

Prediction of Recidivism in Extrafamilial Child Molesters Based on Court Related Assessments

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Abstract

One hundred and ninety-two convicted extrafamilial child molesters were followed for an average of 7.8 years after their conviction. The percentage of men who had committed a sexual, violent or any criminal offense by the 12th year was 15.1, 20.3 and 41.6 respectively. The sexual recidivists, compared with the non recidivists, exhibited greater sexual arousal to assaultive stimuli involving children, than to mutually consenting stimuli with children and a trend towards more problems with alcohol. The violent recidivists, compared with the non recidivists, were more likely to have a history of violence in the families in which they were raised, and were rated significantly more psychopathic on the Psychopathy Checklist-Revised (PCL-R). They also showed more sexual arousal to stimuli depicting depicting coercive sexual activity with children than consenting sexual activities with children. In terms of any criminal recidivism, recidivists were younger, had completed fewer years of school, and were raised in psychologically more harmful family environments, compared with non recidivists. In addition, recidivists demonstrated more general hostility on the Buss-Durkee Hostility Inventory, and were rated significantly more psychopathic on the PCL-R. The phallometric assessments revealed the criminal recidivists, compared to the non recidivists, showed more sexual arousal to stimuli depicting coercive sexual activity with children than consenting sexual activities with children. In addition, they showed more sexual arousal to scenes depicting adult rape than adult mutually consenting sex. Finally, the recidivists also had more charges or convictions for violence and any criminal acts. For general criminal recidivism, a step-wise discriminant function analysis to assess the combination of factors that most successfully distinguished between groups in terms of criminal recidivism was significant with subjects= age, total number of criminal convictions and pedophile assault index being retained for optimal prediction. This represents a rate of improvement over chance (RIOC) of 30.86% .

Key Words: sexual offenders, child molesters, recidivism, pedophile, plethysmography

Since children are the most vulnerable members of our community, their sexual victimization is particularly distressing. Statistics reveal that 40% of females and 25% of males experience some form of sexual abuse prior to 18 years of age (Badgely, Allard, McCormick, Proudfoot, Fortin, Ogilvie, Rae-Grant, Gelinias, Pepin & Sutherland, 1984). The victim literature also suggests a large number of offenses are never reported to authorities, particularly when the victim is a child (Conte, 1991; Russell, 1983). Even if an arrest is made, plea bargaining may lead to the conviction charge being different from the actual offense, or charges for one offense may be dropped in exchange for a guilty plea on another charge (Furby, Weinrott & Blackshaw, 1989). Thus, official records of sexual offenses are certain to be gross under-representations of the actual number of crimes that are committed.

The literature confirms sexual victimization has resounding consequences, which extend beyond the persisting negative effects for victims (Briere, 1992; Russell, 1986; West, 1991), to include adverse consequences for the victim's family (Manion, McIntyre, Firestone, Ligezinska, Ensom, & Wells, 1996). In addition to the emotional damage to victims, their families and communities, these offenses also represent a major financial burden (Freeman-Longo and Knopp, 1992). The federal correctional system in Canada, which houses more serious offenders (sentences of two years and more), reported 3,875 sex offenders in their jurisdiction in 1995. Of these, approximately one-third had committed sexual offenses against non related children (Motiuk & Belcourt, 1996). The large numbers of sexual offenders and the psychological and financial consequences they pose have raised serious public policy questions concerning their management by the Canadian criminal justice system.

Recent studies have endeavored to identify variables which accurately predict recidivism for various categories of sex offenders. The hope has been that such information might lead to increased efficiency in the sentencing of offenders, assist in the development and prescription of appropriate intervention programs, and provide guidance in setting conditions of parole. The importance of such empirically based information is highlighted by the relative difficulty of clinical judgement to predict

recidivism (Hall, 1988; Hanson & Bussière, 1998; Quinsey & Maguire, 1986). Several reports based on meta-analyses have addressed methodological issues related to recidivism research and will not be detailed here (Furby, Weinrott & Blackshaw, 1989; Hanson & Bussière, 1998; Quinsey, Lalumière, Rice & Harris, 1995). It is sufficient to note that recidivism outcomes are affected by the definition of recidivism, length of follow-up, definition of relapse, population samples, and recently the presence of treatment programs.

With regards to men who sexually assault children, research has indicated incest offenders and extrafamilial child molesters (CM) should be considered independent groups (Barbaree & Marshall, 1989; Marshall, Barbaree & Eccles, 1991; Quinsey, Chaplin & Carrigan 1979). Studies that have subdivided these populations have established CM recidivate at a considerably higher rate than do incest offenders, and suggest variables predicting recidivism may differ for the groups as well (Hanson & Bussière, 1998; Hanson, Steffy & Gauthier, 1993; Quinsey, Lalumière, Rice & Harris, 1995).

