

Prediction of Recidivism in Exhibitionists: Psychological, Phallometric, and Offense Factors.

**Sharon R. Rabinowitz Greenberg¹, Philip Firestone^{1,2,4}, John M. Bradford², and
David M. Greenberg³.**

Sexual Abuse: A Journal of Research and Treatment, (2002), Vol. 14, 4, 329-347

This research was funded in part by a grant from the Royal Ottawa Hospital Research Fund.

1.School of Psychology, University of Ottawa.

2.Department of Psychiatry, University of Ottawa.

3.Department of Psychiatry and Behavioural Science, University of Western Australia.

4.To whom correspondence should be addressed at School of Psychology and Department of Psychiatry, 120 University
Private, Ottawa, Ont., K1N 6N5, Canada.

Tel: (613) 562-5800#4444 Fax: (613)562-5253 [E-mail:fireston@uottawa.ca](mailto:fireston@uottawa.ca)

KEY WORDS: exhibitionist; sex offender; paraphilia; recidivism; predictors.

ABSTRACT

Exhibitionists have traditionally been regarded as nuisance offenders. However, empirical studies show that some offenders can be highly recidivistic and can escalate to incidents of Hands-on sexual assault. The objective of this study was to investigate predictors of recidivism in exhibitionists and clarify the differences between Hands-on and Hands-off sexual recidivists. Two hundred and twenty-one exhibitionists were assessed at a university teaching hospital between 1983 and 1996. Archival data came from medical files and police files. The Psychopathy Checklist-R (PCL-R) was assessed retrospectively. Results indicated that over a mean follow-up period of 6.84 years, 11.7, 16.8 and 32.7% of exhibitionists were charged or convicted with sexual, violent, or criminal offenses respectively. Sexual reoffending recidivists were less educated, and had more prior sexual and criminal offenses. Violent recidivists were also less educated, had lower Derogatis Sexual Functioning Inventory (DSFI) scores, higher PCL-R Totals, and more prior sexual, violent and criminal offenses. Criminal recidivists were younger, less educated, had lower DSFI scores, higher PCL-R scores, higher Pedophile Indices and more prior sexual, violent and criminal offenses. Hands-on sexual recidivists demonstrated higher PCL-R ratings, higher Pedophile and Rape Indices, and more prior sexual, violent and criminal offenses than Hands-off counterparts.

INTRODUCTION

Despite high prevalence, Exhibitionism Disorder remains an understudied paraphilia (Marshall, Eccles, & Barbaree, 1991; Quinsey, Lalumiere, Rice, & Harris, 1995). Exhibitionists reportedly account for one- to two-thirds of all sex offenses in England, Wales, the United States and Canada (Abel, Becker, Cunningham-Rathner, Mittelman, & Rouleau, 1988; Gebhard, Gagnon, Pomeroy, & Christenson, 1965) and constitute 25% of all paraphilics seeking outpatient treatment, with a median of fifty acts each (Rooth, 1973). Furthermore, 37% of all victims of paraphilic acts are reportedly victims of exhibitionists (Abel & Osborne, 1992), and a sizeable proportion of such victims are youths at the time of the offense (Badgely, et al, 1984).

The common contention is that exhibitionists are generally harmless Hands-off (non physical contact) offenders, who do not proceed to commit more serious sexual offenses (Abel et al., 1988; West, 1987). However, findings of comorbidity of the paraphilias (Abel, Mittleman, & Becker, 1985; Rooth, 1973) and anecdotal reports of a progressive pattern of sex offenses from exhibitionism towards increasingly serious offenses, including pedophilia and rape, have highlighted the potential dangerousness of exhibitionists (Macdonald, 1971; Marshall & Barbaree, 1989; Walker & McCabe, 1973). This has led to an increased interest in those features of exhibitionism predictive of subsequent reoffending, especially the more dangerous Hands-on sexual offenses (Sugarman, Dumughn, Saad, Hinder, & Bluglass, 1994). Various studies with diverse definitions of rape have found that up to 20% of exhibitionists had committed rape at one time or another (Abel et al., 1988; Bluglass, 1979; Freund, 1989; Grassberger, 1964).

Recent years have seen an increase in research on recidivism with sex offenders (Hanson & Bussière, 1998; Quinsey, Rice & Harris, 1995; Marshall et al., 1991a; Proulx, et al., 1997). This body of work has described the numerous methodological problems inherent in these types of investigations

(Furby, Weinrott, & Blackshaw, 1989; Hanson & Bussière, 1998; Marshall et al., 1991a). In particular, it is abundantly evident that recidivism rates based on official arrest or conviction records should be regarded as relatively conservative estimates (Marshall et al., 1991a), (Freund, Watson, & Rienzo, 1988).

Nevertheless, there are relatively few studies on recidivism or dangerousness in exhibitionists. In their study employing unofficial police records of exhibitionists, Marshall et al. (1991a) found that 91% of recidivists had reoffended prior to four years after their formal discharge. Sugarman et al. (1994) investigated the 210 exhibitionists who presented at a British Forensic Psychiatry Service over a 17 year period, of whom 32% were convicted for a contact sexual offense, and 75% were convicted of any offense other than indecent exposure during the follow-up period. Unfortunately, this retrospective study was based on relatively unsystematic data noted in clinical practice in addition to data routinely collected by the criminal justice system. Although this study adds to the limited body of knowledge in the area, it lacked a battery of standardized assessment tools. Marshall, Payne, Barbaree, and Eccles (1991) examined phallometric assessment measures as predictors of recidivism amongst exhibitionists and showed that preference to exposing scenarios did not correlate with recidivism, concluding that erectile measures of sexual preferences for exhibitionists were of little use in evaluating their risk to reoffend.

The present investigation attempts to expand this body of knowledge by studying 221 exhibitionists, utilizing several standardized assessment tools commonly used in sex offender research. Furthermore, the study compared recidivism defined by the first reoffense after the index offense with recidivism defined by any sexual recidivism during the follow-up period. Considering the first recidivism event provides clear survival statistics because it excludes the possibility of subsequent incarcerations or hospitalisations which may alter the 'time at risk' for reoffence. Considering any sexual recidivism during the follow-up period has the advantage of yielding higher rates. In the present study, the higher rates are helpful for examining differences between those recidivists who subsequently

committed Hands-on versus Hands-off sexual offenses.

