrals in 2000. The National Board of Health and Welfare commissioned the survey and questionnaire items tapped offender, offence, and victim characteristics. A total of 197 boys and 2 girls aged 12-17 years were referred to Social Services because of sexually abusive behavior in 2000. Focusing specifically on males, this yielded a one-year incidence of .060% (95% confidence interval = .052-.068). Forty-six percent of male ASOs abused at least one child younger than age 12 years (child offenders) whereas the rest had abused peer or adult victims (peer offenders). Forty-two percent of male ASOs had ever committed sexual offences together with at least one other offender (group offenders). Child- *vs.* peer offenders and group *vs.* single offenders, suggested typologies in the literature, were compared to explore potential subtype-specific risk factors and correlates. The results suggested a higher proportion of group ASOs than previously reported and stronger support for subdividing ASOs into child *vs.* peer offenders than into group *vs.* single ASOs.

Key words: adolescents; sexual offenders; incidence; national survey; typology

INTRODUCTION

Adolescents commit a considerable portion of all sexual offenses (reviewed by Barbaree & Marshall, 2006). For example, US figures for 2000 (United States Department of Justice, 2001) indicated that 16% of offenders arrested for forcible rape and 19% of offenders arrested for other sexual offenses were juveniles under the age of 18. In the UK, 23% of the offenders reported to the police, cautioned, or found guilty of sexually abusive behavior were 10-21 years of age (Home Office, 1998). In Sweden, the age of criminal responsibility is 15 years and no juvenile under that age is therefore registered by the police. However, in 2000, 105 adolescents aged 15-17 were reported to the police throughout Sweden suspected of having committed one or more sexual offences. This constituted 10% of all individuals suspected of sexual offences in that year (National Council for Crime Prevention, 2004). Figures on incidence (i.e. the rate at which new cases occur in a population during a specified period) and prevalence (i.e. the proportion of the population that are cases at a point in time or during a specified period) of sexually abusive behavior could be expected to vary substantially depending on sampling strategies. Information obtained through anonymous self-reports of adolescent sexually abusive behaviors or victim surveys -- probably the most truthful with respect to the actual occurrence -- indicate relatively high numbers (for a review see Spitzberg, 1999). For example, in a large non-clinical sample of US high school students, Borowsky, Hogan, and Ireland (1997) found a self-reported life-time prevalence of sexual violence perpetration among 4.8% of male and 1.3% of female students. In contrast, cases reported to Social Services or the police reflect a smaller proportion of the true incidence, and cases charged or convicted in court even less so. One rare attempt to measure the occurrence of ASOs in a delimited geographical area was conducted by James and Neil (1996). These authors gathered information from professionals in health, child psychiatry and Social Service agencies as well as probation and police units to estimate the period prevalence (1992-1993)

of ASOs in Oxfordshire, England. Thirty-four (31 male and 3 female) sexually abusive adolescents aged 12-17 were identified. The resulting prevalence of male ASOs was 0.15%.

ASOs are a heterogeneous group of young offenders (e.g. Becker & Hicks, 2003; Ryan, Miyoshi, Metzner, Krugman, & Freyer, 1996). Naturally, variability in parental monitoring, the adolescent's aggression, impulsivity, cognitions, sexual preference and preoccupation, social skills or interest, and interaction with antisocial peers will be reflected in differing victim and offense attributes across individual ASO cases. Different, more or less complex, typologies have been suggested. In particular, several authors have either proposed (e.g. Barbaree, Hudson, & Seto, 1993) or presented data supporting that some variables differentiate ASOs with child victims from those with peer or adult victims (Carpenter, Peed, & Eastman, 1995; Fehrenbach, Smith, Monastersky, & Deisher, 1986; Hendriks & Bijleveld, 2004; Hsu & Starzynski, 1990; Hunter, Hazelwood, & Slesinger, 2000; Hunter, Figueredo, Malamuth, and Becker, 2003; Långström, Grann, & Lindblad, 2000; Richardson, Kelly, & Graham, 1997; Worling, 1995).

Child vs. peer offenders

For example, Hendriks and Bijleveld (2004) studied 58 ASOs of children and 54 peer-abusing ASOs subjected to psychological assessments ordered by Dutch juvenile courts. Child offenders were significantly younger and more often of majority ethnicity than were peer ASOs. Child ASOs had also offended against male victims more often, and committed more sexual offences, but used physical violence less often than did peer ASOs.

