Sexual Murderers With Adult or Child Victims: Are They Different?

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Abstract

This study investigates characteristics differentiating sexually motivated murderers targeting child victims (CV; $n = 35$) from those with only adult victims (AV; $n = 100$). In the initial phase, psychiatric court reports were evaluated using standardized instruments (SCID-II, PCL-R, HCR-20, SVR-20, Static-99). In the second phase, data on duration of detention and reconviction rates were obtained from German federal criminal records. The CV group showed more often diagnostic criteria of pedophilia (43% vs. 4%) and less often alcohol abuse and drug dependency (31% vs. 55%), sexual dysfunctions (9% vs. 29%) and narcissistic personality disorder (0% vs. 13%). No significant differences were found regarding PCL-R and total risk assessment scores. Child victim perpetrators were more likely to have committed acts of sexual child abuse before the sexual homicide (46% vs. 16%) but were less likely to have committed rape or sexual assault (17% vs. 42%) or caused bodily injury (26% vs. 50%). The CV group was detained more frequently in forensic psychiatric hospitals (59% vs. 26%), but the two groups showed the same rates of release and reconviction for sexual (22% for both groups), nonsexual violent (CV 25% vs. AV 15%) and nonviolent offenses (CV 63% vs. AV 59%). Although well-known differences between nonhomicidal sexual child abusers and rapists were replicated in this study on sexual homicide perpetrators, the groups showed more similarities than differences. The high prevalence of violence and antisocial personality disorder in both groups seem to be important risk factors for committing a (sexual) homicide and might have outweighed other differences.

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The sexually related homicide of children is generally perceived as one of the most extreme forms of violence and holds remarkable interest for academic researchers and forensic experts as well as for the general public and media. Although attention to sexually motivated homicide—particularly that of children—has increased, German national crime statistics show a consistent decrease in sexually related homicides. In 1970, about 10 incidents per year were classified as a sexually motivated homicide of a child; this number declined to five in the 1980s and to an average of three homicides per year from the 1990s to 2005. For sexual homicides of adult victims, a similar pattern can be observed: In the late 1980s, the police recorded about 50 cases per year, followed by a decrease in the 1990s to an average of 33 incidents per year. This number declined further to 23 sexually related homicides in 2006 (Bundesministerium des Innern, 2008; Bundesministerium des Innern & Justiz, 2006). The proportion of sexual homicides to all homicides is estimated to be between 1% (Meloy, 2000) and 6% (Beech, Fisher, & Ward, 2005; Roberts & Grossman, 1993) and the victims are most frequently women and children (Bundesministerium des Innern & Justiz, 2006). However, because of the difficulty of establishing forensic evidence for sexual motivation, this proportion may underestimate the number of sexual homicides (Grubin, 1994). Due to the relatively small number of cases, empirical research on sexual homicide is difficult to perform and sample sizes of published studies are usually below 100 and often below 50 participants. Only a few cases are available to most forensic researchers, and the perpetrators tend to be incarcerated in different institutions and locations (Schlesinger, 2003) making investigative studies difficult. In addition to the problem of determining what defines sexual homicide, *sexual homicide*, *sexual murder*, and *sexually motivated homicide* are not juristic terms according to German criminal law codes as well as other criminal law codes. This makes identification of such crimes even more complicated. Consequently, very little data exist on sexual homicide and even less on comparisons of subgroups of sexual murderers, as criticized by Chan and Heide (2009).

Despite the low occurrence of sexually motivated murders, the investigation of these crimes is important because the families, the bereaved, and the community are profoundly affected by the sexual homicide of their loved one (Langevin, Ben-Aron, Wright, Marchese, & Handy, 1988). To prevent such crimes and to improve treatment programs at prisons and forensic institutions, it is important to understand the reasons and motivations for these most serious forms of homicide and to investigate the characteristics associated with them. As there are no universally accepted set of psychological factors that predict sexual homicide (Meloy, 2000), it is crucial to examine psychological and psychiatric disorders using standardized instruments. Studies on sexual murderers are largely based on archival data and/or interviews with offenders.

The use of standardized assessment techniques or control groups is rare among sexual offenders (Quinsey, 1990). The existing literature assumes the presence of sexual sadism (Burgess, Hartman, Ressler, Douglas, & McCormack, 1986; Langevin et al., 1988) and multiple paraphilias (Gratzer & Bradford, 1995; Langevin et al., 1988) as the primary factors that distinguish a sexual murder from other forms of homicide. Furthermore, some authors have postulated that sexual murderers are driven by hostile and aggressive parents (Burgess et al., 1986; Quinsey, 1990; Tatar, 1995), have experienced sexual abuse (Gratzer & Bradford, 1995), or were raised in unstable family conditions (Burgess et al., 1986). However, these assumptions tend to focus on single case studies with a descriptive account on etiological factors (Dietz, Hazelwood, & Warren, 1990).

Studies Comparing Homicidal and Nonhomicidal Sex Offenders

Firestone, Bradford, Greenberg, Larose, and Curry (1998b) compared extrafamilial homicidal child molesters (HCM; $n = 17$) with nonhomicidal extrafamilial child molesters (CM; $n = 35$) and found the prevalence of married offenders to be below the Canadian national rate in both groups. According to the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., revised [*DSM-III-R*]; American Psychiatric Association, 1987), HCM had higher rates of antisocial personality disorder (PD, 24% vs. 0%) and sexual sadism (82% vs. 0%). Pedophiles did not differ significantly. HCM also had a higher total score in the Hare Psychopathy Checklist–Revised (PCL-R; Hare, Clark, Grann, & Thornton, 2000), a standardized instrument for measuring psychopathic behavior ($M = 28.66$ vs. $M = 16.57$). They scored higher on the phallometric assessment of the Pedophile Index Score ($M = 1.33$ vs. 1.00), which measures penile circumference during the visual presentation of child initiates or child mutual stimulus, and scored higher on the Pedophile Assault Index ($M = 1.19$ vs. 0.68) which measures penile circumference during the presentation of visual stimuli involving sexual assaults on a child victim. The HCM victimized strangers more frequently (64% vs. 11%) and were more likely to have a previous history of violence (87% vs. 35%) and sexual offenses (27% vs. 6%). They also used excessive violence, weapons, and/or mutilated their victims in 67% of cases compared with 0% of nonhomicidal child molesters ($n = 189$) and nonoffenders ($n = 47$). Firestone, Bradford, Greenberg, and Nunes (2000a) found higher scores (≥1.0) on the Pedophile Index in both child molester groups (homicidal child molesters 52%; child molesters 46%; nonoffenders 28%) but higher scores (≥1.0) on the Pedophile Assault Index only for the homicidal child molester group (63% vs. 40% for child molesters and 36% for nonoffenders).