Evidence that sex offenders, including exhibitionists, commit both sexual and non-sexual offenses (Quinsey et al., 1995a; Sugarman et al., 1994; Weinrott & Saylor, 1991) necessitates investigation of broader categories of recidivism (Proulx et al., 1997). In the present study, recidivism was divided into three categories in a fashion similar to others (Firestone, et al., 2000; Proulx et al., 1997; Rice, Quinsey, & Harris, 1991). The definition of sexual recidivism was any charge or conviction for a sexual offense after the index offense; violent recidivism was for nonsexual violent and sexual offenses; and criminal recidivism was for any charge or conviction noted in the Canadian Police Information Center's (CPIC) documentation. A cumulative hierarchy in which each additional category subsumes that of the previous category was adopted to account for plea bargaining distortions and to allow comparison with prior recidivism research.

METHOD

Participants

The Exhibitionist sample were 221 men assessed at the Royal Ottawa Hospital Sexual Behaviors Clinic between 1983 and 1996. Participants were defined as Exhibitionists in one of three ways: (a) patients diagnosed with exhibitionism by a psychiatrist according to DSM criteria; (b) offenders convicted by the courts with the offense of exposing; or (c) self-referred patients with the problem of exposing. An exclusion criterion for participation in the study was a police record of either a charge or conviction of a Hands-on sexual offense, prior to the index offense. Although all participants were referred for assessment, the sample was heterogeneous with regards to treatment and court sentencing. As the vast majority of participants were assessed prior to receiving treatment or court sentences, the proportion of subjects who had been treated could not be ascertained. All participants signed an informed consent at the time of the assessment.

Assessment Procedures

It is important to note that this study was not prospective and not theoretically driven. It was based on assessments conducted by the Sexual Behaviors Clinic at the Royal Ottawa Hospital. The assessment battery for sexual offenders was introduced at the Sexual Behaviors Clinic at its inception in 1983 for both clinical and research purposes, and is similar to batteries used in other sexual behavior assessment centers. Therefore the measures utilized are, or have been at one time or another, considered the most clinically relevant for this population.

Alcohol Abuse

The Michigan Alcoholism Screening Test (MAST; Seltzer, 1971) is a 24-item self-report inventory used to identify behaviors indicating alcohol abuse. The degree of problems associated with alcoholism is reflected in the total number of “yes” responses. Scores of 5 or 6 are suggestive of alcohol problems and scores of 7 or more is strongly indicative of alcohol abuse (Allnutt, Bradford, Greenberg, & Curry, 1996). Reliability and validity are well established (Seltzer, 1971, Seltzer, Vinokur, & van Rooijan, 1975). The internal consistency is high (alpha of .87) and it is relatively unaffected by age or denial of socially unacceptable characteristics (Magruder-Habib, Durand, & Frey, 1991). The MAST correlates highly with DSM-III-R criteria for alcohol dependence (Magruder-Habib, Stevens, & Ailing, 1993). Where inconsistency occurred, the MAST tended to over diagnose alcoholism. Apart from its extensive use as a screening tool for alcoholism, the MAST has been incorporated in research with samples of sex offenders (Allnutt et al., 1996; Hucker et al., 1986; Hucker et al., 1988; Rada, Laws, & Kellner, 1976; Rada, Laws, Kellner, Stivastava, & Peake, 1983).

Hostility

The Buss-Durkee Hostility Inventory (BDHI; Buss & Durkee, 1957) contains 66 true-false statements that provide a measure of seven constructs representing general hostility: Assault, Indirect

Hostility, Irritability, Negativism, Resentment, Suspicion, and Verbal Hostility. The 9-item Guilt scale was excluded from the Total Score. Factor analysis yielded two constructs, attitudinal and behavioral. Higher scores indicate the endorsement of more hostile items. A total score of 38 and above is considered high. Among sexual offenders, BDHI scores for rapists have been significantly higher than those for nonoffending controls (Firestone et al., 1998; Rada et al., 1976).

Sexual Functioning

The Derogatis Sexual Functioning Inventory (DSFI) assesses dimensions of sexual functioning (Derogatis, 1975, 1978, 1980). The 10 subscales are Information, Experience, Sexual Drive, Sexual Attitude, Psychological Symptoms (also known as the Brief Symptom Inventory or BSI), Affect, Gender Role Definition, Sexual Fantasy, Body Image, and Satisfaction). The Sexual Functioning Index (SFI) is a global measure derived by summing the 10 subtest scores and providing an overall measure of an individual's level of sexual functioning. Reliability for the subtests is reportedly 'quite good' (Derogatis, 1980). Regarding validity, results of a factor analysis identified seven empirical dimensions underlying the DSFI, namely, psychological distress, body image, heterosexual drive, autoeroticism, gender role, satisfaction and sexual precociousness. The DSFI has been used with large nonforensic samples. Its use with sexual offenders is limited (see Firestone et al., 1998).

Psychopathy

The Psychopathy Checklist-Revised (PCL-R) consists of 20 clinical rating scales 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 United States and England was .87 (Hare, Forth, & Strachan, 1992). Generally, the PCL-R is scored on the basis of a semistructured interview and collateral information obtained from sources such as official records and

psychological assessments. Valid PCL-R ratings can also be made on the basis of high quality archival information (Grann, Langstroem, Tengstroem, & Stalenheim, 1998; Wong, 1988). The PCL-R is currently being used widely in sex offender research (Firestone, et al., 2000; Harris, Rice, & Quinsey, 1993; Serin & Amos, 1995; Serin, Malcolm, Khanna, & Barbaree, 1994). Factor analyses have consistently yielded two distinct and stable factors representing (a) the degree of personality, interpersonal, and affective traits deemed significant to the construct of psychopathy, and (b) the degree of antisocial behavior, unstable, and corrupted lifestyle (Hare, 1991; Hare, et al., 1990). Although correlated with one another, both factors exhibit a differential pattern of correlation with other clinical, personality and experimental variables (Brown & Forth, 1997; Hare, 1991; Harpur, Hare, & Hakstian, 1989; Kosson, Smith, & Newman, 1990). Using five prison samples and three forensic samples, Hare et al. (1990) found the correlation between the two factors averaged $r = .48$. Previous studies have found the inter-rater reliability and internal consistency of both factors to be high despite the small number of items per factors (Hare, 1991; Hare et al., 1990). For the purposes of categorical scoring, a cutoff of 30 is suggested to discriminate psychopathic from nonpsychopathic individuals (Hare, 1991).

