An unresolved but clinically important issue in the literature on juvenile delinquency is to what extent juvenile sex offenders resemble non-sex offenders with respect to individual, familial, and environmental characteristics. The current article reviewed published studies (1995-2005) comparing sex offenders with non-sex offenders. The 17 articles meeting the inclusion criteria suggest that differences exist between sex offenders and non-sex offenders on personality characteristics, behavioral problems, history of sexual abuse, nonsexual offending, and peer functioning. Inconsistent results were found for demographic factors, family functioning and background, antisocial attitudes, and intellectual and neurological functioning. Although it is likely that sex offenders can be differentiated from non-sex offenders on a number of characteristics, caution is warranted because of methodological differences between studies and small samples size. Also, studies show that sex offenders are a heterogeneous group. Further research should take into account this heterogeneity by including sex offenders from clearly circumscribed groups and investigating characteristics specifically related to sexual behavior.

Key words: comparative study; review; juvenile sex offenders; juvenile non-sex offenders
IN THE 1970s AND 1980s, when society became aware that juveniles were capable of committing impermissible sex offenses, the scientific and clinical interest in sexually delinquent behavior of juveniles began and has since then increased steadily. To curb sex offenses, a number of specific treatment programs were developed. Before this time, juvenile sex offenders had been either referred to traditional counseling programs (Ryan, 1998) or, frequently, were given no treatment because of the prevailing idea that sexual and abusive behavior by juveniles is harmless (Ryan, 1999). Until now, a crucial problem in the development of targeted treatment programs for juvenile sex offenders has been the lack of insight in the specific characteristics of these offenders. An important issue in that respect is whether treatment programs should be different for sex offenders than for non-sex offenders. This issue has remained unresolved because earlier literature reviews (Aljazireh, 1993; Becker & Hunter, 1997; Bourke & Donohue, 1996; Righthand & Welch, 2001; Vizard, Monck, & Misch, 1995; Weinrott, 1996) found only few comparative studies between sex offenders and non-sex offenders.

The interpretation of results from the few existing studies comparing juvenile sex offenders with non-sex offenders is often hampered in two ways. First, studies show that a substantial number of juvenile sex offenders also commit nonsexual offenses, making it very difficult to clearly distinguish between the two groups (e.g., Fehrenbach, Smith, Monastersky, & Deisher, 1986; Ryan, Miyoshi, Metzner, Krugman, & Fryer, 1996). Butler and Seto (2002) stressed the need to take into account criminal versatility when comparing juvenile sex offenders with non-sex offenders. In their sample, sex offenders in general were found to be rather similar to non-sex offenders with respect to childhood behavioral problems, current behavioral adjustment, and antisocial attitudes and beliefs but had a lower risk for further delinquency. The subgroup of sex-only offenders—those who committed only sex offenses and no other type of offenses—had fewer childhood behavioral problems, better current adjustment, more prosocial attitudes, and a lower risk for future delinquency than did the sex offenders who also committed other delinquent acts, whereas the latter offenders resembled criminally versatile offenders.

The second obstacle to interpreting existing studies is that juvenile sex offenders constitute a heterogeneous group. Beckett (1999) stated that many studies consider youngsters who molest children (at least 4 or 5 years younger than their perpetrator) and youngsters who rape or sexually assault peers or adult women as a homogeneous group. Studies comparing juvenile child molesters with rapists have revealed differences between the two groups (e.g., Hunter, Figueredo, Malamuth, & Becker, 2003; Hunter, Hazelwood, & Slesinger, 2000), a finding that was confirmed in studies on adult sex offenders (e.g., Gudjonsson & Sigurdsson, 2000). Compared to juvenile rapists, child molesters were found to exhibit more socially inadequate behavior, to be more socially isolated (Hsu & Starzynski, 1990; van Wijk, 1999), and to have more often been victims of sexual abuse (Ford & Linney, 1995; Worling, 1995). Moreover, although child molesters more often exhibited internalizing problems, juvenile rapists had higher levels of externalizing problem behavior (Becker & Hunter, 1997; Carpenter, Peed, & Eastman, 1995; Katz, 1990). With respect to outcome, studies on adult sex offenders have found that rapists reoffended more frequently with nonsexual crimes than do child molesters (Hanson & Bussière, 1998; Quinsey, Rice, & Harris, 1995). As a result,
because specific types of sex offenders may have specific individual and familial characteristics, differences between groups should be taken into account when interpreting research results.

