Recidivism in Convicted Rapists

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Factors associated with recidivism in 86 men convicted of rape were studied. These men had been out of prison for up to 12 years (mean, 7.6 years). The majority of the men had been assessed in a sexual behaviors clinic of a general psychiatric hospital at the time of their conviction. Almost 50 percent of the group had committed some offense by the fifth year out of prison. The recidivism rates for sexual, violent, and any criminal recidivism were 16 percent, 26 percent, and 53 percent, respectively. The ability to predict sexual and violent recidivism in this population of rapists was rather poor. More sexual recidivists, compared with nonrecidivists, had been removed from their family home prior to age 16. Violent recidivists compared with nonrecidivists were also more frequently removed from their homes prior to 16 years of age, and they showed significantly more problems with alcohol. In terms of any criminal recidivism, recidivists compared with nonrecidivists were younger and scored higher on the Michigan Alcohol Screening Test (MAST). They also had more previous charges and/or convictions for violent offenses and more charges and/or convictions for any criminal acts. The combination of age and MAST scores was able to predict 92.6 percent of the nonrecidivists and 53.3 percent of the recidivists. The outstanding feature of the total group of rapists was their poor sexual adjustment as indicated on the Derogatis Sexual Functioning Inventory, on which they scored at approximately the seventh percentile of the population at large. There was also an indication that rapists have problems with hostility, as measured by the Buss-Durkee Hostility Inventory. Furthermore, the range of scores on the MAST indicated that the total group of rapists has serious problems with alcohol. The inability of phallometric assessments and psychopathy as measured by the Psychopathy Checklist-R to predict recidivism are discussed.

Traditionally, the term rape has referred to forced penile-vaginal penetration without consent. The legal requirement to demonstrate forced vaginal penetration was sufficiently problematic to the Canadian courts that the law was changed and the offense of rape no longer exists. Three different crimes of sexual assault (common assault, assault with weapon or causing bodily harm, aggravated assault), each based on the amount of force used in the assault, were instituted as the replacement charge to rape, and forced penile-vaginal penetration is not a requirement for these offenses.[1] Since this article will be dealing with considerable research

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from Canada as well as other countries, the terms rape and sexual assault will be used interchangeably herein.

Reports indicate that between 10 and 20 percent of adult females have been victims of sexual assault.[2,3] Official accounts are likely an underrepresentation in that evidence suggests that as few as eight percent of rape victims report the offense.[4,5] The magnitude of these numbers indicates that there are a significant number of men who perpetrate this type of sexual violence. Several large surveys from the United States, New Zealand, and South Africa reveal that from four to seven percent of men admit committing acts amounting to rape or attempted rape.[6] In the Canadian federal correctional system, which houses criminals with sentences of more than two years, more than 50 percent of the 3,875 sex offenders have been convicted of sexual assault against women.[7] Aside from the resounding emotional damage to victims, their families, and communities at large, these offenses represent a tremendous financial burden to society. Freeman-Longo and Knopp[8] have estimated the judicial costs alone for a single sexual offender to be approximately $200,000, while those for a life conviction exceed $600,000. 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 criminal justice and health care systems.

A number of recent studies have endeavored to identify variables that 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 the conditions of parole. The importance of such empirically based information is highlighted by the relative inability of clinical judgment to accurately predict recidivism.[9–11]

Several reports have addressed methodological issues related to recidivism research and will not be detailed here.[10–14] Definition of recidivism, length of follow-up, population samples, and whether or not offenders have participated in treatment programs have been implicated as important factors that influence recidivism rates. Quinsey *et al.*[14] suggest that ideal recidivism studies would have follow-up periods of at least five years and would define recidivism to include rearrests and reconvictions for sexual and nonsexual offenses. To illustrate, Hanson and Bussière,[10] in a recent meta-analysis, reported very different recidivism rates for rapists when sexual, violent nonsexual, or any type of offense were compared. Two recent studies provide good examples of such research. Rice, Harris, and Quinsey[15] examined recidivism in 54 rapists from a maximum security psychiatric facility over a follow-up period of approximately 64 months. The failure rates for sexual offenses, for violent offenses, or for any offenses were 28 percent, 43 percent, and 53 percent, respectively. Sexual recidivism and violent recidivism were predicted by phallometrically measured interest in nonsexual violence and degree of psychopathy. Proulx

et al.,[6] in a less secure psychiatric facility that includes outpatients, reported reoffense rates for sexual offense, any violent offense, and any criminal offense to be 21 percent, 36 percent, and 51 percent, respectively, for a group of 113 rapists. Although none of the variables in this study were related to sexual reoffending, age and history of violence were related to violent reoffending. The number of previous criminal charges and age were predictive of recidivism for any criminal offense.