The present study attempts to add to the body of literature related to recidivism in child molesters. However, there are two major differences in the design, both related to the subjects under consideration. To the authors' knowledge, this is the first investigation to exclude child molesters who have ever been charged with or convicted of incest or sexual offenses against adults. This results in a group of child molesters that are homogeneous relative to their sexual offending. Furthermore, most recidivism studies with child molesters have examined subjects who are presently incarcerated in prisons, maximum security psychiatric hospitals, or have just been released from correctional institutions. The resulting data may therefore not be representative of all child molesters coming to the attention of the courts and may not be an accurate reflection of the factors related to recidivism in more diverse or less disturbed populations of offenders. In the present investigation, 80% of the men were assessed as part of their trial or sentencing procedures. A variety of well known and validated psychological tests were used, in addition to phallometric assessments and documented police records.

It is recognized that the recidivism criteria presently utilized undoubtedly underestimate the true rate of reoffending. In the present investigation, to counter the fact that only a minority of such acts come to the attention of the criminal justice system, any charge or conviction was counted as an indication of criminal activity. Recidivism was divided into three categories in a fashion similar to Proulx, Pellerin, Paradis, McKibben, Aubut and Ouimet (1997) and Rice, Quinsey and Harris (1991). Sexual recidivism was defined as any charge or conviction for a sexual offense, after the index offense. Violent recidivism included any charge or conviction for non sexual violent, or sexual offenses. Criminal recidivism was defined as any charge or conviction noted in the Canadian Police Information Centre documentation. A cumulative hierarchy, in which each additional category subsumes that of the previous, was adopted to account for plea bargaining distortions and to allow comparison with previous recidivism research with child molesters (Proulx et al. 1997; Rice et al. 1991).

Method

Subjects

All subjects were assessed at the Royal Ottawa Hospital, Sexual Behaviors Clinic between 1982 and 1992. The 192 subjects were males, 18 years of age or older at the time of their index offense and had all been convicted of a hands on sexual offense against an unrelated male or female child who was under the age of 16 at the time of the offense. If the police records indicated a subject had ever been charged with or convicted of a sexual offense against an adult or against a family member they were not included. If there was evidence of previous sexual offenses against unrelated male or female children they were kept in the study. Eighty percent of the subjects were assessed as part of their trial or sentencing procedures.

Assessment Procedures

Sexual Functioning

The Derogatis Sexual Functioning Inventory (DSFI) is designed to assess general and specific dimensions of sexual functioning (Derogatis, 1978; 1980). The DSFI collects information using numerous items at once in order to grasp the fundamental components judged essential to effective sexual behavior (Derogatis, 1980, p.117). The 10 sub-scales are: Information, Experience, Sexual Drive, Sexual Attitude, Psychological Symptoms also known apart from the DSFI as the Brief Symptom Inventory (BSI), Affect, Gender Role Definition, Sexual Fantasy, Body Image, and Satisfaction. The Sexual Functioning Index (SFI), is scored by summing the subtest scores, providing an overall measure of an individual's level of sexual functioning. The DSFI has been used with large non forensic samples, but its use with sexual offenders is limited. Pawlak, Boulet, & Bradford (1991), using the DSFI, found that extrafamilial child molesters endorsed more Sexual Fantasy themes than did the incestuous offenders. However, incestuous offenders scored higher on Sexual Experience and Satisfaction scales. There is some suggestion that sexual offenders in general show high levels of sexual dissatisfaction (Firestone, Bradford, Greenberg, Larose & Curry, 1998 a ; Firestone, Bradford, McCoy, Greenberg, Larose & Curry, 1998 b; Firestone et al., 1999; Hanson, Cox, & Woszczyzna, 1991).

Hostility

The Buss-Durkee Hostility Inventory (BDHI) contains 75 true-false statements which provide a measure of seven constructs representing general hostility, with higher scores indicating a higher level of hostility. The BDHI consists of five assault subscales: Assault, Indirect Aggression, Irritability, Negativism, Verbal Aggression, Resentment, and Suspicion. An additional construct captured by the BDHI is Guilt, reflecting the degree of guilt feelings reported by the subject. This scale is part of the inventory but not included in the Total Score. There is a substantial body of validation evidence to support this widely used inventory (Buss & Durkee, 1957; Buss, 1961). A Total Score of 38 and above is considered high according to Buss and Durkee (1957). Among sexual offenders, BDHI scores for violent rapists have been significantly higher than those for non offending controls (Rada, Laws, & Kellner, 1976).