Two larger studies by Hunter and colleagues (2000, 2003) also merit some description. First, Hunter et al. (2000) studied the criminal records of 126 ASOs (64 child and 62 peer offenders, mean age = 15 years) arrested during 1979-1981 and supplied by police officers participating in an FBI training in the US. No age difference was identified between child and adolescent/adult offenders, but ASOs assaulting children were more often of majority

ethnicity. Child offenders had relative victims and offended non-publicly and against male victims more often than adolescent/adult ASOs. Having multiple victims was equally common across subgroups whereas child ASOs used less physical violence, and were less likely to have accomplices as compared to peer ASOs. Later, Hunter et al. (2003) reported on a diverse US residential sample of 157 child ASOs and 25 ASOs who had offended against female peers/adults (average age = 17 years). ASOs were 13-18 years old overall but no age difference was found between adolescents who sexually abused children and those who abused female peers. Any male victim was found among 41 percent of child ASOs but, by definition, not at all among ASOs of female peers. Child ASOs chose relative victims more often, and used physical violence less often than did peer ASOs. Having had more than one victim of sexual abuse and an accomplice did not differ significantly across subgroups. Finally, Graves, Openshaw, Ascione, and Erickson (1996) reported on a systematic review of the published ASO literature from 1973 to 1993. They identified child offenders, peer offenders, and “mixed” offenders as the three most clearly distinguishable offender categories in clinical samples. However, ASOs against children were not different from peer ASOs with respect to the (high) proportion being of majority (Caucasian) ethnicity and having a low socioeconomic position. One possible interpretation of the results from the cited studies is that the abuse committed by ASOs targeting children is relatively more strongly related to sexual preoccupation, deviant cognitions, and lacking social skills or interest than to aggression, impulsivity, and interaction with antisocial peers. The latter factors may in turn be more important for sexually abusive behavior among ASOs abusing peers or adults.

Group vs. single offenders

Some ASOs commit sexual abuse together with peers. It has been suggested (discussed in Ullman, 1999), based for example on 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. It could be that the relative causal importance of such antisocial peer interactions and gang subculture is stronger for adolescent sexual offending in groups than among those who offend sexually on their own.

However, very few studies have contrasted group with single sexual offenders. To our knowledge, only Bijleveld and Hendriks (2003) have compared group and single ASOs. They studied the files of 32 group ASOs and 51 single ASOs who underwent psychological assessment for Dutch juvenile courts during 1991-1996. Group ASOs were found to be younger, more often of minority ethnicity and had committed more sexual offenses 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.

Aim of study

Epidemiologically representative information about ASOs is needed for the planning of services and policy-making. For example, conclusions regarding preventive strategies based on characteristics of sexual offenses committed by ASOs in selected clinical samples could be misleading. One risk is that more troubled ASOs in clinical samples color the perception of ASOs in general, hereby inflating the perceived risk for sexual reoffending in the latter. The main aim of this study was to explore the size and composition of the disclosed population of adolescent sexual 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 ASO cases and their victims. When researchers find differences across subgroups of sexually abusive individuals, they usually -- more or less explicitly -- interpret these as indicative of different etiological mechanisms for the abusive behavior. However, since etiological models of sexually abusive behavior in adolescents have been based on

studies of selected clinical or forensic samples, model validities need testing in more representative samples. Therefore, we also explored possible variations of incidence across different levels of urbanization and tested the support for two typological subdivisions suggested previously; ASOs offending against child vs. peer victims and group vs. single offending ASOs, respectively.

METHOD

Setting and procedure

The Swedish Social Services Act states a far-reaching general responsibility for the Social Services to support all citizens. This duty is even more pronounced for children and adolescents under age 18, particularly those considered in danger of “developing in an undesirable direction”. Antisocial youth are therefore, whenever identified, referred to the Social Services for assessment, support, or treatment. This is the case even though the age of criminal responsibility is 15 years, meaning that individuals 15 or older can be criminally prosecuted and convicted. The present survey was done in two steps during 2001-2002 in collaboration with the Swedish National Board of Health and Welfare, a controlling body of Social Services and health providers and a major collector of Swedish official statistics. As such, they have during many decades routinely ordered social service and health professionals to take part in national surveys and report service statistics. In the present study, all local Social Service authorities in Sweden ($N = 289$) were asked if they had dealt with a case of an adolescent sexual offender before 2000 and if they had handled *a new ASO case reported in 2000*. The request forms were specifically directed to the child and adolescent units at each Social Services agency. This was done since these units manage all young individuals in need of societal protection or support, independent of whether they are defined as victims of abuse or neglect or abusers in a particular case. Respondents were certified social workers holding at

least a Bachelor's Degree in social work. The following definitions were used and clearly stated in written instructions:

Sexual abuse occurs when a person is subjected to a sexual act against his or her will. This could include physical contact ("hands-on"; exemplified by intercourse, attempted intercourse, or fondling) or sexual harassment without physical contact with the victim ("hands-off", exemplified by exhibitionistic or voyeuristic behavior or other forms of sexual harassment). The offender should be 12 or older and younger than 18 years of age when the alleged sexual abuse was reported to the Social Services.