In virtually all studies of recidivism in rapists, the predictor variables have been static. That is, they are historical and unchangeable factors such as age, demographics , and offense history at the time of the index offense. These factors cannot be affected by personal maturity, treatment, or other vehicles of change. As a result, there has been a call for the study of the role of dynamic factors in recidivism. There has been some suggestion that motivation for, or completion of treatment[12] may be dynamic factors that moderate recidivism.[10] However this research is fraught with methodological difficulty making interpretation tentative.[10]

The present study attempts to add to the body of literature related to recidivism in rapists. Logistics permitted only the one-time evaluation of static variables and measures of psychological functioning. The major difference in the present investigation is related to the subjects under consideration. To date, most studies have examined subjects who are presently incarcerated or only recently released from correctional institutions, including maximum security psychiatric hospitals. Thus, the resulting data may not be representative of all rapists coming to the attention of the courts and may be a less accurate reflection of recidivism factors for all apprehended rapists. In the present investigation, a group of consecutive court referrals to a large Canadian clinic were studied. Approximately 63 percent of these men were assessed before either their conviction or sentencing date and 33 percent shortly after their release. A variety of well-kown and validated psychological tests were used, in addition to DSM psychiatric diagnoses, phallometric assessments, and documented police records.

It is recognized that the recidivism criteria presently utilized undoubtedly underestimate the true rate of reoffending. Consequently any references to absolute recidivism rates should be considered underestimates. To counter the fact that only a minority of such acts come to the attention of the criminal justice system, in the present investigation any charge or conviction was counted as an indication of criminal activity. Recidivism was divided into three categories in a fashion similar to other recent studies, in which 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 nonsexual violent offenses or sexual offenses, and criminal recidivism was defined as any charge or conviction noted in the police records. 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

Table 1
Demographic Characteristics, Self-Reports, and File Information Describing Rapists[a]

Variables	Sexual Recidivism (a)		Violent Recidivism (b)		Criminal Recidivism (c)				
	Yes	No	Yes	No	Yes	No	*t* or χ^2	*df*	*p*<
Age	29.1 ± 9.7 (14)	29.6 ± 8.3 (71)	28.5 ± 8.2 (22)	29.9 ± 8.6 (63)	27.4 ± 6.5 (45)	31.9 ± 9.8 (40)	c, −2.48	83	.015
IQ	89.1 ± 17.5 (13)	88.8 ± 13.1 (48)	90.6 ± 16.1 (18)	88.1 ± 13.1 (43)	89.1 ± 13.6 (36)	88.5 ± 14.7 (25)			
Education	9.0 ± 4.0 (13)	10.1 ± 2.7 (65)	9.1 ± 3.4 (20)	10.2 ± 2.8 (58)	9.7 ± 2.8 (43)	10.1 ± 3.2 (35)			
Ever married[b]	28.6 (4)	34.7 (25)	31.8 (7)	34.4 (22)	28.9 (13)	39.0 (16)			
Stranger relationship to victim	72.7 (8)	41.8 (23)	58.8 (10)	42.9 (21)	55.6 (20)	36.7 (11)			
History of drug abuse	61.5 (8)	66.2 (45)	57.1 (12)	68.3 (41)	72.7 (32)	56.8 (21)			
History of suicidal behavior	7.7 (1)	36.4 (24)	25.0 (5)	33.9 (20)	31.0 (13)	32.4 (12)			
History of violence	46.2 (6)	62.5 (40)	50.0 (10)	63.2 (36)	65.1 (28)	52.9 (18)			
Family history of drug abuse	0 (0)	6.5 (4)	0 (0)	7.4 (4)	0 (0)	11.4 (4)			
Family history of mental illness	16.7 (2)	23.4 (15)	25.0 (5)	21.4 (12)	27.5 (11)	16.7 (6)			
Family history of violence	66.7 (6)	55.6 (30)	60.0 (9)	56.3 (27)	66.7 (20)	48.5 (16)			
Family history of criminality	0 (0)	8.1 (5)	0 (0)	9.3 (5)	5.6 (2)	8.3 (3)			
Intact family	50.0 (6)	52.9 (36)	50.0 (10)	53.3 (8)	50.0 (20)	55.0 (22)			
Physical abuse <16	55.6 (5)	41.1 (23)	53.3 (8)	40.0 (20)	53.3 (16)	34.3 (12)			
Sexual abuse <16	14.3 (2)	36.1 (26)	22.7 (5)	35.9 (23)	28.9 (13)	36.6 (15)			
Placed outside of the home <16	75.0 (6)	34.8 (23)	60.0 (9)	33.9 (20)	48.6 (17)	30.8 (12)	a, 4.83	1	.028
							b, 3.42	1	.064