Alcohol Abuse

The Michigan Alcoholism Screening Test (MAST) , a 24-item self report inventory, is used to identify behaviors indicative of alcohol abuse (Selzer, 1971; Selzer, Vinokur, & van Rooijen, 1975; Gibbs, 1983). The validity and reliability of this instrument are well established (Selzer, 1971; Selzer et al., 1975). The internal consistency has a reported overall alpha coefficient of 0.87 and a validity coefficient of $r=0.79$ ($\gamma = 0.95$), and is relatively unaffected by age or denial of socially unacceptable characteristics (Magruder-Habid, Stevens, & Alling, 1993; Magruder-Habid, Durand, & Frey, 1991). Scores of five or six are considered suggestive of alcohol problems and a score of seven or more is considered strongly indicative of alcohol abuse (Allnutt, Bradford, Greenberg, & Curry, 1996). The MAST has been found to correlate with DSM III R criteria for alcohol dependence (Magruder-Habid et al., 1993). The MAST has been extensively used as a screening tool for alcoholism, and many studies have utilized samples of sex offenders (e.g., Allnutt et al., 1996; Firestone et al., 1998a,b; Hucker, Langevin, & Bain, 1988; Rada, 1975; Rada et al., 1976).

Psychopathy

The Psychopathy Checklist-Revised (PCL-R) consists of 20 clinical rating scales, with a range of 0 to 2, designed to assess behaviors and personality characteristics considered fundamental to psychopathy (Hare, 1991). Rigorous testing has indicated that the PCL-R is a psychometrically sound instrument; the reported alpha coefficient, aggregated across seven samples of incarcerated males from Canada, the U.S. and England was .87 (Hare, Forth, & Strachan, 1992). Valid PCL-R ratings can be made on the basis of high quality archival information (Harris, Rice, & Quinsey, 1994; Quinsey, Rice, & Harris, 1995). The PCL-R is beginning to receive widespread use in sex offender research (Quinsey et al., 1995a ; Serin, Malcolm, Khanna, & Barbaree, 1994). The existence of two factors was replicated using various samples: 1) the degree of personality, interpersonal, and affective traits deemed significant to the construct of psychopathy; and 2) the degree of antisocial behavior, unstable and corrupted lifestyle (Hare, Harpur,

Hakstian, Forth, Hart, & Newman, 1990). Hare et al. (1990), using five prison samples (N=925) and three forensic samples (N=356), found the correlation between the two factors averaged .48. Previous studies have found the interrater reliability and internal consistency of both factors to be high despite the small number of items per factors (Hare et al., 1990; Hare, 1991).

In the present investigation, the PCL-R was completed from descriptive material contained in institutional files by two research assistants. A random sample of 100 clinic files were independently rated by each researcher, resulting in satisfactory interrater reliability correlation $r = .88$, $p < .0001$.

Cognition Scale

The Cognition Scale, which was designed for use with adult child molesters, is composed of 29 statements which reflect values about adult sexual contact with children. Factor analysis has indicated that the Cognition Scale is unidimensional (Abel, Gore, Holland, Camp, Becker, & Rathner, 1989; Hanson, 1994). Scores range from 1 to 5 and lower scores indicate a greater degree of permissiveness toward adult sexual contact with children (i.e., deviation). This scale has demonstrated good discriminant validity, in that groups of child molesters have been distinguished from non offending controls (Hanson, 1994; Stermac & Segal, 1989). Reliability has also been adequately demonstrated, with an alpha coefficient of .92 reported for internal consistency (Hanson, 1994). A Pearson product-moment coefficient of .76 indicates good test-retest reliability (Abel et al., 1989).

Measurement of Sexual Arousal

Changes in penile circumference in response to audio/visual stimuli were measured by means of an Indium-Gallium strain gauge and processed in an IBM compatible computer for storage and printout.

Stimuli Presentation: The order of stimulus presentation was held constant for all subjects and was computer controlled. Subjects were presented with one or more of three series of audiotapes, according to the nature of the subject's sexual offense. The audiotapes consisted of 120 second vignettes which described sexual activities varying in age, gender, and degree of consent, coercion and/or violence

portrayed (Abel, Blanchard, & Barlow, 1981). Each subject was presented with a full set containing one vignette from each category following instructions to allow normal arousal to occur. The female child series consisted of descriptions of sexual activity with a female partner/victim for eight categories. The male child series consisted of eight corresponding vignettes involving a male partner/victim but also included one scenario involving an adult female partner. For each of the female child and male child series, two equivalent scenarios for each category were included. Categories were: (a) child initiates, (b) child mutual, (c) non physical coercion of child, (d) physical coercion of child, (e) sadistic sex with child, (f) non sexual assault of child, (g) consenting sex with female adult, and (h) sex with female child relative (incest). The audiotape series used to identify sexual attraction to rape included two scenarios of two-minute duration for each of three categories: (a) consenting sex with adult female, (b) rape of adult female, (c) non sexual assault of adult female.

Scoring: The Pedophile Index was computed by dividing the highest response to the child initiates or child mutual stimulus by the highest response to an adult consenting stimulus. The Pedophile Assault Index was computed by dividing the highest response to an assault stimulus involving a child victim (non physical coercion of child, physical coercion of child, sadistic sex with child, or non sexual assault of child) by the highest response of the child initiates or child mutual stimulus. The Rape Index was computed by dividing the response to the rape stimulus by the response to the adult consenting stimulus. The Assault Index was computed by dividing the response to a non sexual assault stimulus by the response to the adult consenting stimulus.