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Second, all Social Service authorities that reported contact with a suspected adolescent sexual offender during 2000 received a brief questionnaire for each of these identified individuals. The questionnaire had 21 items (with predefined response alternatives except for age and ethnicity) covering easily rated offender (age, gender, minority ethnicity [other country of origin than Sweden], 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.

The initial request was sent to all 289 local Social Service authorities in Sweden and after several reminders (up to three letters and two phone calls), 285 answered, resulting in a response rate of 98.6%. The four missing local authorities had a total adolescent male population (12-17 years) of 2,824 individuals (0.9% of the entire adolescent male population of Sweden). Of the 285 local authorities, 110 (39%) reported that they had dealt with a new report concerning an adolescent sexual offender in 2000, whereas 175 (61%) responded they had not. The questionnaire concerning each individual ASO was sent to the 110 local authorities who reported contact with one or more new sexual offenders aged 12-17 years during 2000. All of these local authorities (100%) returned questionnaires for the ASOs they

had initially reported. The study was approved by and administered under the auspices of the National Board of Health and Welfare.

Definitions

The demographic character and urbanization level of the area served by each Social Service authority had been officially coded (Svenska Kommunförbundet, 2001) according to four categories: Larger cities and suburbs (> 50,000 inhabitants including the suburbs of the three largest cities in Sweden: Stockholm, Göteborg, and Malmö), medium-sized cities (20,000-50,000 inhabitants), agricultural and manufacturing areas (< 50,000 inhabitants) and rural or sparsely populated areas (< 20,000 inhabitants). When the adolescent and/or at least one parent were born outside Sweden, he or she was categorized by us as having non-Swedish or minority ethnicity.

A victim was defined as a person who had been sexually abused by a specified ASO judging from her/his own statement, information from the offender, or observations by others. Victim-offender relationships were categorized by respondents in four different groups with decreasing relatedness; sibling (biological, step-, or adopted), relative, acquaintance, or stranger. A hierarchy was used so that an offender who abused victims in multiple relationship categories was classified according to the victim category involving higher relatedness. The respondents reported victim age in four predefined categories, 0-5, 6-11, 12-17 and 18 years or older.

Child vs. peer offenders: To examine whether there were differences between offenders with child vs. adolescent/adult victims, offender groups were differentiated by victim age. Due to limitations of the questionnaire, only age groups (and not continuous age variables) were available. We studied child ASOs, that is youth with “child” victims (i.e., victims were 11 years or younger) and peer ASOs, with “peer/adult” victims (victims were 12 years of age or older).

Group vs. single offenders: The ASO was categorized as a group offender when he or she had “ever committed sexual abuse together with at least one other person”.

Statistics

Possible differences between groups with respect to discrete variables were examined with the χ^2 -test whereas *t*-tests were used to analyze potential group differences for continuous variables. Odds ratios with 95% confidence intervals (95% CI) were used to investigate the strength of the association between ASO subtype and various discrete correlates. The statistical software program SPSS, version 12.0, was used for all calculations.

RESULTS

Sociodemographic characteristics and incidence

The group of adolescent sexual offenders (ASOs) reported to the Social Services in 2000 consisted of 197 boys (99%) and 2 girls (1%). Because of the very small number, girls were excluded from further analysis. Social workers at child and adolescent units at local Social Service authorities throughout Sweden completed questionnaires with a limited set of easily obtainable individual data on the 197 male ASOs and their victims. Importantly, respondents had information about both victims and offenders of sexual abuse since they are required by law to provide support and protection to both categories. The boys' mean age was 14.76 years ($SD = 1.48$, $Mdn = 15$ years, range 12-17). Fifty-three (29.6%) ASOs had minority (non-Swedish) ethnicity (18 subjects had data missing for ethnicity). Of these, 24 had another European country as country of origin and 28 a non-European country (one subject had data missing for exact country of origin).

The size of the male population aged 12-17 years in 2000 and living in areas served by the 285 reporting authorities was 328,843 (ranging from 103 to 21,035 within each single local

authority). One-hundred-and-ninety-seven male ASOs yielded a national one-year incidence of .060% (95% confidence interval = .052-.068). The incidence of sexually abusive adolescents across the authorities varied from .00 to .91%. As shown in Table 1, there was a significant difference in incidence across the four regional categories with Social Services located in rural and sparsely populated areas reporting the highest mean incidence (.10%) and those in city areas the lowest (.05%).