In a comparison study by Firestone, Bradford, Greenberg, and Larose (1998a), 48 homicidal sex offenders with adult and child victims (P. Firestone, personal communication, June 6, 2008) were contrasted with 50 incest offenders. The child molesters had been married in higher proportions (84% vs. 30%) and were less likely to have a

previous history of violence (37% vs. 82%). They also had less previous forensic contact (12% vs. 77%) and were less often placed outside their home before the age of 16. Utilization of the PCL-R in this study showed considerably higher scores for the sexual murderers (26.58, *SD* = 7.55) than for the child molesters (18.71, *SD* = 6.97). Homicidal sex offenders were more likely to use excessive violence and weapons and/ or mutilate their victims (70% vs. 8%) in the index offense and throughout their criminal history. In contrast, the child abuser group was less likely to use physical violence and was generally less hostile. Comparing psychiatric diagnoses (according to *DSM-III* and *DSM-III-R*) homicidal sex offenders showed higher rates of antisocial PD (35% vs. 0%) and substance abuse (40% vs. 6%). Of note in this study were the findings on sexual disorders: Sexual murderers were diagnosed with more paraphilias (79% vs. 24%), pedophilia (40% vs. 24%) and were more likely to be diagnosed with a combination of sexual sadism and pedophilia (40% vs. 2%).

In a comparison of sexual murderers (*n* = 21) and rapists (*n* = 121), Grubin (1994) found the most significant differences to be lifelong isolation (29% vs. 5%) and lack of heterosexual relationships (62% vs. 19%). Paraphilias were diagnosed in four individuals in the homicidal sex offender group whereas paraphilic behavior was found in 43% of this group, not a significant difference from the 26% of paraphilic behavior found among rapists. In both groups, 15% admitted to having experienced a sexual dysfunction in the year of their index offense. The murderers had more previous convictions for rape (29% vs. 7%). Both groups had committed equal amounts of violent offenses throughout their criminal histories. Milsom, Beech, and Webster (2003) confirmed some of these findings, outlining higher levels of peer loneliness in adolescence (68% vs. 38%) and higher rates of female grievance (68% vs. 31%) in sexual murderers than in the rapists. Comparing background, personality, offense, and victim characteristics, Oliver, Beech, Fisher, and Beckett (2007) also found that sexual murderers (*n* = 58) had lower rates of a relationships (38% vs. 44%), lower mean age (*M* = 30.4, *SD* = 9.5 vs. *M* = 24.2, *SD* = 7.1) at the time of their index offense, and more attacks against older victims (*M* = 6, *SD* = 5.6 vs. *M* = 57, *SD* = 15.8) than rapists. The rapist group (*n* = 112) presented more previous violent convictions and nonsexual delinquency. They also had higher scores on subscales of tests measuring antisocial personality traits. No difference was found concerning types of sexual interests (including paraphilias).

In a previous study comparing single and multiple sexual murderers, multiple offenders were characterized by higher rates of paraphilias, especially of sexual sadism, fetishism, voyeurism, and narcissistic and schizoid PDs. However, they showed lower rates of alcoholism and sexual dysfunctions (Briken, Nika, & Berner, 1999). In a later, relatively large sample group which serves as the basis for this current study, our research group investigated psychiatric disorders in sexual murderers and found a high lifetime prevalence of substance abuse or dependence, paraphilias (especially sexual sadism), sexual dysfunctions and PDs (especially antisocial, sadistic, and schizoid; Hill, Habermann, Berner, & Briken, 2007). Analysis of recidivism rates in this sample have shown an estimated recidivism rate of 23.1% for sexual and 18.3% for nonsexual violent reoffenses within a 20-year at-risk period. Young age at time of first sexual offense and homicide as well as release after a shorter duration

of detention were associated with increased recidivism with any violent reoffence (Hill, Habermann, Klusmann, Berner, & Briken, 2008).

Studies Comparing Rapists and Child Sexual Abusers

Comparing nonhomicidal child molesters and rapists, Bard et al. (1987) found higher rates of experienced sexual victimization in the child molester group (57%, *n* = 68) compared with rapists (23%, *n* = 107), though there was no significant difference in physical abuse or neglect. Furthermore, in this sample, the child molesters demonstrated less behavioral problems at school (25% vs. 62%). In a small Canadian sample of 29 rapists and 16 child molesters, both groups showed high rates of childhood sexual abuse (Dhawan & Marshall, 1996). Craissati and Beech (2004) compared 80 rapists with a sample of 230 child abusers according to background and offense-related variables. The rapists were significantly less likely to have been sexually victimized in childhood (27% vs. 51%) and were less likely to have been involved in a long-term relationship (55% vs. 72%). Ward, Hudson, and Marshall (1996) showed the rapists as having a more dismissive attachment style with higher rates of a fearful and/or preoccupied style than the child abusers. In another study of 22 rapists and 26 child molesters by Smallbone and Dadds (2000), no significant difference in attachment styles was found. However, intrafamiliar child molesters were more likely to describe their mother as unloving, inconsistent, and abusive, whereas rapists were more likely to describe their father as uncaring and abusive.

In adulthood, child abusers experienced less heterosexual relationships, were less likely to be overassertive, and were older at the time of their first offense (Hudson & Ward, 1997; Quinsey, Rice, & Harris, 1995). In terms of PDs, Hillbrand, Foster, and Hirt (1990) found that rapists with adult victims (*n* = 10) had considerably higher levels of pathology characterized by dysphoria, subjective distress, and inhibition compared with child molesters (*n* = 9) and child rapists (*n* = 10). Generally, PDs were diagnosed more often in rapists (Rice & Harris, 1997), with antisocial disorders being the most common diagnosis (Hanson & Bussiere, 1998). Rapists are more likely to have experienced an unstable or antisocial lifestyle than child abusers (Firestone, Bradford, Greenberg, & Serran, 2000b). Application of the PCL-R was part of the comparison studies by Rice and Harris (1997) and Seto and Barbaree (1999). In both investigations, the rapist group displayed higher scores. In Rice and Harris' sample, child molesters (*n* = 142) showed a PCL-R mean score of 13.4 (*SD* = 6.9) compared with rapists (*n* = 88) with a mean of 18.8 (*SD* = 9.0). In Seto and Barbaree's study, which was composed of a sample of 272 sex offenders, the rapists had an higher average PCL-R score of 19.0 (*SD* = 7.3) compared with 14.4 (*SD* = 6.2) for incest offenders and 14.6 (*SD* = 6.2) for extrafamilial child abusers. Using the Static-99 (Hanson & Thornton, 1999), Craissati and Beech (2004) found a lower risk of reoffending in their child abuser group (44% vs. 13%) when compared with their rapist group.

In regard to offense-related factors, Bard et al. (1987) found higher levels of aggression and force in the rapist group. Rice and Harris (1997) found more previous

criminal convictions and violent offenses for rapists and more previous sexual convictions in the child molester group. Craissati and Beech (2004) could not find higher rates of aggression but found significantly higher rates of verbal threats (46% vs. 22%) and physical coercion (66% vs. 28%) in the rapist group. Higher levels of alcohol use were found among the rapists during the offense (59% vs. 35). Hudson and Ward (1997) found the majority of convicted rapists to be using alcohol during their offense and confirmed Craissati and Beech's findings that a higher percentage of rapists had substance abuse problems. This finding supported Bard et al. (1987), who found more illicit drug use in rapists.

In terms of paraphilic behavior and disorders as motivating criminal factors, Craissati and Beech (2004) reported deviant sexual fantasies during the offense in about 30% in both groups by the perpetrator's own admission. Hudson and Ward (1997) determined a higher likelihood of pornography use for child molesters.