Criminal Offense History

Offense information was gathered from the Canadian Police Information Center (CPIC) a national data base of criminal arrests and convictions including INTERPOL reports from the Royal Canadian Mounted Police. In order for an offender to be considered eligible to reoffend, he must have been free to commit a crime; he could not have been incarcerated or in secure custody for reasons of mental illness.

Treatment of Data

Prior to performing statistical tests, the data were screened to ensure assumptions underlying tests were not violated. Outlying cases were detected by using a criterion of plus or minus three standard deviations from the mean, or by visual inspection of normal probability plots. Values of outlying cases were adjusted upwards or downwards according to the direction of the problem. This method is appropriate when case retention is desirable and does not unduly influence the group mean (Tabachnick & Fidell, 1989).

Results

The follow-up period for the population of child molesters ranged up to 12 years after the conviction for the index offense with an average of 7.8 (SD = 3.7) years. Figure 1 describes the survival rates of the CM. The percentage of men who had committed a sexual, violent or criminal offense by the 12th year was 15.1, 20.3 and 41.6, respectively. As revealed in the figure, by the end of the 5th year, recidivism rates for sexual, violent and any criminal acts were approximately 9.4%, 14.1% and 30.7%, respectively.

Sexual Recidivism

As indicated in Table 1, none of the differences in demographic, self reported or file gathered characteristics achieved statistical significance. The analyses of the psychological test scores (Table 2) revealed a trend suggesting that recidivists rated themselves significantly higher than the non recidivists on the MAST (13.2 vs. 7.0, respectively). The only other significant finding was in the phallometric assessments (Table 3) on which the sexual recidivists had a higher mean Pedophile Assault Index than the non recidivists, indicating that they had higher responses to assault stimuli involving children than to mutually consenting stimuli involving children (PAI; 1.0 vs. .7).

Violent Recidivism

As indicated in Table 1, the only variable discriminating between the groups was the Family History of Violence, on which 56.3% of the recidivists and only 35% of non recidivists had such a history. Table 2 reports on psychological test results, and reveals that recidivists, compared to non recidivists, were rated higher on Factor 1, Factor 2 and the Total Score of the Psychopathy Checklist-Revised (means of 9.7 vs. 8.3, 9.6 vs. 7.3 vs. 21.1 vs. 17.6, respectively). The analyses of phallometric responses (Table 3) indicated only on the Pedophile Assault Index was there a significant difference, with recidivists showing more arousal to coercive child stimuli compared to consenting child stimuli, than non recidivists (1.1 vs. .7).

Criminal Recidivism

Table 1 revealed that for any new criminal charges or convictions, recidivists compared to non recidivists, were significantly younger (34.0 yrs. vs. 39.0 yrs.), and had completed fewer years of school (grade 10.0 vs. grade 11.6). Recidivists, compared to non recidivists, reported higher incidences for History of Drug Abuse (43.2% vs. 19.8%), Family History of Violence (53.2% vs. 29.9%), and Physical Abuse <16 (46.2% vs. 26.7%).

The psychological tests scores described in Table 2 indicated that on the DSFI, the recidivists, compared to the non recidivists, rated themselves as having less knowledge about sexual functioning (Information - 35.8 vs. 40.3 respectively). On the BDHI the recidivists reported they are more willing or likely to use physical violence (Assault 4.2 vs. 2.8), are more likely to express negative feelings in content and style, e.g., shouting (Verbal Aggression 7.1 vs. 5.9), are generally more resentful about the way the world has treated them (Resentment 3.6 vs. 2.9), and perceive hostility in others (Suspicion 5.1 vs. 4.0). They also have a higher Total Score (31.3 vs. 25.6). There were no differences on Abel=s Cognition Scale, but the recidivists rated themselves higher on the Michigan Alcohol Screening Test (11.6 vs. 5.6). On the PCL-R the recidivists, compared with the non recidivists, were rated higher on Factor 1 (9.6 vs. 7.8), Factor 2 (10.3 vs. 5.4), and on the Total Score (22.1 vs. 15.6).

As indicated in Table 3 the phallometric responses revealed that the recidivists showed higher sexual arousal than the non recidivists to child assault stimuli than to child mutual stimuli (Pedophile Assault Index .9 vs. .7) and to adult rape than adult mutually consenting stimuli (Rape Index .7 vs. .5). The CPIC data indicated the recidivists also had more violent charges or convictions (1.2 vs. .7) and more criminal acts (4.2 vs. 1.6) in their histories.