Victim and offense characteristics

Most youth ($n = 122$, 76.7%) had female victims, while 31 (19.5%) had male victims and only 6 (3.8%) had both male and female victims, according to available data. The modal age band was 6-11 years (45.2%) for male victims and 12-17 years (63.6%) for female victims. When the offender abused both male and female victims ($n = 6$), the victims were all children aged 0-11. The offenders usually knew their victim(s). In 26.2% ($n = 49$) of the cases, the victim was a biological, step-, or adopted sibling. In 7.0% ($n = 13$), the victim was a relative and in 57.2% ($n = 107$) acquainted with the offender. Only in 9.6% ($n = 18$) of the cases was the victim unknown to the ASO. Notably, eleven offenders (5.6%) abused a victim placed in the same foster home or institution as the offender himself. Forty-four subjects (28.6%) had abused more than one victim.

Previous offender contact with the Social Services

Eighty-four young male sexual offenders (43.0%) were previously known by the Social Services for various reasons. Three different reasons for a previous record were coded by respondents; exhibiting antisocial behavior (conduct problems, drug/alcohol abuse), being a suspected victim of child abuse/neglect, or both. Forty-three of these 84 (51.2%) young offenders were known for antisocial behavior, 25 (29.8%) for a history of child abuse/neglect and 16 (19.0%) for a combination of both.

Child vs. peer offenders

Eighty-five offenders (43.4%) abused only children (0-5 or 6-11 years), 105 offenders (53.6%) abused adolescents or adults (12 years or older). Six offenders (3.1%) abused victims in both age ranges and were classified here as having child victims for purposes of analysis. This resulted in 91 offenders with child victims (child offenders) and 105 offenders with adolescent/adult victims (peer offenders)(Table 2). When we compared child offenders with peer offenders, some significant differences were identified. Offenders with child victims were significantly more likely to be of majority (Swedish) origin than were those who offended against adolescents/adults. Child offenders were significantly more likely to have abused siblings and relatives than peer offenders, and consequently, the latter were significantly more likely to have been sexually abusive towards a stranger (Table 2). Offenders abusing 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 the Social Services, particularly for their own victimization experiences.

▲ No significant differences were found among child as compared to peer offenders concerning offender age (mean age = 14.60 years, $SD = 1.61$ vs. 14.89 years, $SD = 1.35$; $t = -1.31$, $df = 1$, ns), or the type and size of the community where the ASOs lived (Table 2). In addition, there were no significant differences across the two ASO subgroups with respect to rate of hands-on offences or associated physical violence against the victim of the sexual abuse.

Finally, no major change in the overall pattern of results was found when child offenders were further separated into two subgroups; 37 who offended against young children (aged 0-5) and 54 offending against school children (aged 6-11)(data not shown).

Group vs. single offenders

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For 34 ASOs, information was missing on whether they had ever abused sexually together with one or more peers. Among the remaining 163 ASOs, 69 (42.3%) abused together with one or more associates and were hence defined as group offenders. Unfortunately, data concerning the exact number of offenders (above two) participating in a group offence were not requested from the informants. For 34 of the group offenders, however, spontaneously provided information indicated that the number of offenders within a group could at least vary from 2 to 6. There were no statistically significant differences across the two ASO subgroups concerning offender age (mean age = 14.78 years, $SD = 1.28$ vs. 14.87 years, $SD = 1.53$; $t = -.41$, $df = 1$, ns) or the urbanization level of the community where the ASOs currently lived (Table 3). In addition, there were no significant between-groups differences on ethnicity, presence of male victims, presence of hands-on (vs. hands-off) offenses, or use of violence. However, group offenders were significantly more likely to have abused an acquaintance than were single offenders, while single offenders were significantly more likely to have abused a sibling. 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.

DISCUSSION

This national survey addressed the one-year incidence of adolescent sexual offenders (ASOs) reported to child and adolescent units within Social Services throughout Sweden. To our knowledge, it is the first national incidence study of sexually abusive adolescents being reported to authorities. Six per 10000 12-17 year-old boys in Sweden were referred to Social Services in 2000 because of sexual offending. Only two girls were referred for the same reason which yielded an extremely low incidence, about 1/100 of that found for male ASOs. Importantly, since the Social Services constitute the first line of societal identification and

management of ASOs in many countries, the results may guide policymaking and improve the planning of services by providing more representative descriptions of this population.