[a] The number of subjects in analyses may differ due to missing or uninterpretable data.
[b] In Tables 1, 2, and 3, for categorical data the percentage of subjects is presented first, followed by the number of subjects in parentheses.

previous recidivism research with rapists.[15, 16]

Method

Subjects All of the 85 subjects were assessed at the Sexual Behaviors Clinic (SBC), Royal Ottawa Hospital, between 1982 and 1992. This clinic serves as the major assessment unit for Eastern Ontario and as a teaching hospital for the University of Ottawa. All subjects were 18 years of age or older at the time of their offense and had coerced or forced sexual activity on an unrelated female age 16 or older.

Procedures The assessment process at the SBC routinely includes several components. Upon arrival at the clinic, a psychiatric interview was conducted by a staff psychiatrist. After a second interview, a diagnosis was made according to the DSM (DSM-III and DSM-III-R),[17, 18] and the subject's written consent was obtained for completion of all questionnaires and phallometric testing, with the results to be used in research. The demographic and personal history data collected are presented in Table 1. The perpetrator's degree of sexual violence in the index offenses was rated by the clinician on an incremental three-point scale (the Sexually Aggressive Scale (SAS): (1) attempted touching or touching (fondling, masturbation, and/or kissing); (2) serious assault (genital and/or anal and/or oral penetration); (3) sexual assault with excessive violence (use of violence, weapons, and/or mutilation of body). Corroborating information was generally available from police reports and witness statements. The diagnoses were made prior to phallometric or psychological testing.

Sexual Functioning The Derogatis Sexual Functioning Inventory (DSFI) is a self-report designed to assess general and specific dimensions of sexual functioning with higher scores reflecting better functioning.[19, 20] Therefore, the DSFI collects information using numerous items at once to grasp "the fundamental components judged essential to effective sexual behavior" (p. 117). The 10 subscales in the DSFI 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 a global measure derived by summing the 10 subtest scores and thus provides an overall measure of an individual's level of sexual functioning.

The DSFI has been used with large nonforensic samples, but its use with sex offenders is limited. Pawlak *et al.*,[21] using the DSFI, found that extrafamilial child molesters endorsed more fantasy themes than did the incestuous offenders. However, incestuous offenders scored higher on experience and satisfaction. There is some suggestion that sex offenders show high levels of sexual dissatisfaction.[22] In an unpublished study at our clinic, all DSFI subscales except the Sexual Fantasy distinguished a group of rapists who admitted to their crimes from a nonoffender comparison group. In each instance the comparison group indicated better functioning.[23]

Hostility The Buss-Durkee Hostility

Inventory (BDHI) is a self-report that contains 75 true-false statements that provide a measure of seven constructs representing general hostility. Higher scores indicate that the respondent has endorsed more hostile items. 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 construct validation evidence to support this widely used inventory.[24–27] A total score of 38 and above is considered high according to Buss and Durkee.[24] Research has found that, among sex offenders, BDHI scores for violent rapists have been significantly higher than those for nonoffending controls.[28] In an unpublished study at our clinic, which compared a group of rapists who admitted to their crimes and a normal control group, the scales of Indirect Aggression, Irritability, Resentment, Suspicion, Guilt, and the total score distinguished the two groups. In each instance rapists rated themselves as demonstrating more hostility.[23]