The small number of significant differences between recidivists and non recidivists in the sexual and violent categories precluded an attempt to determine which combination of factors meaningfully predicted reoffending. However, for criminal recidivism the ordinal factors discriminating between the groups were utilized in a step-wise discriminant function analysis to assess the combination of factors that most successfully distinguished between groups in terms of criminal recidivism (Age, Education, MAST, PCL-R TOTAL, PAI, RI, CPIC Violent, CPIC Criminal). The result was a significant discriminant function $_5 (3, N= 181) = 31.82, p<.001$, with only CPIC Criminal, PAI, and Age being retained for optimal prediction. This represents a rate of improvement over chance (RIOC) of 30.86% (Loeber & Dishion, 1983). Interestingly, the RIOC using only the PCL-R Total is 34.03%.

Discussion

Any discussion concerning recidivism in sex offenders must bear in mind the characteristics of the sample under consideration. Most previous research has been conducted with populations of CM who have been imprisoned, and who may also have committed sexual offenses against adults or family members (Hanson & Bussière, 1998; Quinsey, Lalumiere, Rice & Harris, 1995). In the present study the 192 CM were consecutive referrals to a sexual behaviour clinic, part of a forensic service in a large psychiatric hospital. These men had all been convicted of sexually offending against an unrelated male or female child who was under the age of 16 at the time of the offense and had only this type of sexual offense in their history. They represented the wide array of CM processed by the courts in a mid-sized

Canadian city. It is noteworthy that in the present sample, unlike most other reports, only 51% were actually imprisoned for their offenses. An additional 6% were given a sentence of intermittent jail, 43% were placed on probation and one subject received only a fine.

As a group, the present sample of CM was clearly less antisocial than those in other studies whose subjects came from maximum security prisons or maximum security hospitals. As an example, in Hanson, Steffy and Gauthier (1993), child molesters had been incarcerated in a provincial prison, 41.9% had a previous sexual conviction, and 57.6% had a previous violent conviction. The equivalent numbers in the present group were 25.3% and 35.7%. The subjects in Proulx et al. (1997), were primarily from a maximum security psychiatric hospital and the recidivist group had, on average, a history of 10.9 criminal charges compared to 4.2 in the present study. As would be expected from the previous discussion, the recidivism rates in the present population of 15.1%, 20.3% and 41.6% for sexual, violent and criminal recidivism, are somewhat lower than previously published findings (Hanson & Bussière, 1998; Rice et al., 1991; Proulx et al., 1997).

In terms of sexual reoffending, only two measures discriminated CM that recidivated from those that did not - deviant sexual arousal as measured by the PAI, and a trend evident with alcohol problems as measured by the MAST. Although, alcohol abuse is often associated with criminality (Allnutt et al., 1996), and has been reported as occurring in a high proportion of sexual sadists (Allnutt et al., 1996), the documented evidence for alcohol abuse in sexual recidivism is limited (Hanson & Bussière, 1998). Since MAST scores of five to six are generally considered suggestive of alcohol abuse, and seven or higher considered indicative of alcoholism (Gibbs, 1983; Selzer et al., 1975), the sexual recidivists= mean score of 13.2 and the non recidivists= mean score of 7.0, indicate that alcohol is a major problem for both groups.

The role of phallometric measures in the assessment and treatment of sex offenders has become quite controversial, both legally and ethically (Card & Olsen, 1996; Laws, 1996). Furthermore, there has

been conflicting evidence for its ability to discriminate between non offender and offender populations (Barbaree, Baxter & Marshall, 1989; Blader & Marshall, 1989), and between various offender populations (Baxter, Marshall, Barbaree, Davidson & Malcolm, 1984; Firestone et al., 1998a; Firestone et al., 1998b; Laws, Gulayets & Frenzel, 1995; Quinsey et al., 1995). Some of the conflicting findings are undoubtedly related to procedural differences (Howes, 1995; Lalumiere & Quinsey, 1994), and the populations of offenders examined (Furby et al., 1989). However, consistent findings are becoming apparent with sexual recidivism in child molesters. Despite the variety of populations examined and procedures used a recent meta-analysis suggests that sexual preference for children, as measured by phallometric methods, generally the PI, was the largest single predictor of sexual recidivism for child molesters (Hanson & Bussière, 1998). Similar to the present findings, two recent studies of child molesters in Canada also found sexual arousal to children reliably differentiated sexual recidivists from non recidivists (Proulx et al., 1997; Rice et al., 1991). Interestingly, in previous research from our clinic, the PAI was significantly higher in homicidal child molesters compared with non homicidal child molesters, while no significant differences were evident on the PI (Firestone et al., 1998a). The inability of the demographic (e.g., age, education etc.), historical self reported information and offense history to discriminate sexual recidivists may be a function of the small number of recidivists or may reflect the aforementioned less disturbed nature of this population.