In the present investigation the PCL-R was completed retrospectively from descriptive material contained in medical institutional files by two research assistants. A random sample of clinic files was independently rated by each researcher, resulting in satisfactory interrater reliability correlation, $r = .85$, $p < .05$.

Sexual Arousal

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

Stimuli presentation The order of stimuli presentation, held constant for all subjects, was computer controlled. Participants were presented with one or more of three series of audiotapes. The

audiotape battery consisted of vignettes (Abel, Blanchard, & Barlow, 1981) of approximately 2 minutes duration describing sexual activity varying with respect to age, sex, and degree of consent, coercion and violence portrayed. Each participant 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 as follows: (a) child initiates, (b) child mutual, (c) nonphysical coercion of child, (d) physical coercion of child, (e) sadistic sex with child, (f) nonsexual 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 2 minute duration for each of three categories, (a) consenting sex with adult female, (b) rape of adult female, (c) nonsexual assault of adult female. No exhibitionist scenes were used.

Scoring. The Pedophile Index was calculated by dividing the participant's highest response to a child initiates or child mutual stimulus by the highest response to an adult consenting stimulus. The Pedophile Assault Index was calculated by dividing the highest response to an assault stimulus involving a child victim (nonphysical coercion of child, physical coercion of child, sadistic sex with child, or nonsexual assault of child) by the highest response of the child initiates or child mutual stimulus. The Rape Index was calculated by dividing the response to the rape stimulus by the response to the adult consenting stimulus. The Assault Index was created by dividing the response to a nonsexual assault stimulus by the response to an adult consenting stimulus.

Criminal Offense Histories

Offense information was gathered from the Canadian Police Information Center (CPIC) at the

Ottawa Police Station, a national data base of criminal arrests and convictions including INTERPOL reports from the Royal Canadian Mounted Police. For an offender to be considered eligible to reoffend, he must have been free to commit a crime, that is, neither incarcerated nor in secure custody for reasons of mental illness.

Statistical treatment of the data

Prior to performing statistical tests, data were screened to ensure assumptions underlying tests were met. Outlying cases were detected using a criterion of plus or minus three standard deviations from the mean or by visual inspection of normal probability plots (Tabachnick & Fidell, 1989). Values of outlying cases were adjusted upward or downward according to the direction of the problem. This method is appropriate when case retention is desirable and does not unduly influence the group mean. The values reported in the Tables are posttransformation. In instances of missing data, cases were deleted from the analysis of that variable (Tabachnick & Fidell, 1989).

Results

Figure 1 describes the survival rates of the study population. The follow-up period ranged from one to 15 years after the assessment or conviction for the index offense, with an average of 6.8 ($SD = 4.3$) years. The percentage of men who were charged or convicted of a sexual, violent, or criminal offense by the 15th year was 11.7%, 16.8% and 32.7% respectively. Recidivists incurred new charges or convictions rapidly for the initial 5 years at risk, after which the recidivism rate dropped and continued to taper off for the remainder of the follow-up period.

Sexual Recidivism

As indicated in Table 1, sexual recidivists were significantly less educated (11.1 years vs. 12.0 years) and had more sexual and criminal charges and/or convictions prior to the index offenses (0.85 vs. 0.26 and 5.0 vs. 2.2, respectively), compared to nonrecidivists. No other differences achieved statistical

significance.

Violent Recidivism

As described in Table 1, violent recidivists were significantly less educated (11.1 years. vs. 12.0 years) and incurred significantly more previous sexual, violent and criminal charges and /or convictions (0.72 vs. 0.18, 0.97 vs. 0.34, and 4.97 vs. 1.86 respectively).

Criminal Recidivism

Table 1 indicates that for any new criminal charges or convictions, recidivists compared with nonrecidivists, were significantly younger at the time of the initial assessment (29.0 years vs. 32.5 years) and less educated (10.8 years vs.12.4 years). The psychological test scores indicated that recidivists, scored significantly higher on the MAST (16.57 vs.7.09) and the BDHI (30.51 vs. 26.42), reported significantly poorer sexual functioning on the DSFI (33.59 vs.37.39) and scored significantly higher on the PCL-R (18.8 vs. 12.7). The analyses of phallometric assessment measures revealed that the recidivists' responses on the Pedophile Index were significantly higher than the nonrecidivists (1.90 vs. 1.19), indicating greater sexual arousal in response to scenarios of children. They also incurred significantly more previous sexual, violent and criminal offenses (1.11 vs. 0.19, 1.52 vs. 0.31, and 6.19 vs. 1.05 respectively).

The step-wise discriminant function analysis to assess the combination of factors that most successfully distinguished between groups in terms of criminal recidivism used Age, Education, BDHI, DSFI, PCL-R, and the number of Previous Sexual and Previous Criminal offenses (CPIC). Number of Previous Violent Offenses was excluded from the discriminant function analysis because of its high correlation with the other two CPIC variables. The result was a significant discriminant function, $\chi^2(3, N = 163) = 37.04, p < .001$, with the variables Education and Number of Previous Criminal Offenses (CPIC) retained for maximum prediction. The procedure correctly classified 71.8 % of the original

group, representing a relative improvement over chance (RIOC) of 20.5%. Out of interest, when the PCL-R was put into a discriminant function analysis alone, it resulted in a significant discriminant function, $\chi^2(1, N = 190) = 22.30, p < .001$. The procedure correctly classified 69.5 % of the original group, representing a RIOC of 22.7%.

Hands-off versus Hands-on Sexual Recidivists

An additional interest was to determine if we could predict which exhibitionists would eventually commit a hands on sexual offense, which we view as an escalation of the seriousness of the offense pattern. For the purposes of the Hands-on versus Hands-off comparison, all offenders who received sexual charges following the index offence were considered ($n = 41$). Of these, 14 were convicted of a Hands-on sexual offense (i.e., a sexual offense with bodily contact with the victim), and 27 were convicted of a sexual offense with no physical contact. It is important to note that only 26 of these men were considered sexual recidivists according to their first reoffense. The Hands-on/Hands-off distinction was based on CPIC records. Examples of Hands-off offences included Indecent Act, Indecent Exposure, Gross Indecency and Corrupting Morals. Included with the Hands-on offences were Invitation to Sexual Touching, Sexual Exploitation, Sexual Interference, Sexual Assault and similar offences. When both Hands-on and Hands-off sexual offenses were committed during the follow-up period, the offender was classified as a 'Hands-on' sexual recidivist, which we considered the more dangerous classification. It is important to remember, however, that there is no direct correspondence between the sexual misbehavior and the charges laid, such that some of the seemingly Hands-off offences may have been for incidents that included Hands-on misbehaviour.