Ethnicity and living areas

Thirty percent of the male adolescent sexual offenders were of minority (non-Swedish) ethnicity. This figure corresponds quite well with the proportion of males aged 12-17 of non-Swedish ethnicity in the general population (Statistics Sweden, 2001) where 79,933 (24%) were non-Swedish in 2000. The incidence of ASOs was significantly higher in more sparsely populated areas as compared to the largest city areas in Sweden. These two observations are inconsistent with the finding that young people with minority ethnicity (e.g. Lipsey & Derzon, 1998) or living in more populated areas (Osgood & Chambers, 2003) are more likely to engage in *general* criminal behavior. In agreement with current theories of sexually abusive behavior in adults (e.g. Malamuth, 2003; Beech & Ward, 2004), this adds further support to the idea that the relative importance of such sociodemographic variables, or some associated factor(s), is lower for sexually abusive behavior than for other forms of antisocial behavior in adolescents.

Child vs. peer offenders

Our findings support results from more selected clinical samples in that ASOs that offended against children differed from those who offended against peers or adults. Significant differences in child as compared to peer offenders included overrepresentation of majority (Swedish) ethnicity, sibling and male victim choice, more often having more than one victim and less often offending sexually together with peers.

Our findings of similar age for child vs. peer offenders agree with the results of Hunter et al. (2000, 2003). In contrast, Hendriks and Bijleveld (2004) found that child offenders were significantly younger than peer ASOs were. Since the latter study was based on cases referred

for forensic psychological evaluation, their sample might have been biased towards more worrying child abusing subjects (including lower age at first offending). Most adolescent sex offenders were of majority ethnicity. However, in agreement with Hunter et al. (2000) and Hendriks and Bijleveld (2004), we found that majority ethnicity was somewhat overrepresented among ASOs with child victims and underrepresented among ASOs with adolescent/adult victims. This is in contrast with Graves et al. (1996) whose systematic review of the published ASOs literature from 1973-1993 suggested that child ASOs were not different from peer offenders with respect to the proportion being of minority ethnicity and low socioeconomic position. Again, since the study by Graves et al. was based on clinical cases, selection mechanisms related to clinical identification could have caused this difference in findings between studies.

Child ASOs were more likely to have male victims than peer ASOs. This finding confirmed results previously presented by Hunter et al. (2000) and Hendriks and Bijleveld (2004).

Likewise, child ASOs were more likely to have victimized siblings than were peer ASOs (cf. Fehrenbach et al., 1986; Hunter et al., 2000; 2003).

Hunter et al. (2000; 2003) and Hendriks and Bijleveld (2004) reported that child ASOs used physical violence less often than did peer ASOs. This was not confirmed in our data (we found no difference across subgroups) and may reflect limited knowledge about use of violence among the Social Service professionals who provided data in this study. In line with Hunter et al. (2000), child ASOs were less likely to have acted in concert with other offenders than were peer ASOs. In contrast, a later clinical study of incarcerated ASOs by Hunter et al. (2003) failed to find significant group differences related to number of offenders.

We found, as did Hendriks and Bijleveld (2004), that child ASOs more frequently had more than one sexual abuse victim whereas Hunter et al. (2003), in their incarcerated sample, only found a non-significant trend for more than one victim. Hunter et al. (2000) reported no

significant difference in number of victims for child vs. peer offenders, which may again reflect differential selection mechanisms.

Based on these results, we conclude that it may be valid in differentiating between adolescent sexual offenders with child vs. adolescent/adult victims. While we hesitate to speculate on causal mechanisms, given the limitations of this study, the data appear to suggest at least two pathways to sexual offending in adolescents. First, peer offenders seemed to have more characteristics in common with nonsexually delinquent youth than child offenders had (e.g., minorities were overrepresented, offenses occurred outside the home and in groups more often, and prior contact with social services was typically for nonsexually delinquent behavior). Child abusers on the other hand, might be characterized more by family-level problems and/or sexualization. For example, one possible explanation that addresses three findings (i.e., the relatively greater presence of sibling victims, multiple victims, and offenders' own victimization) is that these youths and their victims received insufficient supervision by adult caregivers. As noted in the introduction, youth who sexually offend are diverse, and there likely are multiple pathways to sexual offending, as there are to general delinquency. More information about other ecological levels in which youth are embedded (e.g., family, peer, school, community) and individual characteristics might yield different results or suggest yet more pathways to sexual offending.