Because it remains unclear whether juvenile sex offenders differ from non-sex offenders with respect to non-offense-related characteristics, the aim of the current article is to review studies comparing both groups on a wide range of individual, familial, and environmental characteristics. In addition, because the heterogeneity of juvenile sex offenders is of both clinical and scientific importance, the focus will be on distinct groups of sex offenders.

**METHOD**

To retrieve relevant articles, electronic databases (Medline and PsycInfo) were searched for combinations of the following key words: juvenile sex offenders (415 Medline and 36 PsycInfo hits, respectively), adolescent sex offenders (407 and 55 hits), young sex offenders (60 and 7 hits), comparative studies AND sexual offending (23 and 0 hits), comparative studies AND juvenile offending (60 and 0 hits), juvenile sex AND non-sex offenders (8 and 2 hits). Each reference and abstract on these lists was checked to determine whether or not a study had the required design. Recent research articles published in peer-reviewed journals (publication date from 1995 until 2005) having the following characteristics were eligible for inclusion:

- A clear comparison of sex offenders and non-sex offenders was presented.
- The lower age range of the participants was younger than 21 years.
- Because it was expected that studies on sexually offending females would be extremely rare, only studies on males were included.
- Assessment was done by means of standardized instruments and/or a systematic analysis of official (police, judicial, health care) records.
- The sample included at least 30 sex offenders and 30 non-sex offenders.

No limitations were imposed on the nature of characteristics compared or the type of (sex) offenses participants had committed. Studies focusing specifically on the evaluation of treatment programs were not included.

To present a systematic description of the results, sample characteristics will be discussed first, followed by a comparison of both groups of offenders on the following factors: demographics, family characteristics (family functioning, parental characteristics), and individual characteristics (neurological or cognitive functioning, psychopathology, adjustment problems, antisocial attitudes, sexual development and functioning, criminality and risk behavior, and peer relationships).

Only statistical differences at p values of less than .05 are included. Some studies report on differences and similarities between sex offenders and non-sex offenders.

**RESULTS**

We found 17 eligible articles, all published between 1995 and 2005 (see Table 1). The mean sample size of the sex offender subgroups was relatively small: 105 (SD = 97), range 30 to 304. In 9 (53%) of the studies, offenders were considered a homogeneous group, or the authors did not differentiate the group by type of sex offense. The sex offender populations consisted predominantly (16; 94%) of incarcerated or adjudicated juveniles who were referred to diagnostic and treatment centers. In contrast to the sex offenders, the mean sample size of the non-sex offender groups was large: 513 (SD = 1,374), range 38 to 5,778. The nature of the offenses was defined (i.e., violent, aggressive, property related) in only 6 studies (35%).