Psychometric tools have generally shown an insensitivity to recidivism in sex offenders (Proulx et al., 1997; Hall, 1990; Hanson et al., 1991, 1993; Hanson & Bussière, 1998). Therefore, the fact that most of the self-report psychological tests (i.e., DSFI, BDHI, Abel=s Cognition Scale) were insensitive to sexual and violent recidivism should not be surprising. It should be pointed out the DSFI and the BDHI were not designed to be used with forensic populations in general, and certainly not with sex offenders.

Nevertheless, the information gleaned from these tests is informative. A conspicuous feature on the Derogatis Sexual Functioning Inventory was the poor sexual functioning of the child molesters. On most

factors the groups scored below the 25th percentile (Information, Experience, Sexual Attitudes, Gender Role Definition, Body Image). Their overall level of sexual functioning (Sexual Functioning Index) was at the 3rd percentile (Derogatis & Melisaratos, 1979), revealing their marked inadequacy. On the Buss-Durkee Hostility Inventory, the Resentment factor (which reflects an angry outlook on life) approached clinical levels, while the Suspicion factor was clearly in the clinical range. The clinical levels of functioning revealed by these psychological tests, coupled with their insensitivity to recidivism, support the notion that they may describe the necessary conditions for sexual and violent offenses, but are insufficient in themselves to predict sexual offending. Other factors such as negative affect, availability of victims, and substance abuse may be required to act as disinhibitors for sexual offenses to occur (Proulx et al., 1997).

Violent recidivists, compared to non recidivists, were more likely to have a history of family violence. They were also rated as more psychopathic on Factor 1, Factor 2 and the Total Score of the PCL-R. Although there is little evidence of familial factors predicting recidivism in child molesters there is a growing body of research indicating psychopathy, as measured by the PCL-R, is a potent predictor of violent recidivism (Quinsey et al., 1995a; Quinsey, Rice & Harris, 1995).

A number of background features discriminated criminal recidivists from non recidivists. The CM that were charged or convicted with any new offense were younger at the time of the index offense, had less education, a higher incidence of drug abuse, and a greater history of family violence and child abuse. Similar factors have previously been identified and are often related to general criminality (Hanson & Bussière, 1998). The psychological tests revealed several differences between the groups. On the DSFI, since only one significant difference was apparent, the finding may be spurious. However, on the BDHI the recidivists rated themselves as being more verbally hostile (Verbal Aggression), more willing to use physical violence (Assault), and as being generally more distrustful (Suspicion) and angry (Resentment). As a result, the BDHI Total Score was higher for the recidivists. The MAST also reliably discriminated between recidivists and non recidivists, revealing considerable problems with alcohol. The PCL-R scores

were very successful in discriminating between recidivists and non recidivists. The Factor 1 scores for recidivists and non recidivists of 9.6 and 7.8 places them at approximately the 64th and 44th percentile for male forensic patients. For Factor 2, the group scores of 10.3 and 5.4 puts them at the 41st and 12th percentile. The PCL-R Total Scores of 22.1 and 15.6 for these groups places them at the 57th and 26th percentile of forensic patients. It is of interest to note that the child molesters appear relatively more disturbed on Factor 1, which measures psychopathic personality traits, than on Factor 2, which reflects criminal life style.

The phallometric assessments revealed that criminal recidivists demonstrated more deviant sexual arousal than the non recidivists. A recent meta-analysis did not find this relationship between deviant sexual arousal and criminal recidivism (Hanson & Bussière, 1998), but higher deviant sexual arousal in child molesters who went on to criminal recidivism was reported by Proulx et al. (1997). In most clinics deviant arousal indices in the .80 to .90 range are considered cause for concern (Marshall, Barbaree & Eccles, 1991). The mean PI scores of the total group of subjects in the present study, which is in the 1.4 range, indicate they were indeed more aroused by child stimuli than by adult stimuli, even if this measure was unrelated to recidivism. The differences between recidivists and non recidivists for sexual, violent and criminal offenses on the PAI suggest not only that an index of 1 is related to recidivism, but that even non recidivists show deviant arousal approaching clinical levels.

Common to most reports in the literature, the previous number of violent and criminal convictions successfully discriminated between men who recidivated criminally, and those who did not. The attempt to determine what combination of factors best predicted criminal recidivism included the total number of previous criminal charges or convictions, subject's age and PAI. This resulted in an RIOC of 30.86%. Interestingly, PCL-R scores alone did not perform much different achieving an RIOC of 34.03%. The usefulness of the PCL-R in recidivism research has previously also been demonstrated in general forensic

populations (Serin et al., 1994), rapists (Quinsey et al., 1995a) and child molesters (Firestone et al., 1998a; Rice et al., 1991).