Table 2 indicates that Hands-on sexual recidivists scored significantly higher on the PCL-R Total compared to the Hands-off group (22.3 vs. 16.0) and on both the Pedophile Index and the Rape Index (2.74 vs. 0.60, and 1.06 and 0.28, respectively). The Hands-on sexual recidivists also incurred both

significantly more previous sexual, violent and criminal offenses than the Hands-off group (2.43 vs. 0.58; 3.43 vs. 0.58, and 9.64 vs. 3.50, respectively).

The step-wise discriminant function analysis to assess the combination of factors that most successfully distinguished between the Hands-on and Hands-off sexual recidivists used the variables PCL-R, Pedophile Index, Rape Index, and the Number of Previous Violent and Criminal offenses (CPIC). The result was a significant discriminant function, $\chi^2(1, N = 18) = 6.531, p < .011$, with only Rape Index being retained for optimal prediction. The procedure correctly classified 78.9% of the original group, representing a RIOC of 34%.

Discussion

Any discussion on recidivism in sex offenders must first address the fact that the official rates of recidivism with sex offenders are a gross under-representation of the real number of offenses committed, no matter which criteria are used (Furby et al., 1989; Hanson & Bussière, 1998). In addition, recidivism rates are notoriously sensitive to the populations under investigation and one must bear in mind that in the present study the 210 exhibitionists were consecutive referrals to a sexual behaviours clinic, part of a forensic service in a large psychiatric hospital. The majority of these men were assessed as part of a legal adjudication process and a substantial proportion of these men had never been incarcerated. It is therefore quite likely they were generally less antisocial than subjects in many exhibitionism recidivism studies (Marshall, Eccles et al., 1991; Marshall, Payne et al., 1991, Sugarman et al., 1994), and they were definitely less so using PCL-R scores compared to the other types of sex offenders assessed in our clinic (Firestone et al., 1998; Firestone et al., 1998, 1999, 2000). Nevertheless, using the convention of the first offense after the index offense as the standard, a sizeable proportion did recidivate over a 15 year period - 11.7%, 17.6% and 34.4 % for sexual, violent or criminal offenses, respectively. Comparable to previous reports, over half our recidivist sample in each category had reoffended by the fifth year

(Marshall, Eccles et al., 1991). The recidivism rates with the present population are considerably lower than those of Marshall, Eccles et al., (1991) who reported a sexual recidivism rate of 47.7% for an exclusively prison population of 44 exhibitionists followed up for 8.75 years. However, their outcome data were derived from both official and unofficial police records, the latter being 2.3 times higher. For a psychiatric hospital population, Sugarman et al. (1994) computed a 75% criminal recidivism rate. The longer follow-up period (8 to 25 years), wider definition of contact sex offenses (all sexual offense convictions other than indecent exposures and obscene telephone calls) and sample differences may account for these differences.

Sexual Recidivism

The ability to discriminate between sexual recidivists and nonrecidivists in this study was relatively poor. This has been the case with other types of sex offenders from our clinic as well as others (Firestone et al., 1998;1999; 2000; Proulx et al., 1997). The only factors that discriminated between the groups was education (with the sexual recidivists having approximately one less year of schooling) and prior criminal history (sexual and general).

Violent Recidivism

Violent recidivists also had about one year less of education than those that did not recidivate. However, they also scored significantly higher on psychopathy, and had significantly more previous sexual, violent and overall criminal offenses in their history. Similar findings for other types of sex offenders have been reported by others (Firestone, 1998, 1999, 2000; Hanson & Bussière, 1998; Karpman, 1954; Proulx et al., 1997; Quinsey et al., 1995a; Rice et al., 1991).

Criminal Recidivism

Criminal recidivists, when compared with nonrecidivists, were younger and had completed fewer years of school. They were also more pathological on all the psychological tests - alcoholism (MAST),

general hostility (BDHI), sexual functioning (DSFI), and the PCL-R. The outstanding feature of the MAST however, was that both recidivists and nonrecidivists met the criterion for alcoholism. The recidivists higher level of general hostility (BDHI) is supported by the finding that they had a greater history of violent offenses. Despite this significant difference between groups, neither group met the criteria for clinical levels of general hostility. The DSFI revealed that the recidivists scored significantly more poorly than the nonrecidivists; however, their scores put both groups at the seventh percentile of sexual functioning. We have previously reported similar very low levels of sexual functioning with incest offenders, child molesters and rapists from our clinic (Firestone et al., 1998, 1999, 2000).

The PCL-R was particularly valuable in discriminating between recidivists and nonrecidivists in the violent and criminal categories. These findings add to the growing literature suggesting that psychopaths are at higher risk to reoffend than non-psychopaths, that they recidivate sooner, and that the offense is more likely to be violent (Harris et al., 1993; Hare et al., 1992; Serin et al., 1994). Although both violent and criminal recidivists demonstrated more psychopathic characteristics than nonrecidivists, it is not surprising that their scores were all well below Hare's (1991) criterion for psychopathy (≥ 30), but were in line with the PCL-R scores reported by others (Serin et al., 1994). The recidivists' mean PCL-R of approximately 19 is considerably lower than previously reported for rapists, child molesters and incest offenders from our clinic. As mentioned earlier this reflects the fact that, on average, exhibitionists may be generally less antisocial than other sex offenders. As might be expected, offense histories were particularly valuable in differentiating between the recidivist and nonrecidivist groups. Sexual recidivists had significantly more offenses than the nonrecidivists in the sexual and criminal offense categories only, while violent and criminal recidivists had records of significantly more sexual, violent and criminal offenses than the nonrecidivists. Over one-half of the recidivists had records of prior criminal offenses, a finding consistent with prior research.