All but 3 (18%) studies used a cross-sectional design. Exceptions were 2 studies (Hagan, Gust-Brey, Cho, & Dow, 2001; Sipe, Jensen, & Everett, 1998) in which juvenile offenders were continually followed into adulthood and one
<table>
<thead>
<tr>
<th>Study</th>
<th>Sex Offenders (n)</th>
<th>Non-Sex Offenders (n)</th>
<th>Population</th>
<th>Research Design</th>
<th>Method</th>
<th>Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bischof, Stith, and Whitney (1995)</td>
<td>39 sex offenders (child molesters)</td>
<td>25 violent and 41 nonviolent offenders</td>
<td>Juveniles in various outpatient and residential programs</td>
<td>Cross-sectional</td>
<td>Questionnaires and tests</td>
<td>FES</td>
</tr>
<tr>
<td>Butler and Seto (2002)</td>
<td>32 sex offenders (20 only sex offenses; 12 sex plus)</td>
<td>48 versatile offenders; 34 nonaggressive offenders</td>
<td>Consecutive referred to court clinic for mental health assessment</td>
<td>Cross-sectional</td>
<td>File materials; interviews with boys and parents</td>
<td>YO-LSI, YSR, CSS</td>
</tr>
<tr>
<td>Daleiden, Kaufman, Hilliker, and O'Neil (1998)</td>
<td>302 sex offenders</td>
<td>124 non-sex offenders and 135 nonoffenders</td>
<td>Incarcerated adolescents (10-20 years)</td>
<td>Cross-sectional</td>
<td>Questionnaires</td>
<td>SHF, SFQ</td>
</tr>
<tr>
<td>Ford and Linney (1995)</td>
<td>14 rapists, 21 child molesters</td>
<td>26 violent and 21 status offenders</td>
<td>Adjudicated or incarcerated youths in state operated facilities</td>
<td>Cross-sectional</td>
<td>Interview, files, and questionnaires</td>
<td>CTS, CABS, FIRO-B, PHCSC</td>
</tr>
<tr>
<td>Hagan, Gust-Brey, Cho, and Dow (2001)</td>
<td>50 rapists, 50 child molesters</td>
<td>50 non-sex offenders</td>
<td>Youths placed in a correctional facility</td>
<td>Longitudinal (only for sex offenders); non-sex offenders were randomly selected</td>
<td>Official records</td>
<td>Not used</td>
</tr>
<tr>
<td>Jonson-Reid and Way (2001)</td>
<td>304 sex offenders</td>
<td>3,091 violent and 2,687 nonviolent offenders</td>
<td>Incarcerated juveniles</td>
<td>Cross-sectional</td>
<td>File research or administrative data</td>
<td>Official records; interviews</td>
</tr>
<tr>
<td>Lindsey, Carlozzi, and Eells (2001)</td>
<td>46 sex offenders (mix)</td>
<td>48 non-sex offenders</td>
<td>Consecutive referrals to a assessment or treatment center</td>
<td>Cross-sectional</td>
<td>Official records; interviews</td>
<td></td>
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<tr>
<td>Study</td>
<td>Sample Characteristics</td>
<td>Treatment Programs</td>
<td>Study Design</td>
<td>Instrumentation</td>
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<tr>
<td>Miner and Munns (2005)</td>
<td>78 sex offenders (majority child molesters)</td>
<td>Outpatient and inpatient treatment programs for sex offenders; a stratified sample of nonviolent males</td>
<td>Cross-sectional</td>
<td>Structured interview</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Racey, Lopez, and Schneider (2000)</td>
<td>36 sex offenders (mix)</td>
<td>Incarcerated (most of the non-sex offenders)</td>
<td>Cross-sectional</td>
<td>Tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sipe, Jensen, and Everett (1998)</td>
<td>164 nonviolent sex offenders (majority child molesters)</td>
<td>Adjudicated juveniles</td>
<td>Longitudinal</td>
<td>Official records</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spaccarelli, Bowden, Coatsworth, and Kim (1997)</td>
<td>50 sex offenders (24 arrested, 26 self-report)</td>
<td>Incarcerated juveniles</td>
<td>Cross-sectional</td>
<td>Self-administered interview; official records</td>
<td></td>
<td></td>
</tr>
<tr>
<td>van Wijk, van Horn, Bullens, Bijleveld, and Doreleijers (2005)</td>
<td>57 sexual assaulters, 55 child molesters</td>
<td>Referred to a institute for psychological evaluation</td>
<td>Cross-sectional</td>
<td>Tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>van Wijk, Loeb, et al. (2005)</td>
<td>39 violent sex offenders</td>
<td>Boys in grades 1, 4, and 7 of public schools</td>
<td>Prospective; longitudinal</td>
<td>Official records; tests; interviews with parents, boys and teachers</td>
<td></td>
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</tr>
</tbody>
</table>