Alcohol Abuse The Michigan Alcoholism Screening Test (MAST), a 24-item self-report inventory, is used to identify incidents or behaviors indicative of alcohol abuse.[29–31] The validity and reliability of this instrument are well established.[29, 30] The internal consistency has a reported overall alpha coefficient of .87 and a validity coefficient of $R = .79$ (gamma = .95), and is relatively unaffected by age or denial of socially unacceptable characteristics.[32, 33] Total scores of five or six are considered suggestive of alcohol problems and a score of seven or higher is considered strongly indicative of alcohol abuse.[34] The MAST has been found to correlate with DSM-III-R criteria for alcohol dependence.[32] The MAST has been extensively used as a screening tool for alcoholism, and many studies have utilized samples of sex offenders.[28, 34–36]

Psychopathy The Psychopathy Checklist-Revised (PCL-R) consists of 20 clinical rating scales designed to assess behaviors and personality characteristics considered fundamental to psychopathy.[37] 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.[38] Valid PCL-R ratings can be made on the basis of high quality archival information.[39, 40] The PCL-R is beginning to receive widespread use in sex offender research.[40, 41] 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 behavior, and corrupted lifestyle.[42, 43] In Hare *et al.*,[43] using five prison samples ($n = 925$) and three forensic samples ($n = 356$), 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.[37, 42, 43]

In the present investigation, the PCL-R was completed from descriptive material contained in institutional files by two research assistants. The PCL-R was scored only from files in which there were high quality archival data, by two individuals fully trained in its use.[37] A random sample of 100 clinical files were independently rated by each researcher, resulting in satisfactory interrater reliability correlation ($R = .88$, $p < .0001$).

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 monitored by a Farrell Instruments CAT200 (Grand Island, NE). These data were then processed on an IBM-compatible computer for storage and printout.

The order of stimulus presentation, held constant for all subjects, was computer controlled using MPV-Forth, version 3.05, software provided by Farrell Instruments. Videotapes were presented first, followed by a set of slides. Finally, subjects were presented with one or more of three series of audiotapes according to the nature of the subject's sexual offense. Only the results of arousal to the audiotape stimuli will be presented in this article. The audiotapes consisted of 120-second vignettes that described sexual activities varying in age, gender, and degree of consent, coercion, and/or violence portrayed. Each subject was presented with a full set containing one vignette from each category following instructions to respond normally, that is to allow himself to become aroused if he felt aroused.[44] A second set was presented with instructions to "suppress" their arousal; however, these data will not be reported.

The audiotape series used to identify sexual attraction to rape included two scenarios of two-minute duration for each of three categories: (1) consenting sex with adult female; (2) rape of adult female; (3) nonsexual assault of adult female. 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 the nonsexual assault stimulus by the response to an adult consenting stimulus.

Criminal Offense History Offense information was gathered from the Canadian Police Information Center (CPIC), a national database of criminal charges and convictions including Interpol reports from the Royal Canadian Mounted Police. CPIC records contain the individual's criminal history and include details such as the date of charge or conviction, the nature of the offense, the disposition of the incident (convicted, charges withdrawn, stay of proceedings, etc.), and sentence/penalty imposed in cases of convictions. For an offender to be considered eligible for recidivism, he must have been free to commit a crime; he could not have been incarcerated or in secure custody for reasons of mental illness. When there was evidence that an offender was incarcerated but a release date was unavailable from CPIC records or from the federal and provincial correctional systems, the CPIC record was used to estimate the first

day of eligibility. This date was calculated based on an offender having served two-thirds of his sentence (i.e., mandatory release). The offender then remained "at risk" until the date he was charged or convicted of a new offense, as indicated by the CPIC record.

Treatment of Data Before performing statistical tests, the data were screened to ensure that the assumptions underlying the 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 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.[45] The values presented in the tables are based on scores after transformation.

Results

The follow-up period for the population of rapists ranged up to 12 years after the conviction for the index offense with an average of 7.6 (SD = 3.5) years.

Sexual Recidivism As indicated in Table 1, the only significant difference between recidivists and nonrecidivists was that a significantly greater proportion of recidivists were removed from their homes prior to 16 years of age (Placed Outside of the Home, 75.0% versus 34.8%, respectively). As revealed in Table 2, the nonrecidivists, compared with the recidivists, rated themselves higher on the Body Image of the DSFI (43.5% versus 38.0%) and significantly lower on the Negativism factor of the BDHI (1.9% versus 2.7%).