The use of phallometric assessment continues to be controversial (Card & Olse, 1996; Laws, 1996; Marshall & Fernandez, 2000). In the present investigation, phallometric measures were generally not valuable in predicting sexual or violent recidivism. However, compared with non-recidivists, criminal recidivists did evidence significantly higher mean responses on the Pedophile Index. It is not readily apparent why this should be the case, but one might speculate that the larger sample size or plea bargaining are somehow related to this finding. What has become increasingly evident is that sexual interest in children, as measured by phallometric assessment, is an important factor in sexual offending (Firestone et al., 2000; Hanson & Bussière, 1998). In the present investigation, the outstanding finding on the Pedophile Index is that both recidivists and nonrecidivists, as a group, met the criterion for sexual deviance (over 1.0) . Although this result indicates that a high proportion of men with pedophilic tendencies also expose, it may also reflect the general paraphilic nature of this offender population. That the PI and the RI also discriminate between the Hands-on and Hands-off sexual recidivists in this investigation adds weight to this finding.

One of the most important findings in the present investigation was that, of the total population of exhibitionists, 18 men committed Hands-off, and 8 men committed Hands-on sexual offenses as their first offense after the index offense. However, when the definition of sexual recidivism was widened to include any sexual offense committed at any time during the follow-up period, the rates increased by over one-half to 27 (12.2%) and 14 (6.3%) for Hands-off and Hands-on sexual offenses respectively. The sexual recidivism rate of 6.3 % for Hands-on sexual offenses is remarkably similar to the 7% computed by Bluglass (1979), but is less than the 26% of 210 cases computed in the Sugarman et al. (1994) follow-up study. The differences are likely due to methodological differences mentioned earlier. Despite the small number of subjects studied, the Hands-on sexual recidivists differed appreciably from their Hands-off counterparts on a number of important variables, including

psychopathy. Previous reports have also suggested that antisocial behavior in childhood, and a diagnosis of personality disorder in adulthood are important markers of dangerousness in exhibitionists (Bluglass, 1979; Sugarman et al., 1994) and supports the large literature suggesting that psychopathy is a high risk factor for violent offenses (Hare et al., 1992; Harris et al., 1993; Serin & Amos, 1995). Once again, despite the small number of subjects studied, there were convergent data on the phallometric measures, suggesting they may be valuable in differentiating between the two groups of sexual recidivists, with the Hands-on group demonstrating significantly higher scores on both the Pedophile and Rape Indices than the Hands-off group. There are reports that, compared with normal controls, exhibitionists do not demonstrate a profound degree of deviant arousal to exhibiting scenarios, and that erectile measures of sexual preferences for exhibitionists are of questionable value in determining treatment needs or evaluating risk to reoffend (Freund & Blanchard, 1986; Marshall, Payne et al., 1991). However, the current study suggests that phallometric assessment of exhibitionists' arousal to scenarios other than exhibiting (rape and children in particular) may be useful in evaluating the risk of reoffending for a subgroup of more serious offenders who escalate from exhibiting to Hands-on sexual offense. The Hands-on sexual reoffenders mean PI of 2.74 and mean RI of 1.06 appear distinctly higher than those of the incest (1.2 and 0.4), child molester (1.5 and 0.6) and rapist (0.7 RI only) recidivists on whom we have reported previously (Firestone et al., 1998; 1999, 2000). The fact that the RI was selected to best discriminate between the two groups, and was able to correctly classify 78.9% of the original group, must be viewed with some caution due to the small number of subjects in the analysis. Not surprisingly, offense histories were also valuable in differentiating between the two groups, with Hands-on sexual recidivists demonstrating significantly more prior sexual, violent and criminal offenses than the Hands-off group, which is also consistent with past research (Sugarman et al., 1994).

The present investigation has several limitations. The most obvious is that only offenses and

reoffenses that came to the attention of authorities were considered in calculating recidivism and factors related to recidivism. Not only does this lead to an underreporting of offenses but it may also distort the results in unknown ways. Furthermore, only static features related to recidivism were considered. It was beyond the scope of the investigation to consider the role of more dynamic features such as participating in treatment (Proulx et al., 1997). Finally, the small number of subjects in some of the analyses, especially those related to Hands-on and Hands-off reoffending requires that the results be viewed with some caution. Despite these limitations it is instructive to note that when all offenses committed subsequent to the index offense were considered, as opposed to only the first offense, sexual recidivism rates rose from 11.7% to 18.1%; and violent recidivism rates from 17.6% to 24.5%. By focusing exclusively on the initial offense committed after the index offense, this investigation and others like it may be yielding estimates of rates of recidivism which are too conservative. Future recidivism studies should attempt to include all subsequent offenses, thereby examining the offenders life risk. This may reflect more accurately recidivism rates and assist in establishing the best predictor variables, especially for a more violent subgroup.

In general, the present study suggests that exhibitionists are not a benign group of offenders. A significant number go on to perform other sexual and violent offenses and a wider variety of general criminal offenses. The sexual offending patterns of a small but substantial group is particularly disturbing since these men appear to escalate to hands on sexual offenses. This subgroup demonstrates particularly high psychopathy and deviant sexual arousal as measured by the PI and RI, compared with other exhibitionists. Furthermore, for violent and general reoffending some of the best predictors seem to be the same factors that predict general criminality among nonsexual criminals (e.g., psychopathy and previous offenses)

REFERENCES

- Abel, G. G., Becker, J. V., Cunningham-Rathner, J., Mittelman, M., & Rouleau, J. L. (1988). Multiple paraphilic diagnoses among sex offenders. Bulletin of the Academy of Psychiatry and the Law, *16*, 153-168.
- Abel, G. G., Blanchard, E. B., & Barlow, D. H. (1981). Measurement of sexual arousal in several paraphilias: the effects of stimulus modality, instructional set and stimulus content on the objective. Behavioural Research and Therapy, *19*, 25-33.
- Abel, G. G., Mittleman, M., & Becker, J. V. (1985). Sexual offenders: results of assessment and recommendations for treatment. In M. H. Ben-Aron, S. J. Hucker, & C. D. Webster (Eds.), Clinical criminology: current concepts (pp. 191-205). Toronto: M & M Graphics Ltd.
- Abel, G. G., & Osborne, C. (1992). Stopping Sexual Violence. Psychiatric Annals, *22*, 301-306.
- Allnutt, S. H., Bradford, J. M. W., Greenberg, D. M., & Curry, S. (1996). Co-morbidity of Alcoholism and the Paraphilias. Journal of Forensic Sciences, *41*, 234-239.
- Badgely, R., Allard, H., McCormick, N., Proudfoot, P., Fortin, D., Ogilvie, D., Rae-Grant, Q., Gelinias, P., Pepin, L., & Sutherland, S. (1984). Sexual offenses against children (Vol. 1,): Canadian Government Publishing Centre.
- Bluglass, R. (1979). Indecent Exposure in the West Midlands. Paper presented at the Sex Offenders in the Criminal Justice System, Cambridge.
- Brown, S. L., & Forth, A. E. (1997). Psychopathy and Sexual Assault: Static Risk Factors, Emotional Precursors, and Rapist Subtypes. Journal of Consulting and Clinical Psychology, *65*, 848-857.
- Buss, A. H., & Durkee, A. (1957). An inventory for assessing different kinds of hostility. Journal of Consulting and Clinical Psychology, *21*, 343-349.
- Card, R.D., & Olse, S.E. (1996). Visual plethysmograph stimuli involving children: Rethinking some quasi-logical issues. Sexual Abuse: A Journal of Research and Treatment, *8*(4), 268-272.
- Derogatis, L. R. (1975, 1978). Derogatis Sexual Functioning Inventory. Baltimore: Clinical Psychometrics Research.
- Derogatis, L. R. (1980). Psychological Assessment of psychosexual functioning. Psychiatric Clinics of North America, *3*, 113-131.
- Firestone, P., Bradford, J.M., McCoy, M., Greenberg, D.M., Larose, M.R., & Curry, S. (1998). Recidivism factors in convicted rapists. Journal of the American Academy of Psychiatry and Law, *26*, 185-200.