NOTE: FES = Family Environment Scale; SAEQ = Sexual Abuse Exposure Questionnaire; BIDR = Balanced Inventory of Desirable Responding; YO-LSI = Young Offender-Level of Service Inventory; CSS = Criminal Sentiments Scale; SHF = Sexual History Form; SFQ = Sexual Fantasy Questionnaire; CTS = Conflict Tactics Scale; CABS = Children’s Assertive Behavior Scale; FIRO-B = Fundamental Interpersonal Relations Orientation-Behavior Questionnaire; PHCSC = Piers-Harris Children’s Self-Concept Scale; WAIS-R = Wechsler Adult Intelligence Scale-Revised; WISC-R = Wechsler Intelligence Scale for Children; WRAT-R = Wide Range Achievement Test-Revised; WRAT-3 = Wide Range Achievement Test-3; MMPI-A = Minnesota Multiphasic Personality Inventory-Adolescent; MMPI-2 = Minnesota Multiphasic Personality Inventory-2; PCL-R = Psychopathy Checklist-Revised; IPT-15 = Interpersonal Perception Task-15; WRAT-III = Wide Range Achievement Test-III; RFES = Receptive Facial Expressions Subtest; RoHi = Rating of Heterosexual Interactions; SoHi = Survey of Heterosexual Interactions; CDS = Cognitive Distortion Scale; SKQ = Sexual Knowledge Questionnaire; ATPSA = Attitudes toward physical and sexual aggression; CDI = Children’s Depression Inventory; RCMAS = Revised Children’s Manifest Anxiety Scale; TSC = Trauma Symptoms Checklist for Children; SRD = Self-reported Delinquency Instrument; CBCL = Child Behavior Checklist; TRF = Teacher Report Form.
longitudinal study in which juvenile sex offenders were followed within a normal population sample (van Wijk, Loeber, et al., 2005). Structured interview methods, questionnaires, or psychological tests were most frequently used for collecting information. Nearly one fourth of the studies relied exclusively on clinical or judicial file information (4, 24%), in 7 (41%) only questionnaires or tests were used, whereas a combination of methods was applied in 6 (35%). The Youth Self-Report was used most often (3 studies; Achenbach, 1991). Two (12%) studies applied a multi-informant (parents and offenders) design for obtaining information, whereas all other studies relied uniquely on information provided by the juveniles or their parents or teachers.

Ten articles reported on demographic factors (Table 2). Three of them described sex offenders as being significantly younger than non-sex offenders (Bischof, Stith, & Whitney, 1995; van Wijk, van Horn, Bullens, Bijleveld, & Doreleijers, 2005; van Wijk, Vreugdenhil, & Bullens, 2004), whereas another 3 found sex offenders to be older (Jacobs, Kennedy, & Meyer, 1997; Jonson-Reid & Way, 2001; van Wijk, Loeber, et al., 2005). Four studies did not find differences with regard to age (Burton, Miller, & Shill, 2002; Butler & Seto, 2002; Ford & Linney, 1995; Veneziano, Veneziano, LeGrand, & Richards, 2004). Of the 5 studies reporting on ethnicity, 2 studies found Caucasians to be more prevalent in the group of sex offenders (Veneziano et al., 2004; van Wijk, van Horn, et al., 2005). In the remaining 3 studies, no differences were found between groups on race (Bischof et al., 1995; van Wijk et al., 2004; van Wijk, Loeber, et al., 2005). With regard to family socioeconomic status, parental employment, and educational status, 4 studies did not find differences between sex offenders and non-sex offenders (Bischof et al., 1995; Butler & Seto, 2002; Ford & Linney, 1995; van Wijk, Loeber, et al., 2005). One study (van Wijk, Loeber, et al., 2005), investigating a range of demographic variables, found several to be similar between sex offenders and non-sex offenders (family on welfare, broken family, small house), whereas other variables differed between groups (bad neighborhood, older, poor housing, young mother, poorly educated mother).

Although information about family functioning and background were reported in 6 studies (Table 3), the diversity of the family variables included did not allow systematic comparison. At first glance, the similarities seem to outnumber the differences. Intrafamilial violence or the witnessing of intrafamilial violence was described in 3 studies, with 2 describing a higher frequency of exposure to violence in sex offenders (Ford & Linney, 1995; Spaccarrelli, Bowden, Coatsworth, & Kim, 1997), whereas 1 study did not find differences on this characteristic (Spaccarrelli et al., 1997). Two studies reported on criminal and mental health problems of the parents and found these characteristics to be

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**TABLE 2: Demographic Factors**

<table>
<thead>
<tr>
<th>Studies</th>
<th>Differences (Sex Offenders Versus Non-Sex Offenders)^a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bischof, Stith, and Whitney (1995)</td>
<td>Race, parental employment</td>
</tr>
<tr>
<td>Butler and Seto (2002)</td>
<td>Age, grade, socioeconomic status (SES)</td>
</tr>
<tr>
<td>Burton, Miller, and Shill (2002)</td>
<td>Age</td>
</tr>
<tr>
<td>Ford and Linney (1995)</td>
<td>Age, educational status</td>
</tr>
<tr>
<td>Jacobs, Kennedy, and Meyer (1997)</td>
<td></td>
</tr>
<tr>
<td>Jonson-Reid &amp; Way (2001)</td>
<td></td>
</tr>
<tr>
<td>van Wijk, Vreugdenhil, and Bullens (2004)</td>
<td>Race, living in family</td>
</tr>
<tr>
<td>van Wijk, van Horn, Bullens, Bijleveld, and Doreleijers (2005)</td>
<td>Low SES, race, family on welfare, broken family, small house</td>
</tr>
<tr>
<td>van Wijk, Loeber, et al. (2005)</td>
<td></td>
</tr>
</tbody>
</table>