Several studies have examined the differences in detention and recidivism for child abusers and rapists. Seto and Barbaree (1999) found incest offenders had a higher probability of being paroled than rapists or extrafamilial child molesters. In a 32-month at-risk period, rapists reoffended more than twice as much as child molesters. In a meta-analysis, Hanson and Bussiere (1998) found higher sexual recidivism rates in rapists (18.9%, $n = 1,839$) compared with child molesters (12.7%, $n = 9,603$) in a follow-up period of 4 to 5 years. Nonsexual but violent recidivism rates were also higher in rapists (22.1%, $n = 782$) than in child abusers (9.9%, $n = 1,774$). In contrast, in Prentky, Lee, Knight, and Cerce's (1997) sample, 32% of child molesters committed a new sexual offense in a follow-up period of 25 years compared with 26% of rapists. In terms of nonsexual crimes, however, the rapists demonstrated a higher likelihood to reoffend with 33% compared with 14% of child abusers. Rice and Harris (1997) found that rapists recidivated more quickly with violent offences when compared with child molesters. However, perpetrators with both child and adult victims showed the highest recidivism rates.

Child molesters had the highest recidivism rates of sexually related offenses, followed by rapists and the mixed-victim group. In a German representative sample of 181 sexual offenders, no significant difference in terms of reoffending with a sexual crime was found for child molesters (22%) compared with rapists (19%) during a 6-year at-risk period (Elz, 2002, p. 217). With a follow-up period of 36 months ($SD = 19$) for rapists and 55 months ($SD = 35$) for child abusers, Craissati and Beech (2004) presented relatively low sexual recidivism rates: only 5% for the rapists and 3% for the child molesters.

Aims and Hypotheses

The aim of this study is to explore the characteristics that differentiate sexual murders with exclusively child victims from those with only adult victims.

We wanted to (a) examine the hypothesis that sexual murderers differ in terms of psychiatric disorders, childhood development, criminal history, and risk of criminal

recidivism in relation to their specific type of victim and (b) test the hypothesis that sexual murderers with child victims are more similar to child abusers and that sexual murders with adult victims are more similar to rapists.

We expected to find similar differences as those in the cited studies comparing sexual child abusers and rapists. For example, we expected to find that sexual murderers with adult victims had a higher prevalence of antisocial PD, substance abuse, previous history of violence and paraphilias but were less likely to display pedophilia and have experienced childhood sexual abuse than the sexual homicide child murderers.

Method

Participants

This study is based on retrospective evaluation of forensic psychiatric court reports of 166 men who committed a sexual homicide between 1945 and 1991. We extracted 35 (21%) offenders with homicide victims exclusively below the age of 12 years (CV) and compared this group with offenders that killed only adults (AV) aged 18 years or older ($n = 100$, 60%). Perpetrators with victims between the ages of 12 and 17 ($n = 19$) or with both child and adult victims or victims of unknown age ($n = 12$) were excluded from this analysis. The majority of the sexually motivated homicides were committed in the 1970s ($n = 60$, 44.4%) and 1980s ($n = 43$, 31.9%), followed by 12.6% ($n = 17$) in the 1960s and 8.1% ($n = 11$) in the 1990s. Only a little number was committed between 1945 and 1948 ($n = 2$, 1.5%) and between 1955 and 1958 ($n = 2$, 1.5%).

The sample ($N = 135$) consisted exclusively of White offenders, and 98% were German. Less than one fifth of the offenders (16.3%) had killed more than one victim. The murderers' mean age at the time of first sexual homicide was 26.9 years ($SD = 8.4$, range = 15.5-58.7) with 10.4% of the offenders being adolescents below the age of 18. The majority were either single (71.1%) or divorced/living apart (15.6%). Only 13.3% were married. 25.2% were in an intimate relationship and 27.5% had at least one child. School performance was poor: 45.2% had no formal school degree or attended special education classes/schools, that is, schools for children with learning and behavioral difficulties, 50.3% had completed their primary school education (9-10 years), and 3.7% finished high school (13 years, regular duration for German high school degree). Nearly a third of the offenders (28.9%) had no occupation at the time of the homicide. This low educational and occupational standard stands in contrast to an average level of intelligence found among offenders: The mean IQ was 101.5 ($SD = 13.8$, range = 67-143) for those who had completed formal intelligence tests ($n = 119$). Only one offender had an IQ below 70.

Materials and Procedures

Between June 2002 and September 2003, three trained raters assessed the psychiatric court reports for sociodemographic, criminal, and clinical factors, including

standardized diagnostic and risk assessment instruments. The raters comprised three experienced forensic psychiatrists and psychologists and were trained for this study using a study protocol defining the variables. They were blind for the follow-up data from the federal criminal records. The reports were written by 20 forensic psychiatrists from four major German forensic centers. Adopting Ressler, Burgess, and Douglas's (1988) definition of sexual homicide, homicide offenses in which at least one of the following criteria was fulfilled were included:

- Αττεμπτεδ ορ χομπλετεδ σεξυαλ ιντερχουρσε (οραλ, αναλ, ϖαγιναλ)
- Εξποσυρε οφ τηε πριμαρψ ορ σεχονδαρψ σεξυαλ παρτσ οφ τηε ϖιχ–τιμ σ βοδψ
- Τηε ϖιχτιμ βεινγ λεφτ νακεδ ορ σεμινακεδ
- Σεξυαλ ποσιτιονινγ οφ τηε ϖιχτιμ σ βοδψ
- Ινσερτιον οφ φορειγν οβφεχτσ ιντο τηε ϖιχτιμ σ βοδψ χαϖιτιεσ
- Σεμεν ον ορ νεαρ τηε ϖιχτιμ σ βοδψ
- Συβστιτυτε σεξυαλ αχτιϖιτψ (ε.γ., μαστυρβατιον, εξηιβιτιονιστιχ ορ ϖοψευριστιχ βεηαϖιορ)
- Σεξυαλ ιντερεστ αδμιττεδ βψ τηε οφφενδερ
- Σαδιστιχ φαντασιεσ αδμιττεδ βψ τηε οφφενδερ

The mean number of the above-named criteria per offender was 3.7 (*SD* = 1.5). Commissioning of the court reports was due to assessment of criminal responsibility (67.5%) or risk assessment before release or changes in security levels of imprisonment (32.5%). The reports had an average length of 58 pages (*SD* = 35, range 8-208) and consisted of external intelligence (law enforcement files, solicitor information, statements from witnesses and relatives, former psychiatric expertise, and psychological and psychiatric assessments), psychiatric examination, and somatic and psychological assessments. If available, additional information was evaluated (psychological tests, neurophysiologic and neuroimaging assessments, previous forensic reports, court verdicts, etc.).