Firestone, P., Bradford, J.M., Greenberg, D.M., McCoy, M., Larose, M.R & Curry, S. (1999). Prediction of recidivism in incest offenders. Journal of Interpersonal Violence, 14(5), 511-531.

Firestone, P., Bradford, J.M., McCoy, M., Greenberg, D.M., Curry, S., & Larose, M. (2000). Prediction of Recidivism in Extrafamilial Child Molesters Based on Court-Related Assessments. Sexual Abuse: A Journal of Research and Treatment, 12, (3), 203-221.

Freund, K. (1989). Courtship Disorder. In W. L. Marshall & D. R. Laws (Eds.), Handbook of Sexual Assault: Issues, Theories and Treatment of the Offender (pp. 195-207). New York: Plenum Press.

Freund, K., & Blanchard, R. (1986). The Concept of Courtship Disorder. Journal of Sex and Marital Therapy, 12(2), 79-92.

Freund, K., Watson, R., & Rienzo, D. (1988). The Value of Self-Reports in the Study of Voyeurism and Exhibitionism. Annals of Sex Research, 1, 244-62.

Furby, L., Weinrott, M.R., & Blackshaw, L. (1989). Sex offender recidivism: A review. Psychological Bulletin, 105, 3-30.

Gebhard, P.H., Gagnon, J.H., Pomeroy, W.B. and Christenson, C.V. (1965). Sex Offenders: An Analysis of Types. London: Heinemann.

Grann, M., Langstroem, N., Tengstroem, A., & Stalenheim, E. G. (1998). Reliability of file-based retrospective ratings of psychopathy with the PCL-R. Journal of Personality Assessment, 70(3), 416-26.

Grassberger, R. (1964). Der Exhibitionismus. Kriminalistik in Oesterreich, 18, 557-562.

Hanson, R. K., & Bussière, M. T. (1998). Predicting Relapse - a Meta-Analysis of Sexual Offender Recidivism Studies. Journal of Consulting & Clinical Psychology, 66, 348-362.

Hare, R. D. (1991). Manual for the Revised Psychopathy Checklist. Toronto: Multi-Health Systems.

Hare, R. D., Forth, A. E., & Strachan, K. E. (1992). Psychopathy and crime across the life span. In R. D. Peters, R. J. McMahon, & V. L. Quinsey (Eds.), Aggression and Violence Throughout the Lifespan (pp. 285-300). Newbury Park: Sage Publications.

Hare, R. D., Harpur, T. J., Hakstian, A. R., Forth, A., Hart, S. D., & Newman, J. P. (1990). The Revised Psychopathy Checklist: Descriptive statistics, reliability and factor structure. Psychological Assessment: A Journal of Consulting and Clinical Psychology, 2, 338-341.

Harpur, T. J., Hare, R. D., & Hakstian, A. R. (1989). Two factor conceptualization of psychopathy: Construct validity and implications. Psychological Assessment: A Journal of Consulting and Clinical Psychology, 1, 6-17.

Harris, G. T., Rice, M. E., & Quinsey, V. L. (1993). Violent recidivism of mentally disordered offenders: The development of a statistical prediction instrument. Criminal Justice and Behavior, 20(4), 315-335.

Hucker, S., Langevin, R., Dickey, R., Handy, L., Chambers, J., Wright, S., Bain, J., & Wortzman, G. (1988). Cerebral Damage and Dysfunction in Sexually Aggressive Men. Annals of Sex Research, 1, 33-47.

Hucker, S., Langevin, R., Wortzman, G., Bain, J., Handy, L., Chambers, J., & Wright, S. (1986). Neuropsychological Impairment in Pedophiles. Canadian Journal of Behavioural Science, 18(4), 440-48.

Laws, D.R. (1996). Marching into the past: A critique of Card and Olsen. Sexual Abuse: A Journal of Research and Treatment, 8(4), 273-275.

Karpman, B. (1954). The Sexual Offender and his Offenses: Etiology, pathology, psychodynamics and treatment. New York: Julian.

Kosson, D. S., Smith, S. S., & Newman, J. P. (1990). Evaluating the construct validity of psychopathy on black and white male inmates: Three preliminary studies. Journal of Abnormal Psychology, 99, 250-259.

Macdonald, J. M. (1971). Rape: Offenders and their victims. Springfield, Illinois: Thomas.

Magruder-Habib, K., Durand, A. M., & Frey, K. A. (1991). Alcohol Abuse and alcoholism in primary health care settings. Journal of Family Practice, 32, 406-413.

Magruder-Habib, K., Stevens, H. A., & Ailing, W. C. (1993). Relative Performance of the MAST, VAST and CAGE versus DSM-III-R criteria for alcohol dependence. Journal of Clinical Epidemiology, 46, 435-441.

Marshall, W. L., & Barbaree, H. E. (1989). Sexual Violence. In K. Howells & C. R. Hollin (Eds.), Clinical Approaches to Violence. Chichester: Wiley.

Marshall, W.L., Fernandez, Y.M. (2000) Phallometric Testing with Sexual Offenders: Limits to its Value. Clinical Psychology Review, 20,7, 807-822

Marshall, W. L., Eccles, A., & Barbaree, H. E. (1991). The Treatment of Exhibitionists: A Focus on Sexual Deviance versus Cognitive and Relationship Features. Behavioural Research and Therapy, 20(2), 120-135.