Violent Recidivism As indicated in Table 1, the only difference between recidivists and nonrecidivists was a trend indicating that a greater proportion of the former were removed from their homes prior to 16 years of age (Placed Outside of the Home, 60.0% versus 33.9%, respectively). As revealed in Table 2, the recidivists, compared with the nonrecidivists, rated themselves higher on the Gender Role Definition of the DSFI (45% versus 40.9%) and on the Assault factor of the BDHI (5.5% versus 4.1%). The recidivists also admitted to more problems with alcohol as indicated by a mean score of 30.3 on the MAST compared with the nonrecidivists' mean score of 10.9.

Criminal Recidivism As indicated in Table 1, the recidivists were younger at the time of their index offense compared with the nonrecidivists (27.4 versus 31.9 years). Table 2 reveals that the recidivists, compared to the nonrecidivists, scored higher on the Indirect Aggression item of the BDHI and rated themselves on the MAST as having a greater problem with alcohol (21.9% versus 9.1%). The CPIC revealed that recidivists also had, on average, significantly more violent offenses (2.3% versus 1.3%), as well as more offenses of any type on record, prior to the index offense (criminal offenses: 7% versus 4.7%).

The small number of significant differences between recidivists and nonrecidivists in the sexual and violent categories precluded an attempt to determine which combination of factors meaningfully pre-

Table 2
Psychological Test Scores for Rapists

Variables	Sexual Recidivism (a) Yes	Sexual Recidivism (a) No	Violent Recidivism (b) Yes	Violent Recidivism (b) No	Criminal Recidivism (c) Yes	Criminal Recidivism (c) No	*t*	*df*	*p*<
DSFI									
Information	37.9 ± 11.5 (14)	38.2 ± 10.8 (67)	38.6 ± 11.2 (21)	38.0 ± 10.8 (60)	39.0 ± 10.1 (43)	37.2 ± 11.7 (38)			
Experience	41.2 ± 9.4 (14)	44.5 ± 10.9 (67)	43.0 ± 10.4 (21)	44.3 ± 10.9 (60)	42.3 ± 10.7 (43)	45.8 ± 10.5 (38)			
Sexual drive	53.0 ± 11.6 (14)	50.4 ± 11.7 (66)	54.5 ± 10.9 (21)	49.6 ± 11.7 (59)	52.8 ± 11.5 (42)	48.7 ± 11.6 (38)			
Sexual attitude	38.7 ± 7.9 (14)	40.8 ± 10.7 (67)	39.1 ± 9.1 (21)	40.9 ± 10.7 (60)	40.1 ± 9.9 (43)	40.8 ± 10.7 (38)			
Psychological symptoms	43.9 ± 9.2 (14)	43.4 ± 14.9 (66)	41.6 ± 10.0 (21)	44.1 ± 15.2 (59)	42.8 ± 2.3 (43)	44.2 ± 15.9 (37)			
Affects	38.1 ± 10.8 (14)	39.6 ± 12.3 (65)	38.3 ± 10.7 (20)	39.7 ± 12.5 (59)	39.5 ± 12.6 (42)	39.1 ± 11.5 (37)			
Gender role definition	45.4 ± 9.1 (14)	41.2 ± 7.5 (65)	45.0 ± 7.9 (20)	40.9 ± 7.7 (59)	42.8 ± 8.4 (42)	41.0 ± 7.4 (37)	b, 2.03	77	.046
Sexual fantasy	43.5 ± 12.9 (14)	46.1 ± 11.4 (66)	45.1 ± 11.4 (20)	45.8 ± 11.8 (60)	45.0 ± 10.2 (42)	46.3 ± 13.1 (38)			
Body image	38.0 ± 7.6 (14)	43.5 ± 9.5 (64)	39.8 ± 7.1 (20)	43.4 ± 9.9 (58)	42.1 ± 8.5 (41)	42.9 ± 10.4 (37)	a, −2.01	76	.049
Satisfaction	48.9 ± 11.6 (14)	50.8 ± 8.2 (65)	50.4 ± 10.7 (20)	50.6 ± 8.2 (59)	50.8 ± 9.0 (41)	50.2 ± 8.8 (38)			
Sexual Functioning Index	33.2 ± 11.1 (14)	35.1 ± 14.4 (62)	34.7 ± 12.3 (20)	34.8 ± 14.4 (56)	34.8 ± 13.8 (40)	34.8 ± 14.1 (36)			
BDHI									
Assault	5.6 ± 3.1 (14)	4.2 ± 2.5 (66)	5.5 ± 2.9 (20)	4.1 ± 2.5 (60)	4.6 ± 2.8 (42)	4.3 ± 2.5 (38)	b, 2.13	78	.036
Indirect aggression	4.7 ± 2.4 (14)	4.4 ± 2.3 (66)	4.4 ± 2.4 (20)	4.4 ± 2.3 (60)	4.0 ± 2.2 (42)	5.0 ± 2.4 (38)	c, 1.95	78	.055
Irritability	4.6 ± 3.1 (14)	4.6 ± 3.0 (66)	4.6 ± 2.8 (20)	4.7 ± 3.1 (60)	4.5 ± 2.9 (42)	4.8 ± 3.2 (38)			
Negativism	2.7 ± 1.1 (14)	1.9 ± 1.4 (66)	2.5 ± 1.2 (42)	1.9 ± 1.4 (60)	2.0 ± 1.3 (42)	2.0 ± 1.5 (38)	a, 2.11	78	.038
Verbal aggression	7.8 ± 2.8 (14)	6.5 ± 2.5 (66)	7.4 ± 2.5 (20)	6.5 ± 2.6 (60)	6.6 ± 2.7 (42)	6.9 ± 2.5 (38)			
Resentment	2.8 ± 2.4 (14)	3.1 ± 2.3 (66)	2.7 ± 2.4 (20)	3.2 ± 2.3 (60)	2.7 ± 2.1 (42)	3.3 ± 2.4 (38)			
Suspicion	4.1 ± 2.7 (14)	4.1 ± 2.8 (66)	3.9 ± 2.6 (20)	4.2 ± 2.9 (60)	4.4 ± 2.6 (42)	3.7 ± 2.9 (38)			
Guilt	4.9 ± 2.2 (14)	4.8 ± 2.5 (66)	5.1 ± 2.2 (20)	4.8 ± 2.5 (60)	4.8 ± 2.2 (42)	4.9 ± 2.7 (38)			
Total Score	32.3 ± 11.9 (14)	28.7 ± 12.1 (66)	30.9 ± 10.8 (20)	28.9 ± 12.5 (60)	28.8 ± 10.6 (42)	30.0 ± 13.7 (38)			
MAST	26.3 ± 17.9 (3)	12.6 ± 13.9 (40)	30.3 ± 15.8 (6)	10.9 ± 12.4 (37)	21.9 ± 16.7 (15)	9.1 ± 10.9 (28)	b, 3.45	41	.001
							c, 2.68	20.5	.014
PCL-R									
Factor 1	9.8 ± 4.4 (13)	10.1 ± 3.5 (63)	10.6 ± 3.9 (21)	9.9 ± 3.6 (55)	10.4 ± 3.3 (42)	9.71 ± 4.1 (34)			
Factor 2	11.8 ± 4.4 (12)	11.5 ± 4.7 (53)	12.2 ± 4.4 (19)	11.3 ± 4.7 (46)	12.5 ± 4.3 (36)	10.4 ± 4.8 (29)			
Total Score	25.2 ± 8.4 (13)	25.2 ± 8.3 (65)	26.1 ± 8.2 (21)	24.8 ± 8.3 (57)	26.7 ± 7.2 (43)	23.3 ± 9.1 (35)			