The present investigation is limited by the fact that only offenses reported to the police were included and only static predictors of recidivism were studied. For example, we did not determine which subjects were interested in treatment, entered treatment or changed due to treatment. There is growing evidence that some treatment programs may decrease the rates of recidivism in some sex offenders (Marshall, Jones, Ward, Johnston & Barbaree, 1991). Despite this limitation several issues may be addressed. First of all, this group of child molesters is more representative of those entering the criminal justice system than the majority who have previously been involved in recidivism studies. As a result, they appear to have a less severe criminal history. Nevertheless, even this group is at considerable risk to reoffend. Nearly one-third had been charged with or convicted of a criminal offense by the end of the 5th year of monitoring, and 41.6% had committed an offense by year 12. Their predatory sexual activities and/or violent nature are evidenced by the 20% showing such offenses by the 12th year. It appears demographic, self reported historical information, and self reported psychological tests, the MAST notwithstanding, are not particularly useful tools for predicting recidivism, even though they do pick up on the significant levels of psychopathology evidenced by child molesters. As in most recidivism research into criminality previous offense history was a potent predictor. In addition, deviant phallometric responses in child molesters have once again demonstrated their utility in this endeavor. However, even with child molesters, the utility of phallometric assessments is limited by the large proportion of men who show levels of responding sufficiently low to be considered uninterpretable. In the present investigation this encompassed approximately 30% of subjects. Finally, the PCL-R, a relatively inexpensive, easy to use, and non intrusive measure, showed it predicts criminal recidivism as well as any combination of measures used in the present study. Further research into the two factors that make up the PCL-R and how they relate to various sexual offenses would be helpful.

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Table 1. Demographic Characteristics, Self-Reports and File Information Describing the Child Molesters.

Variables	Sexual Recidivism (a)		Violent Recidivism (b)		Criminal Recidivism (c)		t or χ^2	df	p<
	Yes	No	Yes	No	Yes	No			
Age	36.8 "12.0 (29)	37.0 "12.1 (163)	35.5 "12.4 (39)	37.4 "11.9 (153)	34.0 "11.1 (78)	39.0 "12.2 (114)	c, - 2.91	190	.004
IQ	87.3 "17.6 (21)	91.2 "17.2 (79)	87.4 "17.4 (26)	91.4 "17.2 (74)	87.0 "16.3 (49)	93.6 "17.7 (51)			
Education	10.8 " 3.6 (25)	11.0 " 4.0 (156)	10.2 " 3.8 (35)	11.1 " 3.9 (146)	10.0 " 3.6 (74)	11.6 " 4.1 (107)	c, 2.78	179	.006
Ever Married*	48.3 (14)	49.4 (79)	46.2 (18)	50.0 (75)	43.6 (34)	53.2 (59)			
Gender of victim - female	37.9 (11)	45.4 (74)	41.0 (16)	45.1 (69)	50.0 (39)	40.4 (46)			
Gender of victim - male	48.3 (14)	47.2 (77)	43.6 (17)	48.4 (74)	39.7 (31)	52.6 (60)			
Gender of Victim - male & female	13.8 (4)	7.4 (12)	15.4 (6)	6.5 (10)	10.3 (8)	7.0 (8)			
Stranger Relationship to Victim	13.0 (3)	17.6 (21)	11.1 (3)	18.3 (21)	15.5 (9)	17.9 (15)			
History of Drug Abuse	29.6 (8)	29.1 (46)	35.1 (13)	27.7 (41)	43.2 (32)	19.8 (22)	c, 11.79	1	.001
Family History of Violence	47.8 (11)	38.1 (48)	56.3 (18)	35.0 (41)	53.2 (33)	29.9 (26)	b, 4.73 c, 8.25	1 1	.030 .004
Physical Abuse <16	45.8 (11)	33.1 (42)	48.5 (16)	31.4 (37)	46.2 (30)	26.7 (23)	c, 6.12	1	.013
Sexual Abuse < 16	44.8 (13)	31.3 (51)	35.9 (14)	32.7 (50)	35.9 (28)	31.6 (36)			
Placed Outside of the Home < 16	16.7 (4)	30.7 (43)	30.3 (10)	28.2 (37)	36.2 (25)	23.2 (22)			

* In all tables, for categorical data the percentage of subjects is presented first followed by the number of subjects in brackets.

Table 2. Psychological Test Scores for Child Molesters.