Marshall, W. L., Payne, K., Barbaree, H. E., & Eccles, A. (1991). Exhibitionists: Sexual Preferences for Exposing. Behavioural Research and Therapy, 29(1), 37-40.

Murphy, W. D. (1997). Exhibitionism, Psychopathology and Theory. In E. R. Laws & O'Donohue (Eds.), Sexual Deviance, Theory, Assessment and Treatment: Guilford Press.

Proulx, J., Pellerin, B., Paradis, Y., McKibben, A., Aubut, J., & Quimet, M. (1997). Static and Dynamic Predictors of Recidivism in Sexual Aggressors. Sexual Abuse: A Journal of Research and Treatment, 9, 7-27.

Quinsey, V. L., Lalumiere, M. L., Rice, M. E., & Harris, G. T. (1995). Predicting Sexual Offenses. In J. C. Campbell (Ed.), Assessing dangerousness. Violence by sexual offenders, batterers, and child abusers. Thousand Oaks, California: Sage.

Quinsey, V.L., Rice, M.E. & Harris, G.T. (1995). Actuarial prediction of sexual recidivism. Journal of Interpersonal Violence, 10(1), 85-105.

Rada, R. T., Laws, D. R., & Kellner, R. (1976). Plasma testosterone levels in the rapist. Psychosomatic Medicine, 38, 257-267.

Rada, R. T., Laws, D. R., Kellner, R., Stivastava, L., & Peake, G. (1983). Plasma Androgens in violent and nonviolent sex offenders. Bulletin of the American Academy of Psychiatry and the Law, 11, 149-158.

Rice, M.E., Quinsey, V.L., & Harris, G.T. (1991). Sexual recidivism among child molesters released from a maximum security psychiatric institution. Journal of Consulting and Clinical Psychology, 59, 381-386.

Rooth, G. (1971). Indecent Exposure and Exhibitionism. British Journal of Hospital Medicine, 5, 521-533.

Rooth, G. (1973). Exhibitionism, Sexual Violence and Paedophilia. British Journal of Psychiatry, 122, 705-10.

Seltzer, M. (1971). The Michigan Alcoholism screening test: A quest for a new diagnostic instrument. American Journal of Psychiatry, 127, 1653-1658.

Seltzer, M., Vinokur, A., & van Rooijan, L. (1975). A self-administered Short Michigan Alcoholism Screening Test (S.M.A.S.T.). Journal of Studies on Alcohol, 36, 117-126.

Serin, R. C., & Amos, N. L. (1995). The Role of Psychopathy in the Assessment of Dangerousness. International Journal of Law and Psychiatry, 18(2), 231-238.

Serin, R. C., Malcolm, P. B., Khanna, A., & Barbaree, H. E. (1994). Psychopathy and Deviant Sexual Arousal in Incarcerated Sexual Offenders. Journal of Interpersonal Violence, 9(1), 3-11.

Sugarman, P., Dumughn, C., Saad, K., Hinder, S., & Bluglass, R. (1994). Dangerousness in Exhibitionists. Journal of Forensic Psychiatry, 5(2), 287-296.

Tabachnick, B. G., & Fidell, L. S. (1989). Using Multivariate Statistics. (2 ed.). New York: Harper & Row.

Walker, N., & McCabe, S. (1973). *Crime and Insanity in England. Vol 2, New Solutions and New Problems. (Vol. 2)*. Edinburgh: Edinburgh University Press.

Weinrott, M. R., & Saylor, M. (1991). Self-report of crimes committed by sex offenders. Journal of Interpersonal Violence, 6(3), 286-300.

West, D. J. (1987). *Sexual Crimes and confrontations: a study of victims and offenders*. In Aldershot & Hants (Eds.) : Gower.

Wong, S. (1988). Is Hare's Psychopathy Checklist reliable without the interview? Psychological Reports, 62(3), 931-934.

Table 1

Age, Education, Psychological Test Scores, Phallometric Measures and Criminal Offense History of Recidivist and Nonrecidivist Exhibitionists

	Sexual Recidivism (a)		Violent Recidivism (b)		Criminal Recidivism (c)		<i>t</i> or <i>F</i> ²	<i>df</i>	<i>p</i>
	yes	no	yes	no	yes	no			
	29.85±11.21 (26)	31.49±9.66 (195)	28.85±9.96 (39)	31.82±9.76 (182)	29.04±9.00 (75)	32.47±10.12 (146)	a) .800 b) 1.72 c) 2.48	a) 219 b) 219 c) 219	a b c
	11.08±1.72 (24)	11.97±3.04 (178)	11.09±1.85 (35)	12.02±3.08 (167)	10.78±2.10 (69)	12.43±3.14 (133)	a) 2.11 b) 2.38 c) 4.43	a) 45.5 b) 79.4 c) 187.5	a b c
ogica									
ichigar lcohol ng Te:	5.00±12.07 (11)	10.09±15.54 (118)	11.50±16.87 (18)	9.36±15.10 (111)	16.57±19.13 (35)	7.09±12.81 (94)	a) 1.06 b) -.55 c) -2.72	a) 127 b) 127 c) 45.8	a b c
Durke ostility ventor	26.44±12.48 (25)	27.99±11.32 (184)	27.86±11.75 (37)	27.80±11.41 (172)	30.51±11.46 (71)	26.42±11.23 (138)	a) .64 b) -.03 c) -2.48	a) 207 b) 207 c) 207	a b c
rogati Sexual tioning ventor	33.00±13.01 (24)	36.51±13.45 (179)	32.43±12.07 (35)	36.86±13.59 (168)	33.59±12.80 (69)	37.39±13.59 (134)	a) 1.21 b) 1.79 c) 1.93	a) 201 b) 201 c) 201	a b c
pathy st- R	17.47±10.07 (24)	14.54±8.29 (166)	18.83±9.27 (35)	14.02±8.17 (155)	18.82±8.62 (69)	12.68±7.72 (121)	a) -1.57 b) -3.07 c) -5.05	a) 188 b) 188 c) 188	a b c

Table 1 (Continued)