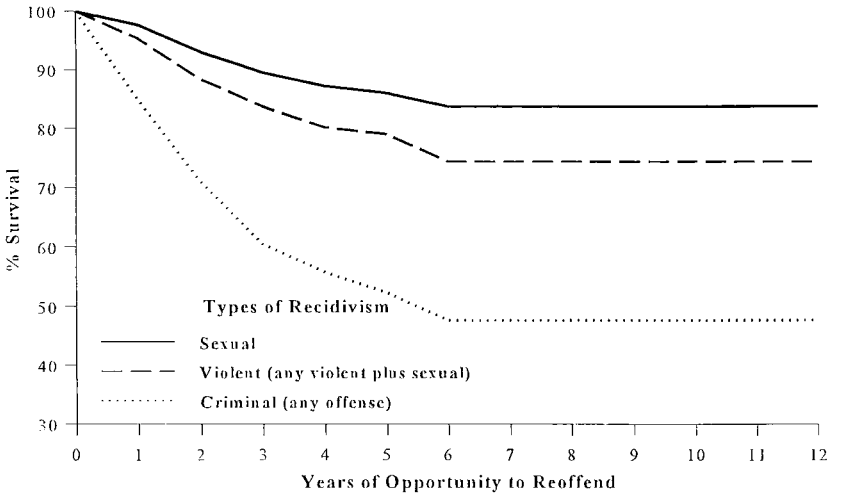

Figure 1. Survival rates of rapists.