^a. Statistically significant is p < .05.
similar between the sex offender and the non-sex offender groups (van Wijk et al., 2004; van Wijk, Loeber, et al., 2005).

Eight studies reported data on intellectual and neurological functioning (Table 4), with inconsistent results. Some studies found no differences regarding IQ, special school attendance, or neurological problems (Butler & Seto, 2002; Ford & Linney, 1995; Jacobs et al., 1997; Veneziano et al., 2004; van Wijk et al., 2004; van Wijk, van Horn, et al., 2005), whereas others reported differences between sex offenders and non-sex offenders on some of these aspects (Butler & Seto, 2002; Jonson-Reid & Way, 2001; Veneziano et al., 2004; van Wijk, van Horn, et al., 2005; van Wijk, Loeber, et al., 2005).

Eight articles reported on personality characteristics and behavioral problems among the juveniles (Table 5). In 5 studies, the authors stated that sex offenders were likely to have personality and behavioral problems (Ford & Linney, 1995; Jacobs et al., 1997; Jonson-Reid & Way, 2001; Spaccarelli, Bowden, Coatsworth, and Kim, 1997; Van Wijk, Vreugdenhil, and Bullens, 2004; Van Wijk, Loeber, et al., 2005).
Three studies found that sex offenders had fewer personality and behavioral problems than non-sex offenders (Butler & Seto, 2002; van Wijk et al., 2004; van Wijk, Loeber, et al., 2005). In 7 studies, no differences emerged between both groups with regard to personality and behavioral problems (Butler & Seto, 2002; Ford & Linney, 1995; Jacobs et al., 1997; Spaccarelli et al., 1997; van Wijk, van Horn, et al., 2005).

Four studies reported sex offenders to be similar to non-sex offenders in (antisocial) attitudes (Butler & Seto, 2002; Miner & Munns, 2005; van Wijk, Loeber, et al., 2005), whereas one study (Spaccarelli et al., 1997) found that sex offenders had a greater tendency toward sexually and physically aggressive attitudes than did mildly violent offenders (Table 6). No such differences...
appeared when sex offenders were compared to severely violent offenders. Although Butler and Seto (2002) found sex offenders and non-sex offenders to be similar, sex-only offenders were described as having more prosocial attitudes and beliefs compared to sex offenders who also perpetrated nonsex offenses as well.

Nine articles reported on the prevalence of sexual abuse and the sexual development and functioning of sex offenders and non-sex offenders (Table 7). In 4 studies, sex offenders were more likely than were non-sex offenders to have been sexually abused (Burton et al., 2002; Ford & Linney, 1995; Jonson-Reid & Way, 2001; Veneziano et al., 2004), whereas 2 studies did not find such a difference (Spaccarelli et al., 1997; van Wijk, Loeber, et al., 2005). With regard to sexual development and functioning, 2 studies (Daleiden, Kaufman, Hilliker, & O’Neil, 1998; Ford & Linney, 1995) found that sex offenders were more emotionally disturbed (e.g., more deviant sexual fantasies, fewer consenting sexual experiences, exposure to pornographic materials) compared to non-sex offenders, whereas one study found no differences with regard to atypical sexual experiences and fantasies (Daleiden et al., 1998), and still another found fewer cognitive distortions among sex offenders (Racey, Lopez, & Schneider, 2000). van Wijk, Loeber, et al. (2005) found that the age of first sexual intercourse and the number of female partners were similar for sex offenders and non-sex offenders.

Three studies out of 6 found a lower level of non-sexual offending in sex offenders than in non-sex offenders (Butler & Seto, 2002; Jacobs et al., 1997; Sipe et al., 1998), whereas in 3 studies, no differences

With regard to sexual development and functioning, 2 studies found that sex offenders were more emotionally disturbed (e.g., more deviant sexual fantasies, fewer consenting sexual experiences, exposure to pornographic materials) compared to non-sex offenders, whereas one study found no differences with regard to atypical sexual experiences and fantasies, and still another found fewer cognitive distortions among sex offenders.