	Sexual Recidivism (a)		Violent Recidivism (b)		Criminal Recidivism (c)		<i>t</i>	<i>df</i>	<i>p</i>
	yes	no	yes	no	yes	no			
Metric Measure									
Female Index	1.58±1.85 (13)	1.38±1.72 (99)	1.58±1.78 (18)	1.37±1.73 (94)	1.90±2.39 (39)	1.19±1.44 (73)	a) -.39 b) -.47 c) -1.68	a) 110 b) 110 c) 53.2	a) b) c)
Female Assault Index	0.65±0.56 (13)	0.74±0.75 (98)	0.57±0.51 (18)	0.76±0.76 (93)	0.70±0.69 (39)	0.74±0.76 (72)	a) .42 b) 1.01 c) -.31	a) 109 b) 109 c) 109	a) b) c)
Female Rape Index	0.66±1.02 (24)	0.52±0.66 (172)	0.62±0.85 (37)	0.51±0.65 (159)	0.63±0.83 (73)	0.49±0.66 (123)	a) -.89 b) -.87 c) -1.32	a) 194 b) 194 c) 194	a) b) c)
Female Maltreatment Index	0.17±0.32 (25)	0.14±0.29 (170)	0.13±0.26 (38)	0.15±0.30 (157)	0.12±0.28 (73)	0.16±0.31 (121)	a) -.37 b) .26 c) .87	a) 193 b) 193 c) 192	a) b) c)
of previous charge:									
Victims (CPIC)									
Sexual	0.85±1.69 (26)	0.26±0.87 (195)	0.72±1.39 (39)	0.18±0.52 (182)	1.11±2.49 (75)	0.19±0.91 (146)	a) -1.73 b) -2.39 c) -3.08	a) 26.8 b) 40.3 c) 84.3	a) b) c)
Violent	1.15±2.48 (26)	0.45±1.12 (195)	0.97±1.74 (39)	0.34±0.84 (182)	1.52±2.93 (75)	0.31±1.25 (146)	a) -1.44 b) -2.24 c) -3.42	a) 26.4 b) 41.8 c) 88.0	a) b) c)
Criminal	5.04±8.30 (26)	2.21±4.95 (195)	4.97±7.16 (39)	1.86±4.33 (182)	6.19±9.61 (75)	1.05±3.38 (146)	a) -1.70 b) -2.62 c) -4.49	a) 27.4 b) 44.1 c) 83.6	a) b) c)

I- test

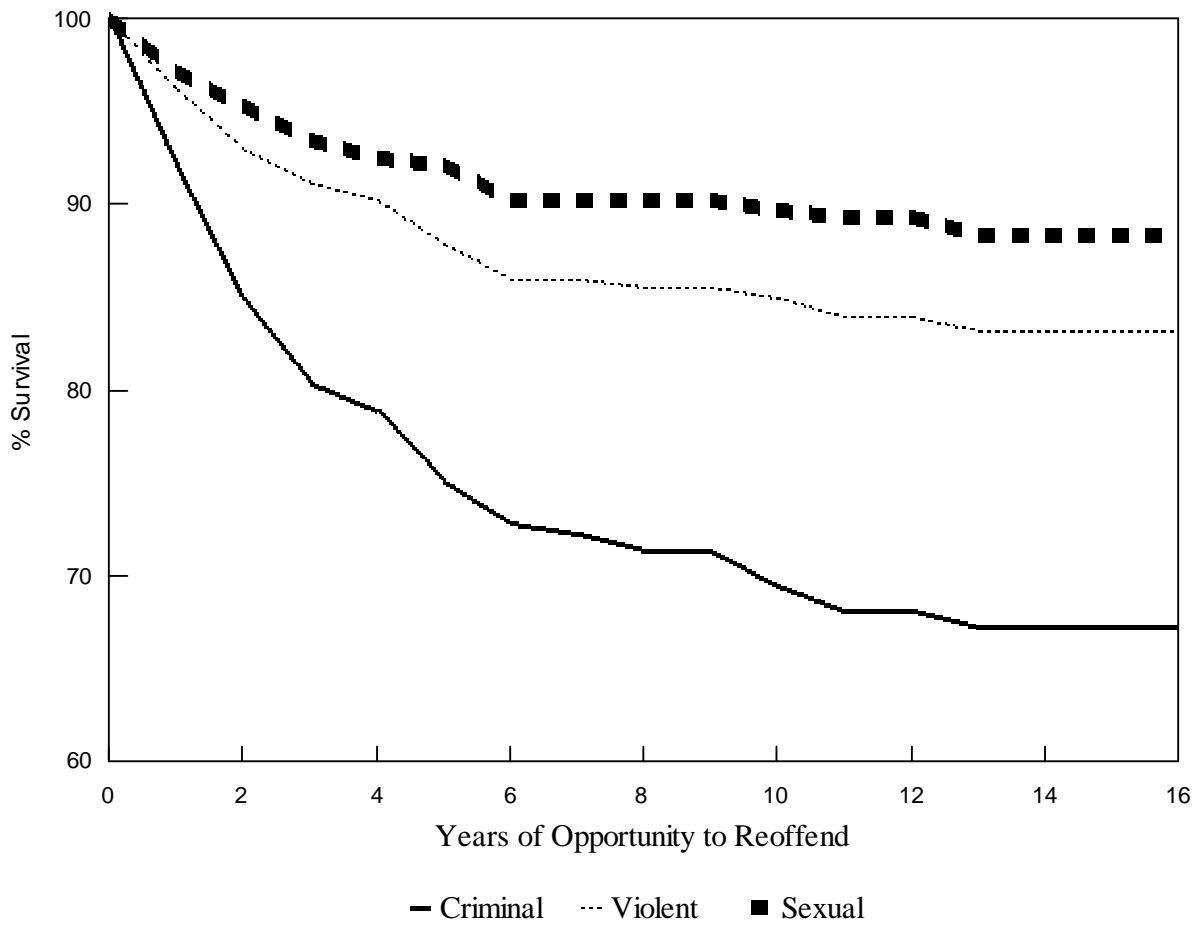


Figure 1. Survival Graph for Sexual, Violent and Criminal Recidivism

	(12)	(20)			
Number of previous charges and convictions (CPIC)					
Sexual	2.43±3.90 (14)	0.58±0.95 (26)	-0.18	13.8	.051 ¹
Violent	3.43±4.70 (14)	0.58±0.95 (26)	-2.24	13.6	.021 ¹
Criminal	9.64±9.84 (14)	3.50±6.41 (26)	-2.11	19.1	.025 ¹

¹ one-tail t- test