Variables	Sexual Recidivism (a)		Violent Recidivism (b)		Criminal Recidivism (c)		t	df	p<
	Yes	No	Yes	No	Yes	No			
DSFI Information	36.9 "10.9 (27)	38.7 "11.8 (153)	36.8 "10.6 (37)	38.8 "11.9 (143)	35.8 " 9.9 (76)	40.3 "12.5 (104)	c, -2.70	176.9	.008
Experience	40.2 " 9.9 (27)	41.6 " 9.5 (153)	40.5 " 9.2 (37)	41.6 " 9.7 (143)	42.1 " 9.8 (76)	40.8 " 9.3 (104)			
Sexual Drive	44.1 " 7.7 (27)	46.3 "10.7 (153)	45.7 " 9.3 (37)	46.0 "10.6 (143)	47.6 "10.3 (76)	44.7 "10.2 (104)			
Sexual Attitude	36.8 " 6.1 (27)	38.4 " 8.6 (152)	36.8 " 6.1 (37)	38.5 " 8.7 (142)	38.1 " 7.6 (76)	38.3 " 8.7 (103)			
Psychological Symptoms	42.2 "13.1 (27)	43.5 "14.2 (153)	43.1 "13.9 (37)	43.4 "14.1 (143)	42.3 "13.1 (76)	44.0 "14.7 (104)			
Affects	44.8 "13.0 (27)	42.2 "12.8 (152)	45.6 "13.3 (37)	41.9 "12.7 (142)	42.7 "12.8 (76)	42.6 "12.9 (103)			
Gender Role Definition	40.9 " 7.6 (27)	42.0 " 8.6 (152)	41.6 " 8.3 (37)	41.9 " 8.5 (142)	41.5 " 7.9 (76)	42.0 " 8.8 (103)			
Sexual Fantasy	42.3 "12.5 (27)	43.5 "12.1 (152)	40.5 "11.4 (37)	44.1 "12.3 (142)	43.6 "13.4 (76)	43.2 "11.2 (103)			
Body Image	36.6 " 8.1 (27)	39.7 " 9.0 (151)	36.8 " 7.9 (36)	39.8 " 9.0 (142)	38.7 "10.0 (75)	39.5 " 8.0 (103)			
Satisfaction	44.1 "12.1 (26)	47.9 " 9.9 (150)	45.5 "11.9 (35)	47.8 " 9.9 (141)	47.1 " 9.9 (74)	47.6 "10.7 (102)			
Sexual Functioning Index	27.9 " 9.5 (27)	31.5 "11.6 (147)	29.1 "10.7 (36)	31.4 "11.5 (138)	30.2 "11.4 (75)	31.5 "11.4 (99)			
BDHI Assault	3.3 " 2.7 (27)	3.4 " 2.6 (153)	3.6 " 2.6 (37)	3.3 " 2.6 (143)	4.2 " 2.8 (75)	2.8 " 2.4 (105)	c, 3.46	178	.001
Indirect Aggression	4.3 " 2.3 (27)	4.1 " 2.4 (153)	3.9 " 2.2 (37)	4.2 " 2.4 (143)	4.3 " 2.5 (75)	4.1 " 2.2 (105)			
Irritability	4.5 " 2.7 (27)	4.3 " 3.1 (153)	4.3 " 2.9 (37)	4.3 " 3.0 (143)	4.8 " 3.0 (75)	4.0 " 2.9 (105)			
Negativism	2.4 " 1.7 (27)	2.0 " 1.5 (153)	2.3 " 1.6 (37)	2.0 " 1.5 (143)	2.3 " 1.6 (75)	1.9 " 1.4 (105)			
Verbal Aggression	5.8 " 1.8 (27)	6.5 " 3.1 (153)	6.2 " 2.2 (37)	6.5 " 3.1 (143)	7.1 " 2.8 (75)	5.9 " 2.9 (105)	c, 2.80	178	.006

Phallometric Responses *										
Pedophile Index	1.5 " 1.5 (29)	1.3 " 1.5 (154)	1.5 " 1.7 (39)	1.3 " 1.5 (144)	1.4 " 1.6 (76)	1.3 " 1.5 (107)				
Pedophile Assault Index	1.0 " .8 (29)	.7 " .6 (152)	1.1 " .8 (39)	.7 " .6 (142)	.9 " .7 (76)	.7 " .6 (105)	a, 2.11	179	.036	
							b, 2.85	179	.005	
							c, 2.22		.027	
Rape Index	.6 " .7 (27)	.6 " .6 (152)	.6 " .6 (37)	.6 " .6 (142)	.7 " .7 (76)	.5 " .6 (103)	c, 2.73	177	.007	
Assault Index	.3 " .5 (27)	.3 " .5 (152)	.3 " .5 (37)	.3 " .5 (142)	.4 " .5 (76)	.2 " .4 (103)				
Number of Previous Charges and Convictions (CPIC)*										
Sexual	.9 " 1.8 (29)	.6 " 1.4 (163)	.9 " 1.9 (39)	.5 " 1.4 (153)	.7 " 1.5 (78)	.5 " 1.5 (114)				
Violent	1.2 " 1.8 (29)	.9 " 1.8 (163)	1.2 " 1.9 (39)	.8 " 1.7 (153)	1.2 " 1.8 (78)	.7 " 1.7 (114)	c, 2.13	190	.035	
Criminal	2.9 " 3.7 (29)	2.7 " 3.9 (163)	3.2 " 3.7 (39)	2.6 " 3.9 (153)	4.2 " 4.0 (78)	1.6 " 3.4 (114)	c, 4.73	148. 1	.001	

* one-tail t-tests, no subjects were excluded for low levels of phallometric arousal