Raters diagnosed psychiatric disorders retrospectively according to the *DSM-IV* (American Psychiatric Association, 1994). For a systematic assessment of PDs, all criteria were scrutinized according to the Structured Clinical Interview for *DSM-IV* Personality Disorders (SCID-II; First, Spitzer, Gibbon, & Williams, 1997) and, in addition, *DSM-III-R* criteria for sadistic PD (American Psychiatric Association, 1987). Psychopathic attributes (i.e., mainly antisocial personality traits) were assessed by the PCL-R with a cut-off score of 25, which has been recommended for European samples (Cooke & Michie, 1999; Hare et al., 2000). Risk assessment of sexual violence was measured by the SVR-20 (Boer, Hart, Kropp, & Webster, 1997) and the Static-99 (Hanson & Thornton, 1999). Both instruments have been cross-validated recently in a European sample (de Vogel, de Ruiter, van Beek, & Mead, 2004). For general violence, the HCR-20 (Webster, Douglas, Eaves, & Hart, 1997) was used. Since no cut-off scores are defined for the SVR-20 and the HCR-20, we chose a cut-off score of

25 for the SVR-20 and a cut of score of 20 for the HCR-20 for statistical group comparisons. We opted for the lower cut-off score in the HCR-20 because the five so-called risk variables reflecting the future social and therapeutic circumstances could not be rated with enough confidence for the majority of the offenders and were therefore excluded from analysis. For the same reason, Item 19 of the SVR-20 (no realistic plans for the future) was dropped from analysis. For the Static-99, the cut-off score for high risk (≤6) was applied (Hanson & Thornton, 1999). Sexual orientation was assessed by the Kinsey Scale in terms of the offenders' sexual history and sexual activity: 0 = *exclusively heterosexual*, 1 = *predominantly heterosexual, only incidentally homosexual*, 2 = *predominantly heterosexual, but more than incidentally homosexual*, 3 = *equally heterosexual and homosexual*, 4 = *predominantly homosexual, but more than incidentally heterosexual*, 5 = *predominantly homosexual, only incidentally heterosexual*, 6 = *exclusively homosexual* (Kinsey, Martin, & Pomeroy, 1948).

The construct *traumatization during childhood* (until the age of 15 years) was assessed based on the definition by Engfer (1997): *Physical abuse* implies beating or other violent actions (punching, shaking, burning, stabbing, etc.) that might cause injury to the child. However, minor forms of physical abuse (e.g., light slaps) were excluded. *Sexual abuse* was defined as sexual activity of a child with an adult or a person at least 5 years older to which the child or adolescent was forced or did not consent to. *Physical neglect* occurred when parents or guardians had been egregiously insufficient in their nurturing, care, support, and protection of the child. We defined *emotional abuse or neglect* as any actions and omissions of parents or guardians that resulted in anxiety, excessive demands, feelings of worthlessness or that harmed the child's psychological and/or physical development.

In regard to characteristics of crime scene behavior, we employed criteria for nonimpulsive offenses established by Sass (1985). Concerning criminal history, previous offenses were determined as all actions that could have resulted in an official sanction, not just crimes officially registered by the police or resulting in legal action.

Interrater reliability was assessed by evaluation of 20 reports by all raters to obtain a consensus rating for each item. For Axis I disorders, Cohen's kappa ranged between 0.61 and 1.0 (mean $\kappa = 0.82$). For sexual sadism, it reached 0.79. Categorical diagnoses of specific PDs using the SCID-II interrater reliability had lower results (κ between 0.26 for borderline PD and 0.71 for schizoid PD, $M = 0.54$). Rating of sadistic PD according to *DSM-III-R* presented a kappa of 0.61.

Follow-Up Data

Data on duration of detention, incarceration in prison or a forensic hospital, and reconviction after the sexual homicide were obtained from German federal crime records. Follow-up data were available for 111 of the complete sample of 135 offenders. Eighty of these 111 offenders (59.3%) were released and offered information about recidivism with an average follow-up time of 12.7 years (range = 0.5-31.70, $SD = 6.6$): 18 (51.4%) within child victim group and 62 (62%) within the adult victim group.[1]

Offenders without follow-up data were excluded from analysis. Reoffending was limited to three types: sexual offenses (rape, sexual assault, sexual child abuse, sexual homicide), nonsexual violent offenses (bodily harm, assault, robbery, kidnapping, nonsexual homicide), and nonviolent offenses (property offences, possession or trade of illegal drugs, traffic offences, etc.). Time at risk referred to the amount of time from release until the first new offence or until the date of the last follow-up information (including death). Time served in prison for offenses other than the defined reoffence group were subtracted. Information about death was obtained from birth registry offices.

Statistics

Between-group comparisons were performed using two-tailed *t* tests for normally distributed data (e.g., IQ), Mann-Whitney U tests for nonparametric continuous data, and χ^2 analyses of frequencies. For multiple comparisons, we applied the Bonferroni correction and significant results before Bonferroni correction ($p < .05$) are reported as trends. However, for testing a priori hypotheses, critical *p* value was set at <.05. Kaplan-Meier survival analysis was performed with a *p* value determined by Breslow test, for the probability of significant differences between survival curves of the complete observation period, not just of the reported rates of recidivism after 20 years. The application of Kaplan-Meier survival analysis corrects for different times at risk. Statistical analysis was performed using SPSS 15.0 ("SPSS 15.0 for Windows," 2006).

Results

Participants

No significant differences in sociodemographic characteristics or intelligence (IQ) were found. Offenders' mean age at the time of first sexual homicide was 25.4 years (range = 16.3-46.7) for the CV group and 27.4 years for the AV group (range = 15.8-58.7, $t = 1.201$, $p = .235$). The CV group contained more juvenile offenders with 23.1% (6/26) versus 9.3% in the AV group ($\chi^2 = 3.463$, $df = 1$, $p = .063$). Mean IQ-score was 101.82 for the CV group ($n = 28$, $SD = 13.5$) and 102.87 for AV group ($n = 67$, $SD = 14.3$, $t = 0.338$, $p = .737$). Three (3.8%) offenders in the AV group were deceased at the time of the study evaluation.

One fifth (20.0%) of the men in the AV group had killed more than one victim whereas only 5.7% men in the CV group had committed multiple sexual homicides ($\chi^2 = 3.879$, $df = 1$, $p = .049$). The total number of victims amounted to 164 of whom 75.0% were female (CV: 70.3%, AV: 76.4%). In the CV group, considerably more male victims were killed (28.6%) compared with the adult murderers with only 12.0% ($\chi^2 = 5.219$, $df = 1$, $p = .022$). In both groups, the rate of victims who were strangers was very high (CV 74.3% and 66.0% for AV, $\chi^2 = 0.820$, $p = .365$).

Table 1. Personality Disorders in Sexual Homicide Offenders With Child or Adult Victims

	Offenders with only child victims (n = 35)		Offenders with only adult victims (n = 100)			
	n	%	*n*	%	χ^2 (*df* = 1)	*p*[a]
Any PD	29	82.9	75	75.0	0.905	.342
Anxious (avoidant) PD	5	14.3	13	13.0	0.037	.847
Dependent PD	0	0.0	5	5.0	1.817	.178
Obsessive-compulsive PD	0	0.0	2	2.0	0.711	.399
Negativistic PD[b]	0	0.0	4	4.0	1.443	.230
Depressive PD[b]	1	2.9	0	0.0	2.878	.090
Paranoid PD	1	2.9	4	4.0	0.095	.758
Schizotypal PD	1	2.9	1	1.0	0.613	.434
Schizoid PD	7	20.0	12	12.0	1.372	.241
Histrionic PD	0	0.0	0	0.0	—	—
Narcissistic PD	0	0.0	13	13.0	5.035	.025*
Borderline PD	6	17.1	17	17.0	0.000	.985
Antisocial PD	9	25.7	24	24.0	0.041	.839
Sadistic PD[c]	4	11.4	17	17.0	0.613	.434

a. According to Pearson chi-square (two-sided).
b. These diagnoses are included in the SCID-II but are not listed in the *DSM-IV*.
c. Sadistic PD is not part of SCID-II and was assessed using the *DSM-III-R* criteria.
*Critical *p* value after Bonferroni correction was *p* ≤ .003 for categorical (1 × 15 comparisons).