### TABLE 7: Sexual Abuse, Development, Functioning

<table>
<thead>
<tr>
<th>Studies</th>
<th>Similarities</th>
<th>Differences (Sex Offenders Versus Non-Sex Offenders)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burton, Miller, and Shill (2002)</td>
<td></td>
<td>More sexually victimized, closer relationships with their perpetrator, more male perpetrator, longer duration of the abuse, more forceful abuse, and penetration as part of the abuse</td>
</tr>
<tr>
<td>Daleiden, Kaufman, Hilliker, and O’Neil (1998)</td>
<td>Atypical voyeuristic experiences and fewer nondeviant sexual fantasies</td>
<td>Fewer consenting sexual experiences and more involvement in nonconsenting and paraphilic behaviors; more solitary sexual acts; higher frequency of deviant and nontraditional sexual fantasies</td>
</tr>
<tr>
<td>Ford and Linney (1995)</td>
<td>X-rated movies and TV programs</td>
<td>Child molesters were more often victims of physical and sexual abuse; earlier and more frequent exposure to pornographic materials</td>
</tr>
<tr>
<td>Jonson-Reid and Way (2001)</td>
<td></td>
<td>Sexual and physical abuse more common than neglect</td>
</tr>
<tr>
<td>Lindsey, Carlozzi, and Eells (2001)</td>
<td></td>
<td>More sexual abuse and less physical abuse</td>
</tr>
<tr>
<td>Racey, Lopez, and Schneider (2000)</td>
<td>Knowledge of sexuality</td>
<td>Fewer cognitive distortions</td>
</tr>
<tr>
<td>Veneziano, Veneziano, LeGrand, and Richards (2004)</td>
<td>Sexual or physical abuse, sexual intercourse, number of female partners, age of first intercourse</td>
<td></td>
</tr>
</tbody>
</table>

a. Statistically significant is $p < .05$. 

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Six studies reported on peer functioning (Table 9). Three studies reported that sex offenders were more likely to have peer relationship problems than were non-sex offenders (Ford & Linney, 1995; Miner & Munns, 2005; Racey et al., 2000), whereas one study described the opposite (Butler & Seto, 2002). Three studies found no differences with regard to problems in peer relations (Ford &
CONCLUSION

The aim of this literature review was to compare juvenile sex offenders and non-sex offenders with respect to individual, familial, and environmental characteristics. After systematically searching relevant literature databases, we found 17 articles comparing juvenile sex offenders and non-sex offenders. The mean number of participants in the sex offender subgroups \( n = 105 \) was smaller than in the non-sex offender subgroups \( n = 513 \), and most samples were derived from incarcerated populations. A number of studies did not meet inclusion criteria, mainly because they included relatively small samples or were not considered because they were published before 1995 (e.g., Benoit & Kennedy, 1992; Epps, Haworth, & Swaffer, 1983; Fagan & Wexler, 1988; Losada-Paisey, 1998; Rubinstein, Yeager, Goodstein, & Lewis, 1993; Tarter, Hagedus, Alterman, & Katz-Garris, 1983; Truscott, 1993; Valliant & Bergeron, 1997).

Caution should be taken when interpreting the results because of large methodological differences among studies. A limitation of the studies is the existence of methodological issues that may have hampered comparisons among studies. The diagnostic instruments used in the studies were diverse, varying from widely used standardized instruments to unknown ones and including questionnaires and interviews of a specific nature. These instruments were often used for measuring similar concepts in different ways. The nature of the samples was diverse and not always well described. Although a substantial number of the juveniles came from detention centers, the homogeneity of this group is disputable because vast differences may exist among countries and even regions with respect to the judicial and rehabilitation principles for detention. As a consequence, generalization toward nontreatment samples may more be problematic. Also, only a few studies took into account confounding factors such as the earlier-described heterogeneity of the sex offender group with regard to type of sexual offending and the nonsexual offending. Nevertheless, because differences were seen between the two groups, it is likely that sex offenders are different from non-sex offenders in specific ways. However, inconsistent findings among studies, and the many similarities found between the two groups, make further research that takes into account methodological issues and possible confounding factors necessary.