Group vs. single offenders

Forty-two percent of all ASOs identified in this sample had been involved in group offences. For comparison, Hunter et al. (2000) found 8% group offenders among 126 cases of arrested ASOs (1979-1981) supplied by police officers participating in an FBI training program. Hunter et al. (2003) reported 6% group offenders among 182 treated ASOs in an institution-based clinical sample, and Ullman (1999) 27% group rapists in an adult rapist sample from the Chicago police. Previous studies of selected clinical or forensic samples may have led to

an underestimation of the true proportion of group offenders among ASOs. Nevertheless, we cannot rule out a relative under-representation of the true incidence of single as compared to group offenders that may have boosted the proportion of group offenders in our total sample. For example, Gidycz and Koss (1990) found group sexual abuse victims to be more likely than single offender victims to seek police and crisis services.

Results from comparisons of group *vs.* single offenders bore similarities with results from comparisons of child *vs.* peer ASOs. Thus, group offenders were significantly more likely to have abused an acquaintance, to have one (*vs.* multiple) victim, were less likely to have been victimized themselves and less likely to have had previous contact with the Social Services. While other results did not reach statistical significance, they were in the same direction as the child *vs.* peer offender results (e.g., group offenders included nonsignificantly more ethnic minority youth and fewer male victims). In contrast, in their clinical sample, Bijleveld and Hendriks (2003) reported that group ASOs were younger than single offenders, more often of minority ethnicity and had committed more sexual offenses than single ASOs. In a large sample of arrested rapists 16 years or older, Ullman (1999) found that group rapists were younger than single rapists. Ullman's (1999) finding that group rapists were of minority ethnicity equally often as single rapists was confirmed in the present study. Sample characteristics (such as referrals to social services or arrest data *vs.* clinically referred ASOs) and associated selection mechanisms may account for some of these differences across studies.

We found no differences in rates of sexual offense-related physical violence for group *vs.* single ASOs. In contrast, Ullman (1999) found less use of violence among group as compared to single rapists. We may have had a less robust measure for this variable (Social Service professionals' reports) than the former two studies. A similar discrepancy was found for our finding that group offenders were more likely to offend against adolescent/adult victims as

compared to single ASO:s. This contrasted with findings by Ullman (1999) indicating that group rape victims were younger than in individual rape and Gidycz and Koss (1990) who found no victim age difference among college women sexually assaulted by group or single offenders. The present study included only a categorical estimate for victim age and thus discrepancies might be due to this study limitation. Additionally, sample characteristics (e.g., rapists older than age 15; Ullman, 1999 and young adult peer offenders only and low power to detect true differences between groups; Gidycz & Koss, 1990) might also explain these differences across studies.

We conclude that the proportion of ASOs that can be defined as group offenders may be higher than previously found. However, given the substantial overlap in results between the group *vs.* single offender analyses and the child *vs.* peer offender analyses, we conclude that the group *vs.* single offender distinction holds less value than the child *vs.* peer offender distinction.

Strengths and limitations

This sample was likely more representative of the total ASO population than clinical or forensic samples because of the uncontrolled selection mechanisms that particularly affect the recruitment of subjects to the latter. For example, as shown by Knight and Prentky (1993), sexually abusive adolescents with specific characteristics such as being more violent or having minority ethnicity may be more likely to be reported and become known by the police. That phenomenon could in turn inflate the perceived relative importance of such traits for the development of sexually abusive behavior. However, we cannot rule out selection mechanisms affecting also the composition of this Social Services sample with respect to which individuals were reported by victims, their families, and professionals. The study was carried out at a time when the problem with adolescent sexual offenders had still not been fully acknowledged in Sweden. It is likely that otherwise maltreated (and therefore perhaps

seen as less personally responsible for their offending), more innocent-looking or frankly denying sexually abusive adolescents, or a combination of these, were less well represented in this study than they would have been in an anonymous self-report survey. This may also hold as a possible explanation for the very low proportion of sexually abusive girls (1%) found in this sample (cf. Charles & McDonald, 1997). Interestingly, this proportion (female to male ASOs; 1:100) is substantially lower than that obtained with anonymous self-reports of the life-time prevalence of sexually abusive behavior in adolescents (e.g. Borowsky et al., 1997; female to male ASOs approximately 1:5). All those who work professionally with children under age 18 in Sweden are required by law to immediately alert the Social Services about youth that may be perpetrators or victims of abuse. However, delay may occur with respect to both victims' and professionals' reporting. No questionnaire item in this study addressed when the adolescent started to sexually offend, so reporting delay may have led to some misclassification. In other words, some individuals younger than age 12 when the offending took place or older than 17 when reported to the Social Services could have been inappropriately included and excluded, respectively. For similar reasons, some ASOs could have been misclassified as peer offenders though they actually offended against victims 6-11 years old. Since data were primarily collected to yield national incidence estimates to aid the planning of services, and not to investigate ASO subgroups, we could only study a limited set of offender, offence, and victim variables. Although the questionnaire addressed routine data already being collected and documented in the course of assessment and management of ASOs and their victims, no formal reliability testing of respondent coding was conducted. In addition, relatively high levels of missing data (up to 30 percent) for some variables tested across ASO subgroups could have affected the reliability of the corresponding findings. Finally, the fact that each group offender involved in a specific group offence yielded similar (although not necessarily identical) data on victim and offence characteristics for that offence

might have reduced variability for these variables in the comparison of group vs. single ASOs.