Psychiatric Disorders

Offenders with exclusively child victims were more likely to demonstrate aspects of pedophilia (42.9% vs. 4.0%, $\chi^2 = 32.369$, *df* = 1, *p* = .000), paraphilia not otherwise specified, for example, uro- or coprophilia (17.1% vs. 5.0%, $\chi^2 = 5.108$, *df* = 1, *p* = .024) and were more often diagnosed with any paraphilia (71.4% vs. 42.0%, $\chi^2 = 8.982$, *df* = 1, *p* = .003). In both groups, sexual sadism was diagnosed frequently with 37.1% in the CV group and 32.0% in the AV group ($\chi^2 = 0.309$, *p* = .579). Sexual dysfunctions in general were more frequent in the AV group (29.0% vs. 8.6%, $\chi^2 = 5.983$, *df* = 1, *p* = .014). Moreover, offenders with adult victims were more likely to be diagnosed with alcohol abuse and dependency (55.0% vs. 31.4%, $\chi^2 = 5.765$, *df* = 1, *p* = .016) and other substance-related disorders (59.0% vs. 34.4%, $\chi^2 = 6.351$, *df* = 1, *p* = .012). However, no correlation could be found between sexual dysfunctions and alcoholism (Pearson's *r* = −.042, *p* = .678; Pearson's *r* = −.095, *p* = .349) and drug dependency.

In terms of PDs, no significant differences (after Bonferroni correction) could be established. Only trends could be found for narcissistic PD with higher prevalence in AV (13%) compared with CV (0.0%, $\chi^2 = 5.035$, *df* = 1, *p* = .025; Table 1). Antisocial

PD was diagnosed in about one quarter of individuals in both groups (CV with 25.7% and 24.0% in AV).

No differences were found for other Axis I psychiatric disorders, including affective disorders (CV: 11.4% vs. AV: 10.0%), anxiety disorders (CV: 2.9% vs. AV: 5.0%), somatoform disorders (CV: 5.7% vs. AV: 7.0%), impulse-control disorders (CV: 0% vs. AV: 3.0%), and schizophrenia and other psychotic disorders (CV: 2.9% vs. AV: 4.0%). The overall rates of these disorders were rather low in both groups. However, this might not reflect the true prevalence rates as we did not apply standardized diagnostic instruments for these diagnostic categories and especially information on affective and anxiety disorders might have been incomplete in the forensic reports.

Sexual and Relationship History

Information about masturbation with sadistic fantasies, masturbation with homicidal fantasies, and use of sadistic pornography was not always available in the court reports, therefore we had to use reduced sample sizes. Offenders with exclusively child victims stated that they masturbated more frequently to homicidal fantasies (42.4%, 14/33 vs. 21.9%, 21/96, $\chi^2 = 5.245$, $df = 1$, $p = .022$) and were more likely to show compulsive masturbation than those who murdered adults (30.0%, 9/30 vs. 10.2%, 9/88, $\chi^2 = 6.766$, $df = 1$, $p = .009$). In both homicide categories, about one third of the participants stated they had masturbated to sadistic fantasies (CV with 38.7%, 12/30, and AV with 30.8%, 28/88, $\chi^2 = 0.662$, $df = 1$, $p = .416$). Sexual orientation varied: Those in the CV group were less likely to be exclusively heterosexual (48.5% vs. 74.0%, $\chi^2 = 14.945$, $df = 6$, $p = .021$). In terms of psychosocial difficulties preceding the sexual homicide, offenders with adult victims were more likely to state experiencing stress in their relationships (38.0% vs. 17.1%, $\chi^2 = 5.134$, $df = 1$, $p = .023$) and stress due to financial problems (43.3% vs. 23.5%, $\chi^2 = 4.169$, $df = 1$, $p = .041$), whereas the child murderers were more likely to experience stress due to social isolation (71.4% vs. 41.4%, $\chi^2 = 9.320$, $df = 1$, $p = .002$). The majority of the sample in both groups was not married (CV: 82.9% vs. AV: 67.0%, $\chi^2 = 3.491$, $df = 2$, $p = .175$). More than three quarters of this group stated that they never had sexual intercourse (76.5%, 26/34 vs. 35.6%, 31/87, $\chi^2 = 20.830$, $df = 9$, $p = .013$) and more than half had never had a relationship before the offense (57.1% vs. 21.0%, $\chi^2 = 19.650$, $p = .001$). Moreover, the vast majority of offenders with exclusively adult victims had performed petting (88.9%, 88/99) in contrast to only 55.9% (19/34) of the child murderers ($\chi^2 = 17.531$, $df = 1$, $p = .000$). A greater number of the CV sample had no biological, adopted, or step children (82.9% vs. 69%, $\chi^2 = 12.189$, $df = 4$, $p = .016$). Within the CV group, no relationship could be found between being a juvenile offender and having experiences with petting (Pearson's $r = .250$, $p = .228$).

Childhood Development and Traumatization

Information about childhood development and experiences was not available for every participant, therefore we had to use reduced and varied sample sizes. We found no

Table 2. Childhood Behaviour Problems and Traumatization in Sexual Homicide Offenders With Child or Adult Victims

	Offenders with only child victims		Offenders with only adult victims		χ^2 (df = 1)	p^a
	n	%	*n*	%		
Childhood behavior problems						
Enuresis/encopresis	12/33	36.4	22/98	22.4	2.487	.115
Chronic lying	5/33	15.2	13/97	13.4	0.063	.802
Isolation	27/34	79.4	66/99	66.7	1.955	.162
Bullied frequently	15/31	48.4	49/100	49.0	0.004	.952
Running away from home	8/34	23.5	25/97	25.8	0.067	.795
Repeated classes	15/32	46.9	49/99	49.5	0.066	.797
School problems	30/34	88.2	68/99	68.7	4.988	.026*
Animal cruelty	0/33	0.0	4/98	4.1	1.389	.239
Fire setting	2/33	6.1	5/98	5.1	0.045	.832
Childhood traumatization						
Physical abuse	19/35	54.3	74/100	74.0	4.701	.030*
Sexual abuse	10/35	28.6	24/100	24.0	0.288	.592
Physical neglect	7/35	20.0	14/100	14.0	0.711	.399
Emotional abuse/neglect	23/35	65.7	78/100	78.0	2.077	.150
Witness of sexual violence	2/35	5.7	9/100	9.0	0.374	.541

a. According to Pearson chi-square (two-sided).
*Critical *p* value after Bonferroni for 1×9 comparisons (childhood behavior problems) was $p \leq .005$, for 1×5 comparisons (childhood traumatization) was $p \leq .01$.

significant group differences. However, there was a trend toward higher rates of school problems and lower rates of physical abuse until the age of 15 for offenders in the CV group. No group differences could be found in terms of personal child sexual abuse histories (Table 2).

In terms of educational status, we identified no significant difference between lack of degree or special school degree in the CV group (60%, 21/35 vs. 40.4%, 40/99 in AV, $\chi^2 = 6.272$, *df* = 3, *p* = .099), but almost all child murderers had not completed professional training (97.1%, 34/35). In comparison, 60.6% (60/99) in the AV group had completed some form of professional training ($\chi^2 = 16.495$, *df* = 3, *p* = .001).