Because specific risk factors may be more common in detained youth, statistical comparison may be flawed. For example, studies on psychiatric disorders in incarcerated delinquent adolescents have indicated that many show a psychiatric disorder (Vermeiren, 2003; Vreugdenhil, Doreleijers, Vermeiren, Wouters, & van den Brink, 2004). Because the prevalence of psychiatric disorders is so high, psychopathology may not be useful as a discriminative factor among subgroups of incarcerated populations. Similar statistical problems may exist for other risk factors, such as family problems or substance use. Also, possible differential judicial selection mechanisms for juvenile sex offenders and non-sex offenders and demographic differences can make comparisons difficult between these groups (see van Wijk et al., submitted).

Although it has been acknowledged that juvenile offenders constitute a heterogeneous group, only a small number of studies have differentiated among subtypes of offenders. For this reason, possible differences among subtypes of sex offenders may have remained undetected (Beckett, 1999), and differences between non-sex offenders and specific subgroups of sex offenders may have gone unnoticed. A complicating factor is that one sex offender may perpetrate different kinds of sex offenses, as was recently found in adults (Heil, Ahlmeyer, & Simons, 2003). Because child molesters may also rape adult women and rapists of adult women may also molest children, some individuals will be difficult to classify. This issue could be even more complicated in juveniles because juvenile sex offenders may be even more undifferentiated with respect to victim selection, partly because of less pronounced age differences between perpetrator and victim.

All but three studies adopted a cross-sectional research design. Although this type of
research is suitable for determining correlational relations, it does not allow for detecting etiological factors and/or developmental patterns of problem behavior.

A last limitation concerns the nature of the measured variables, namely that factors specifically related to sexuality and sex offending have only rarely been studied. Specific and possibly crucial factors that have not been compared between sex offenders and non-sex offenders are modus operandi (Hunter et al., 2000), cognitive distortions (Ward, Hudson, & Marshall, 1995; Ward, Keenan, & Hudson, 2000), the development of deviant sexual experiences and fantasies (Abel et al., 1987), and empathy (Burke, 2001; Hanson & Scott, 1995; Hudson & Ward, 2000).

Differences Between Sex Offenders and Non-Sex Offenders

The findings of this review suggest that sex offenders are more likely to display internalizing problems than are non-sex offenders. These characteristics may however prevail in a specific subgroup of sex offenders, specifically the child molesters (e.g., Hendriks & Bijleveld, 2004; Katz, 1990; van Wijk, van Horn, et al., 2005).

Future research should differentiate between participants committing only sex offenses and those who have perpetrated both sex and nonsex offenses. Some studies have found that sex-only offenders displayed fewer behavioral problems than did pervasive offenders (Butler & Seto, 2002; Kempton & Forehand, 1992). With regard to externalizing problem behavior, the findings were rather inconsistent (e.g., Freeman, Dexter-Mazza, & Hoffman, 2005). More research should be undertaken to verify the hypothesis that a violent sex offense is a manifestation of a general criminal behavioral pattern and is closely related to externalizing problem behavior, which violent sex offenders could share with non-sex offenders (Lussier, 2005).

A considerable number of the sex offenders showed a history of nonsex offending, although the rate of nonsex offending was lower than in non-sex offenders. Lower levels of antisocial tendencies can be assumed to be more present among minor delinquents compared to serious delinquents, who exhibit a wide range of antisocial acts such as nonsex offenses (e.g., Loeber & Farrington, 1998). Future research should investigate to what extent sex offenders or subgroups of sex offenders differ with respect to nonsex offending and also whether sex offenders who do not commit nonsexual offences differ from sex offenders who commit nonsexual offences and from non-sex offenders with respect to other risk factors.

Sex offenders may exhibit more problems in peer relationships than non-sex offenders, but this is based on a small number of studies. Previous research has shown that sex offenders may be less able to establish and maintain emotional relationship with others (Barbaree, Marshall, & Hudson, 1993). Several studies have indicated that social isolation is primarily a characteristic of child molesters (e.g., Ford & Linney, 1995; Hendriks & Bijleveld, 2004; Katz, 1990; van Wijk, 1999).