Conclusion

The present study was based on data from all ASO cases that became known to social workers at child and adolescent units within Swedish Social Services during one year. Therefore, it entailed less selection bias (or at least more similar selection mechanisms) for the studied subgroups, child vs. peer ASOs, and group vs. single ASOs, than prior studies comparing highly and differentially selected clinical samples from specialized assessment or treatment units. One conclusion is that the group vs. single offender division has less validity among ASOs than the child vs. peer offender subdivision. Causal effects cannot be determined from cross-sectional studies. Nevertheless, the present study lends further support to the hypothesis that differential etiological mechanisms might be involved in the development of adolescent sexual offending against children as compared to sexual offending against peers or adults. For example, peer influences and general criminogenic factors may be more important for sexual offending against peers or adults than for offending against children.

Overall, comparisons of the results with those obtained from previous clinical and forensic samples suggested similarities as well as differences and illustrate the need for caution when generalizing from studies with selected samples with respect to etiological mechanisms for sexual offending.

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Table 1. One-year incidence of adolescent male sex offenders (ASOs) referred to Social Services in Sweden in 2000 by level of urbanization.

	Level of urbanization				Statistic ^a
	Large city	Medium-size city	Agricultural/ manufacturing area	Rural area	Any
	(<i>n</i> = 65)	(<i>n</i> = 39)	(<i>n</i> = 112)	(<i>n</i> = 69)	(<i>n</i> = 285)
Male population aged 12-17	182,504	49,806	70,479	26,054	328,843
Reported ASO cases	93	26	51	27	197
Mean incidence	.05	.05	.07	.10	.06
95% CI	.04 - .06	.03 - .07	.05 - .09	.06 - .14	.05 - .07
<i>Note:</i>					
95% CI = 95% Confidence Interval					
a) The chi square test was computed for the four different levels of urbanization.					
$\chi^2 = 13.08, df = 3, p < .01$					

Table 2. Adolescent male sex offenders (ASOs) referred to Social Services in Sweden in 2000: Comparison of child and peer offender subtypes.

Variable	Offender subtype ^a			χ^2	Statistic
	Child offender (<i>N</i> = 91)	Peer offender (<i>N</i> = 105)	Total <i>N</i>		
	<i>n</i> (%)	<i>n</i> (%)		df = 1, if not otherwise stated	Odds Ratio ^b (95% CI)
Minority ethnicity ^c	15 (17.6)	38 (40.4)	53	11.11**	.32 (.16-.63)
Current area of living				.92 ns	
Large city	40 (44.0)	53 (50.5)	93	df = 3	.77 (.44-1.35)
Medium-sized city	12 (13.2)	13 (12.4)	25		1.08 (.46-2.49)
Agricultural/manufacturing area	26 (28.6)	25 (23.8)	51		1.28 (.68-2.43)
Rural area	13 (14.3)	14 (13.3)	27		1.08 (.48-2.44)
Victim-offender relation ^d				35.92***	
Sibling	37 (42.5)	12 (12.1)	49	df = 3	5.37 (2.56-11.22)

Relative	11 (12.6)	2 (2.0)	13	7.02 (1.51-32.62)
Acquaintance	35 (40.2)	72 (72.7)	107	.25 (.14-.47)
Stranger	4 (4.6)	13 (13.1)	17	.32 (.10-1.02)
Any male victim ^e	25 (37.3)	12 (13.2)	37	12.53***
> 1 victim ^f	32 (41.0)	12 (15.8)	44	12.01**
Contact offense ^g	73 (80.2)	87 (83.7)	160	.39 ns
Use of violence ^h	11 (16.2)	16 (22.2)	27	.82 ns
Offended with accomplice(s) ⁱ	12 (15.4)	57 (67.9)	69	45.54***
Reason for previous contact with Social Services				8.91*
Antisocial behavior	17 (18.7)	26 (24.8)	43	.70 (.35-1.39)
Victim of abuse/neglect	18 (19.8)	7 (6.7)	25	3.45 (1.37-8.70)
Both	9 (9.9)	7 (6.7)	16	1.54 (.55-4.31)
No previous contact	47 (51.6)	65 (61.9)	112	.66 (.37-1.16)

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes:

ASOs who sexually abused a victim under the age of 12 were defined as *child offenders*, whereas those who offended against a victim aged 12 years or older were defined as *peer offenders*. ASOs who abused victims in both age groups were defined as *child offenders*.