Criminal History

Offenders in the AV group had committed significantly more violent offenses (55.0% vs. 31.4%, $\chi^2 = 5.765$, *df* = 1, *p* = .016) previous to the sexual homicide. The child murderers were more likely to have committed acts of child sexual abuse (45.7% vs. 16.0%, $\chi^2 = 12.657$, *df* = 1, *p* = .000) but were less likely to have committed acts of rape, sexual assault (17.1% vs. 42.0%, $\chi^2 = 6.991$, *df* = 1, *p* = .008), and bodily injury (25.7% vs. 50.0%, $\chi^2 = 6.215$, *p* = .013).

Table 3. Characteristics of Nonimpulsive Offences (Adopted From Sass, 1985) in Sexual Homicide Offenders With Child or Adult Victims

	Offenders with only child victims ($n = 35$)		Offenders with only adult victims ($n = 100$)		χ^2 ($df = 2$)	p^a
	n	%	n	%		
Previous tendencies to of similar behavior	19	54.3	48	48.0	3.451	.178
Previous announcement of the offence	1	2.9	3	3.0	0.002	.966
Immediate antecedent aggressive behavior	7	20.0	23	23.0	1.279	.528
Preparation of the offence	8	22.9	17	17.0	1.511	.470
Situational constellation by the offender	24	68.6	49	49.0	4.700	.095
Offending without being provoked by the victim	28	80.0	47	47.0	11.571	.003[b]
Purposefully carrying out the offence	21	60.0	25	25.0	14.245	.001[b]
Long duration of the offence	9	25.7	20	20.0	1.048	.592
Complex, stepwise course of the offence	17	48.6	33	33.0	3.042	.219
Sustained introspection during offence	31	88.6	81	81.0	3.008	.222
Accurate and detailed memory of the offence	28	80.0	75	75.0	0.385	.825
Offender denies the offence afterward	1	2.9	11	11.0	2.123	.145
Congruence of file information and offender's report of the offence	26	74.3	77	77.0	0.210	.900

a. According to Pearson chi-square (two-sided).
b. Critical *p* value after Bonferroni correction was $p \leq .004$ for categorical (1×13 comparisons).

Offence-Related Characteristics

The most striking difference between child and adult victim offenders concerned the more frequent use of alcohol during the time of the offense in the AV group (78.6%, 77/98 vs. 34.3%, 12/35, $\chi^2 = 24.196$, $df = 1$, $p = .000$). Evidence of masturbation during the offense was found more frequently in the CV group (33.3%, 9/27 vs. 9.4%, 8/85, $\chi^2 = 9.306$, $df = 1$, $p = .010$). Considerably more offenders with child victims hid their victim's body after the homicide (56.3%, 18/32 vs. 33.3%, 33/99, $\chi^2 = 5.342$, $df = 1$, $p = .012$) but were less likely to keep items belonging to their victim (3.2%, 1/31, vs. 42.4%, 42/99, $\chi^2 = 16.387$, $df = 1$, $p = .000$). In terms of characteristics of nonimpulsive offenses (adopted from Sass, 1985), offending without being provoked by the victim and purposefully carrying out the offence were found more often in the child victim group (Table 3).

Table 4. Standardized Instruments in Sexual Homicide Offenders With Child or Adult Victims

Total scores	Offenders with only child victims (n = 35)		Offenders with only adult victims (n = 100)			
	M	SD	M	SD	t	p^a
PCL-R	15.74	6.586	16.39	8.681	−0.402	.688
HCR-20	16.91	4.321	16.15	4.821	0.828	.409
SVR-20	22.74	5.982	22.83	6.641	−0.68	.946
Static-99	5.57	2.004	5.19	1.796	1.049	.296

a. According to *t* test (two-tailed) for equality of means.

Instruments for Risk Assessment

No significant difference was found regarding the applied standardized instruments (PCL-R, HCR-20, SVR-20, and Static-99) total scores. Both groups were almost identical in total scores (Table 4).

We found no significant distinction concerning a PCL-R score of 25 and higher (8.6% in CV vs. 18.0% in the AV, $\chi^2 = 1.755$, $df = 1$, $p = .185$). Investigating the risk categories of the Static-99, we identified no group differences: 85.8% of the CV and 86.0% of the AV obtained a middle-high to high risk in the test (Mann-Whitney U = 1627.000, $p = .497$). A similar picture was found in the SVR-20 risk categories: In CV, 40.0% in AV 37% scored on a middle risk, whereas 54.3% in CV and 53.0% in AV were assessed to have a high risk of reoffending ($\chi^2 = 0.606$, $p = .739$).

Detention and Criminal Recidivism

The child victim group was detained more frequently in forensic psychiatric hospitals (59.3%, 16/27 vs. 26.2%, 22/84, $\chi^2 = 9.924$, $df = 1$ $p = .002$). No significant group differences were found regarding average follow-up time and rates of release. The CV group had an average follow-up time of 13.8 years and the AV group of 12.5 years ($SD = 6.0$, $t = 0.697$, $p = .488$). According to Kaplan-Meier survival analysis, in both groups, 22% (CV 3/18, AV: 9/62) of the murderers reoffended with a sexual offense after an at-risk period of 20 years (Breslow = 0.00, $p = .982$, Figure 1a). No significant group differences were found for recidivism with nonsexual violent offenses (CV 25%, 4/18 vs. AV 16%, 9/62, Breslow = 0.42, $p = .516$, Figure 1b), any sexual and nonsexual violent offenses (CV 43%, 6/18 vs. AV 31%, 17/62, Breslow = 0.15, $p = .697$, Figure 1c), and nonviolent crimes (63%, 10/18 vs. 59%, 30/62, Breslow = 0.23 $p = .629$, Figure 1d).

Logistic Regression

A binary logistic regression analysis was conducted to determine statistically significant predictors of the group membership defined by the victim's age (either child or
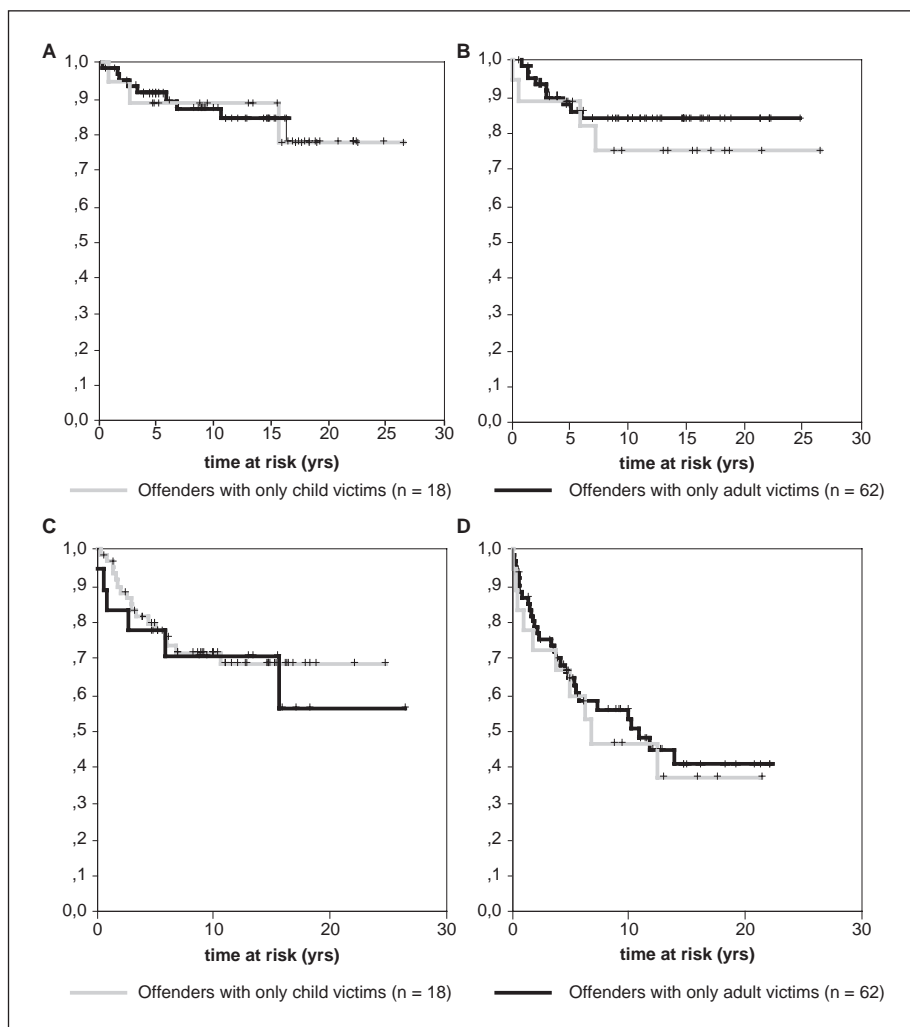
Figure 1. Estimated criminal recidivism in 80 released sexual homicide offenders (Kaplan-Meier survival analyses): (a) sexual offences, (b) nonsexual violent offences, (c) sexual or violent offences, (d) other nonviolent offences