A consistent finding across studies was that juvenile sex offenders were more often sexually abused in their childhood than were non-sex offenders. However, not all juvenile sex offenders have a history of sexual abuse, and not all sexually abused children become offenders (Becker & Hunter, 1997). Having a history of sexual abuse may specifically be a characteristic for child molesters (Becker & Hunter, 1997; Ford & Linney, 1995; Hendriks & Bijleveld, 2004). Because the causal relationship between sexual abuse and sexual offending has not been elucidated, further research on this topic is needed.

Inconsistent Results

With regard to the demographic factors, inconsistent results were found when comparing
the age of both groups. These inconsistencies may have resulted from methodological differences between studies (e.g., the inclusion of specific groups). Some studies used demographic variables for matching samples of juvenile delinquents, which forces the age distribution to be similar. Data from one population study indicated that sex offenders were significantly older at the time of their first offense than were violent offenders (van Wijk, Loeber, et al., 2005). Several other studies (e.g., Bischof et al., 1995; Blaske, Borduin, Henggeler, & Mann, 1989; McCraw & Pegg-McNab, 1989; Oliver, Hall, & Neuhaus, 1993) found no ethnic differences between sex offending and nonsex offending groups, whereas another study (van Wijk et al., 2003) revealed that Caucasians were more common among the sex offender group and that ethnic minorities were overrepresented in the group of violent sex offenders (van Wijk, Mali, Bullens, Prins, & Klerks, 2006). According to Murphy, DiLillo, Haynes, and Steere (2001), Caucasian participants tended to respond higher than African American participants on sexual arousal, a finding that further supports research on ethnic differences with respect to type of offending.

With regard to intellectual and neurological functioning, inconsistent results also prevailed. Because neurocognitive malfunctioning may be considered a general vulnerability to problem behavior (Jonson-Reid & Way, 2001; Lewis, Shanok, & Pincus, 1979), sex offenders and non-sex offenders may be expected to show deficits in this respect. However, because specific aspects of neuropsychological functioning have not been examined, potential differences between the groups may remain unknown. Veneziano et al. (2004) demonstrated that a subset of sex offenders and non-sex offenders had a pattern of frontal-executive dysfunction, whereas Guay, Ouimet, and Proulx (2005) found significant differences on intellectual levels between sex offenders and nonsex, violent offenders. Kelly, Richardson, Hunter, and Knapp (2002) found differences between sex offenders and age-matched male adolescents. Further research among different samples of juvenile offenders is therefore desirable.

This review found that family characteristics of sex offenders and non-sex offenders were difficult to compare. One interesting question is whether families of sex offenders are more inclined to cover up the problem than are families of non-sex offenders. Baker, Tabaccoff, Tornusciolo, and Eisenstadt (2003) found that families of sex offenders told more lies, had more family myths, and were more likely to be involved in taboo behavior. A consequence of this attitude may be that problems within the families of sex offenders are not well recognized, whereas these families may well be more disturbed than families of non-sex offenders. On the other hand, family characteristics may play a role in the development of offending behavior in general rather than sexual behavior in particular (e.g., Caputo, Frick, & Brodsky, 1999).

Inconsistent results were also found when comparing antisocial attitudes, which may result from the diversity of methods used to measure antisocial attitudes. Research among adult sex offenders and non-sex offenders found that the former endorsed fewer antisocial attitudes than the latter and that rapists endorsed more antisocial attitudes than did child molesters (Mills, Anderson, & Kroner, 2004).

On the basis of the current literature, clear and consistent conclusions regarding similarities and differences between sex offenders and non-sex offenders cannot be drawn. Because recognition of specific characteristics is necessary for developing targeted prevention and intervention programs, further research in this field is vital. If further research reveals significant differences among different types of sex offenders and non-sex offenders, more differentiated and effective diagnostics and treatment can be developed. Future studies should also attempt to address the methodological limitations found in much of the existing body of research.
IMPLICATIONS FOR PRACTICE, POLICY, AND RESEARCH

- Longitudinal research can explore etiological differences more in detail.
- It is important to include groups of offenders from settings other than incarcerated youths.
- To obtain comparable research results, researchers should make use of internationally accepted and standardized instruments.
- Identification of differences in future research among different types of sex offenders and non-sex offenders may lead to more adequate differentiation and treatment interventions (specific treatment needs).

REFERENCES


SUGGESTED FUTURE READINGS


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