- a) One subject had missing data for victim age, and was therefore not possible to classify as a child or peer offender.
- b) Odds ratio expresses the association between the coding alternative specified at the beginning of row and child (as compared to peer) offender subtype.
- c) Minority (non-Swedish) ethnicity was coded when ASO and/or at least one parent were born outside Sweden. Eighteen subjects had missing data for ethnicity.
- d) ASOs who abused victims from more than one category were classified according to the victim category involving higher relatedness. Ten subjects had missing data for victim-offender relation.
- e) 38 subjects had missing data for victim gender.
- f) 42 subjects had missing data for number of victims.
- g) Eight subjects had missing data for sexual offense contact level.
- h) Defined as when the victim(s) was exposed to physical violence by the ASO during the sexually abusive act. Fifty-six subjects had missing data for use of violence.
- i) 34 individuals had missing data on accomplice(s).

Table 3. Adolescent male sex offenders (ASOs) referred to Social Services in Sweden: Comparison of group and single offender subtypes.

Variable	Offender subtype ^a			Statistic
	Group offender	Single offender	Total	
	(<i>N</i> = 69)	(<i>N</i> = 94)	<i>N</i>	χ^2 df = 1, if not otherwise stated
	<i>n</i> (%)	<i>n</i> (%)		
Minority ethnicity ^c	20 (31.7)	22 (25.0)	42	.83 ns
Current area of living				1.97 ns
Large city	36 (52.2)	39 (41.5)	75	1.54 (.82-2.88)
Medium-sized city	8 (11.6)	14 (14.9)	22	.75 (.30-1.90)
Agricultural/manufacturing area	16 (23.2)	28 (29.8)	44	.71 (.35-1.45)
Rural area	9 (13.0)	13 (13.8)	22	.94 (.38-2.33)
Victim-offender relation ^d				32.21 ***

Sibling	3 (4.7)	37 (40.2)	40	df = 3	.07 (.02-.24)
Relative	2 (3.1)	10 (10.9)	12		.27 (.06-1.25)
Acquaintance	51 (79.7)	38 (41.3)	89		5.58 (2.67-11.65)
Stranger	8 (12.5)	7 (7.6)	15		1.74 (.60-5.05)
Any male victim ^e	11 (17.2)	19 (25.3)	30	1.35 ns	.61 (.27-1.41)
Any child victim ^f	12 (17.4)	66 (71.0)	78	45.54***	.09 (.04-.19)
> 1 victim ^g	7 (12.3)	31 (37.8)	38	11.03**	.23 (.09-.57)
Contact offense ^h	56 (82.4)	77 (81.9)	133	.01 ns	1.03 (.46-2.33)
Used violence ⁱ	10 (19.2)	11 (15.1)	21	.38 ns	1.34 (.52-3.44)
Reason for previous contact with Social Services				10.92*	
Antisocial behavior	17 (24.6)	19 (20.2)	36	df = 3	1.29 (.61-2.71)
Victim of abuse/neglect	3 (4.3)	17 (18.1)	20		.21 (.06-.73)
Both	3 (4.3)	11 (11.7)	14		.34 (.09-1.28)
No previous contact	46 (66.7)	47 (50.0)	93		2.00 (1.05-3.81)

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Notes:

ASOs performing the abuse together with one or more accomplices were defined as *group offenders*, whereas those who sexually abused on their own were defined as *single offenders*.

a) 34 individuals had missing data for accomplice(s), and were hence not possible to classify as group or single offenders.

b) Odds ratio expresses the association between the coding alternative specified at the beginning of row and group (as compared to single) offender subtype.

c) Minority (non-Swedish) ethnicity was coded when ASO and/or at least one parent were born outside Sweden. Eighteen subjects had missing data for ethnicity.

d) ASOs who abused victims from more than one category were classified according to the victim category involving higher relatedness. Ten subjects had missing data for victim-offender relation.

e) 38 subjects had missing data for victim gender.

f) Defined as having offended sexually against any victim under the age of 12. One subject had missing data for victim age.

g) 43 subjects had missing data for number of victims.

h) 8 subjects had missing data for contact level in the sexual offense.

i) Defined as when the victim(s) was exposed to physical violence by the ASO during the sexually abusive act. Fifty-six subjects had missing data for use of violence.