adult). Seven independent binominal variables examined for their predictive power were included: the diagnosis of pedophilia, alcohol abuse and dependency, multiple sexual homicides, sexual dysfunctions, rape or sexual assault, child sexual abuse previous to the sexual homicide, and the victim's gender. The choice of variables was based on hypothesized predictors and their potential relevance from previous statistical analysis. Research was conducted using all seven variables in one block by

Table 5. Logistic Regression Analysis of Factors Predicting Offender's Group Membership

	β	SE	Wald	Significance	Exp(B)	90.5% CI for Exp(B) Lower	Upper
Pedophilia	2.439	0.887	7.568	.006**	11.463	2.017	65.158
Sexual dysfunction	−1.501	0.780	3.701	.054	0.223	0.048	1.029
Rape or sexual assault	−1.206	0.607	3.942	.047*	0.299	0.091	0.985
Sexual child abuse	0.880	0.731	1.447	.229	2.410	0.575	10.106
Alcohol abuse and dependency	−0.730	0.507	2.077	.150	0.482	0.178	1.301
Multiple sexual homicides	−1.464	0.930	2.480	.115	0.231	0.037	1.430
Victim's sex	0.731	0.642	1.295	.255	2.077	0.590	7.311
Constant	1.570	1.331	1.390	.238	4.805		
χ^2	48.496***						
−2 log likelihood	106.019						
Nagelkerke R^2	.443						

*$p \leq .05$. **$p \leq .01$. ***$p \leq .001$ (two-tailed tests).

employing the "enter" approach. The regression equation for the model was statistically significant ($\chi^2 = 48.496$, $df = 7$, $p = .000$) in relation to a reliable distinction of the offender groups. Results indicated that the model explained 44.3% of the variations in the response as indicated by the Nagelkerke R^2 (.443). The model was able to correctly classify 95.0% of the offenders with adult victims and 45.7% of the child victim group with an overall proportion of 82.2%. To determine the statistical significance of the correlation coefficient measuring the strength of the relationship β, the Wald statistics were calculated for each independent variable. The two statistically significant variables were the diagnosis of pedophilia ($p = .006$) and committed rape or sexual assault previous to the sexual homicide ($p = .047$; Table 5).

If a sexual homicide perpetrator was diagnosed with pedophilia, his odds of targeting a child was more than 11 times higher compared with an offender with an adult victim. Having committed a rape or sexual assault previously to the sexual homicide decreased the odds of targeting a child victim.

Discussion

For a clear distinction of sexual murderers with child victims from those with adult victims regarding a diagnosis of pedophilia, we defined a cut-off age of 11 years for the child victims and 18 years for the adult victims. The groups did not differ significantly in terms of IQ score and mean age, although the CV included a slightly higher number of juvenile offenders, a factor which might have influenced the comparison on specific age-related aspects.

Relatively high proportions of victims who were strangers to the perpetrators were found in both groups with 60% to 70%. This differed significantly from the 33% of

murders of victims who were strangers in sexually motivated homicides documented in German criminal records from 1988 to 2005 (Bundesministerium des Innern & Justiz, 2006). In the Firestone, Bradford, Greenberg, Larose, and Curry (1998b) study, sexually motivated murderers of children chose unknown victims more often than child molesters. This can be interpreted to mean that sexual assault was the main motivation of the contact.

As expected, we identified higher rates of pedophilia in the child victim group. However, this pedophilia was not diagnosed in the majority of individuals in this group. In addition, alcohol abuse and dependency was more prevalent in the adult victim group similar to the rapist group, according to Craissati and Beech's (2004) comparison of rapists versus child molesters. Sexual dysfunctions were found more frequently in adult murderers, possibly due to the higher rates of alcohol abuse and drug dependency and the lower proportion of juvenile offenders in this group. In general, distribution of psychiatric disorders was dissimilar from those distinguishing child molesters from rapists. Whereas rapists were diagnosed more frequently with antisocial PD, antisocial lifestyle, and sexual sadism (Craissati & Beech, 2004; Firestone, Bradford, Greenberg, & Larose, 1998a, Firestone, Bradford, Greenberg, & Serran, 2000b) and showed higher PCL-R mean scores (Firestone, Bradford, Greenberg, & Larose, 1998a; Rice & Harris, 1997; Seto & Barbaree, 1999), we found—against our hypothesis—a very similar and relatively high proportion of antisocial PD of about 25%. Sexual sadism and a similar PCL-R mean score was found in both groups. The differences between individuals who sexually abused children to those who committed a sexually motivated murder of a child is mentioned in the study by Firestone, Bradford, Greenberg, Larose, and Curry (1998b), where homicidal child molesters had a more violent and antisocial personality, a fact supported by higher scores in the Pedophile Assault Index. In addition, sexually motivated murderers of children were found to have a higher prevalence of sadistic PD compared with nonhomicidal child molesters.

In this sample, it was found that offenders with child victims were less likely to be in a relationship. This finding has also been reported in comparisons of child molesters and rapists (Craissati & Beech, 2004; Hudson & Ward, 1997; Quinsey et al., 1995). Sexually motivated murderers with child victims were also more likely to suffer stress related to social isolation before committing sex crimes. The CV group was more likely to masturbate to homicidal fantasies and generally had a lack of sexual experience. The higher proportion of juveniles in the child victim group might have influenced these results, as Habermann found less sexual experience for juvenile sexual homicide perpetrators, although earlier development of masturbation with homicidal fantasies compared with adult sexual murderers in the same sample was noted (Habermann, 2008, p. 152). In addition, offenders with child victims were more likely to admit to compulsive masturbation, a characteristic which might be related to an obsessive-compulsive aspect discussed in correlation with the paraphilic child molestation act (Bogaerts, Daalder, Vanheule, Desmet, & Leeuw, 2008).

According to the literature, child abusers generally demonstrated a higher prevalence of being victims of sexual abuse themselves in childhood (Bard et al., 1987; Craissati & Beech, 2004). However, like in the sample of Dhawan and Marshall (1996), no difference was found in terms of childhood sexual abuse experiences in our sample. About one quarter of the individuals in both groups were found to have suffered sexual abuse, and the majority of offenders in both groups had suffered physical abuse. The reason why an adult perpetrator chooses to murder a child in a sexual context rather than an adult cannot be determined by personal childhood sexual or physical abuse. It is more likely that childhood trauma and antisocial PD, in combination with the advent of pedophilia, results in a predisposition to commit this type of crime. The experience of physical and sexual abuse and neglect in childhood increases the risk for committing violent offenses (Hosser, Raddatz, & Windzio, 2007; Rivera & Widom, 1990), as do antisocial and psychopathic characteristics (Gretton, Hare, & Catchpole, 2004) which can result in a complete lack of empathy. These developmental and PDs were found in the majority of both groups and a distinction could not be established. However, this similarity might also be the result of insufficient evaluation of frequency and duration of the particular experience.

Like the Hudson and Ward (1997) study, comparing rapists to child abusers, higher levels of alcohol abuse during the index offense were found in the adult victim group. Moreover, more evidence was found that masturbation was often part of the sexual assault in the sexually motivated murder of a child, which could be due to the fact that sexual intercourse is more difficult with a child than with an adult. While rapists tend to use more excessive physical violence and weapons against their victims than child molesters (Bard et al., 1987; Craissati & Beech, 2004), we found similar rates (about 20%) of immediate antecedent aggressive behavior in both groups in our sample. These similarities once again demonstrate that for any sexual homicide, a similar level of aggression and antisociality is necessary, whether the victim is a child or an adult. The main difference between the two homicide offender groups is not the level of aggression and antisociality but their paraphilic preference.

The child victim group demonstrated a higher rate of offending without previous provocation and of deliberately carrying out their sexual offense. A likely explanation can be a higher paraphilic, that is, pedophilic, desire found among sexually motivated killers who target children. Impulsive actions and revenge were found to be motivating factors for the adult group in cases of sexual homicide.

We found narcissistic PD more often in the AV group. Chronic self-absorption might make these offenders more likely to attribute sexual rejection to personal rather than situational factors (Baumeister, Catanese, & Wallace, 2002).

A clear distinction between groups could be established in terms of criminal histories. As Firestone, Bradford, Greenberg, and Larose (1998a), Rice and Harris (1997), and Oliver et al. (2007) found, child molesters were less likely to have committed violent crimes but were more likely to have committed previous sexual offenses when compared with rapists. We could confirm these results for the CV compared

with the AV group, as early preference of the victim's age group is similar to rapists and child molesters.

Particularly remarkable are the almost identical results of all standardized risk assessment instruments. The homogeneity reflected by HCR-20, SVR-20, and Static-99 in total scores and risk categories demonstrates that sexual homicide perpetrators are a very distinctive type of offender. The vast majority in both groups showed a middle to high risk of reoffending in SVR-20 and Static-99, a finding supported by the actual recidivism rates found in this study. About 22% of both offender groups committed a new sexual offense within 20 years of their initial offense. Therefore, earlier study results with higher sexual recidivism rates (Hanson & Bussiere, 1998) and nonsexual or violent offences (Prentky et al., 1997; Rice & Harris, 1997) for rapists compared with child molesters could not be established in our sample of sexual murderers with adult or child victims. Perpetrators with child victims reoffended at similar rates as those in the AV group, although more individuals in the CV group were detained in forensic psychiatric hospitals. This indicates that sexual homicide perpetrators had been evaluated—either by court or forensic expert—as more troubled and less responsible for their actions. Accordingly, a diagnosis of paraphilia, in particular pedophilia, frequently resulted in being sentenced to treatment at a forensic institution rather than incarcerated but resulted in no difference in terms of recidivism rates. Contrary to public opinion, the choice of victim, whether adult or child, does not change actual recidivism rates. However, our findings confirm the public opinion that sexually motivated murderers of children are more likely to suffer from severe mental disorders.

Conclusions

In this sample, sexual murderers with adult or child victims show more diagnostic similarities than differences, antisocial PD and sexual sadism being among the most frequently diagnosed disorders. As expected, the groups differ most significantly in the diagnosis of pedophilia, with sexually motivated murderers of children showing a higher rate of pedophilia. In terms of criminal history, both groups tended to have criminal charges and convictions previous to the sexual homicide. However, the CV group demonstrated more sexual offenses against children and less violent offenses. Overall, however, sexual murderers with child victims show more similarities to murders in general than samples of child sexual abusers (e.g., few anxious [avoidant] PD, obsessive-compulsive PD, depressive PD or social phobia). The entire group of sexual homicide perpetrators in this sample had a high prevalence of violence and high rates of recidivism, which can be seen from the risk assessment scores. Noticeably, the offenders in the CV group were more likely to be detained in forensic psychiatric hospitals, meaning they were determined to be more mentally troubled and less responsible for their actions than those individuals with adult victims. Because of this, similarities in terms of recidivism rates in both groups can be interpreted as being an effect of the differing detention strategies: In a forensic psychiatric hospital, the

patients receives more treatment and release will only be considered if the risk of recidivism is considered low enough.

Recommendations for Future Research

This study primarily compares sexually motivated murderer's choice of adult versus child victims. Research on sexually motivated crimes has increased significantly in the last few years, but research and findings of subgroups within this category of murderers is still limited and relatively rare. With the purpose of determining motivating factors differentiating sexually motivated murderers of children from sexually motivated murders of adults, this study can be seen as a basis on which further research and examination can be conducted. Further studies are required to compare these results to other populations, particularly offenders from other countries and institutions. To increase the significance of these results, the implementation of control groups is recommended: for example, sexual murderers with adult victims compared with rapists, sexual murderers with child victims compared with child molesters, and the like.

Limitations

All information about the characteristics of sexually motivated murderers of adult and child victims was derived from retrospective evaluation of forensic psychiatric court reports. Although these reports contained extensive and detailed information, they were not written uniformly and provide no guarantee that the forensic psychiatrists paid sufficient attention to all the issues addressed in this study at the time. Follow-up information was restricted to data from German federal criminal records; thus, recidivism rates were based only on rates of reconviction. In addition, it should be taken into account that some diagnoses of PDs showed only modest interrater reliabilities. The study had no control group consisting of nonhomicidal sex offenders. Due to a small sample size, we did not analyze a third group of offenders who targeted both child and adult victims. The sample may not be fully representative of sexual murderers in Germany or other countries. However, recruiting reports from four German forensic centers and the relatively large sample size do provide some confidence that the results are not merely due to any selection bias. Furthermore, this investigation has the largest published sample size of sexual homicide offenders, allowing us to compare sexually motivated murders with exclusively child victims with those with only adult victims for the first time.

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The authors declared no potential conflicts of interest with respect to the authorship and/or publication of this article.

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Note

1. This lack of data can be due to different reasons: A federal criminal record file is deleted 1 year after the person has died or reached the age of 90 years or after defined periods if the offender was sentenced to a limited detention in prison (after 15 years, for any sentence of more than 1 year; after 20 years, for any sentence involving hands-on sexual offences) and was not reconvicted for a new offence.

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