dicted reoffending. However, the ordinal factors discriminating between the groups were used in a stepwise discriminant function analysis to assess the combination of factors that most successfully distinguished between groups in terms of criminal recidivism (Age, MAST, CPIC Violent, CPIC Criminal). The loading matrix of correlations between predictors and discriminant functions suggested that the best combination of predictors for distinguishing between recidivists and nonrecidivists were age and MAST scores. The result was a significant discriminant function: χ^2 (2, n = 42) = 8.97, $p < .011$. The procedure correctly classified 78.6 percent of the original group, 92.6 percent of the nonrecidivists, and 53.3 percent of the recidivists. This represents a rate of improvement over chance of 26.8 percent for the nonrecidivists and 19.16 percent for the recidivists.

Figure 1 describes the survival rates of the rapists. The follow-up ranged up to 12 years, averaging 7.6 (±3.8) years. The percentage of men who had been charged or convicted of a sexual, violent, or criminal offense by the 12th year was 16 percent, 26 percent, and 53 percent, respectively. As revealed by the figure, by the end of the 3rd year recidivism rates for sexual, violent, and any criminal act were approximately 10.5 percent, 16.3 percent, and 39.5 percent, respectively. By the end of the 5th year, the corresponding failure rates were 14 percent, 21 percent, and 47.7 percent.

Discussion

The nature of the population considered in the present study is central to the discussion of the findings. To date, the majority of recidivism studies have utilized samples from maximum security psychiatric hospitals or prisons. In the present study, the subjects were 86 consecutive referrals to a sexual behaviors clinic, located in the forensic unit of a large general psychiatric hospital, who had been convicted of rape. Since 63 per-

cent of these men were assessed prior to sentencing for sexual assault, the group is much more representative of the wide array of men processed through the courts than those in previously published studies. It is noteworthy, in the present group of offenders, that only 75 percent were imprisoned for their offense, 23 percent were given suspended sentences or placed on probation, 1 percent were sentenced to intermittent jail, and 1 percent were given a fine.

Any discussion of sexual offenses or recidivism must be prefaced with a comment about the fact that a substantial proportion of sex offenses remains unreported.[5] Therefore, it is expected that the present reported recidivism rates are very conservative. It is important to recall that recidivism was defined, in the present investigation, as any charge or conviction. The rates for sexual, violent, and overall criminal recidivism were 16 percent, 26 percent, and 53 percent, respectively. In two other Canadian reports of recidivism in rapists in which the definition of offenses constituting sexual, violent, and any recidivism was the same as that employed in the present study, but in which only convictions were considered for recidivism, the rates were higher—28 percent, 43 percent, and 53 percent[15]; and 21 percent, 36 percent, and 51 percent.[16] The mean number of previous charges and convictions for all crime in Proulx *et al.*[16] was approximately 15 for recidivists and 7.9 for nonrecidivists, while the corresponding figures reported by Rice *et al.*,[15] 11 and 6, were about twice as high as for the subjects in this study.[7,4] Given that the subjects in those other studies were incarcerated in maximum security psychiatric hospitals, it should not be surprising that they also appeared to be more criminally entrenched than the present group of men.

The predominant feature of the data for our total group of rapists is their relatively poor personal history in a wide array of domains, albeit quite similar to other rapist populations.[15,16,40] The average number of years of education of rapists in this and the other populations is considerably lower than the general population of Canadians of similar age, 85 percent of whom graduate from high school.[46] In addition, the proportion of individuals who have been in a marital or common-law relationship is also much lower than the national rate for Canadian men, which is approximately 75 percent.[47] For subjects in the present study, the rates of family violence, parental separation, and physical and sexual abuse, as well as the number of men removed from their homes before age 16, are also disturbing.

The ability to predict sexual and violent recidivism in this population of rapists was rather poor, and replicates, in general, the results of Proulx *et al.*[16] who found no differences between those who reoffended sexually and those who did not. The sexual and violent recidivists in the present study were removed from their homes at almost twice the rate of the nonrecidivists. In addition, the violent recidivists scored significantly higher on alcohol problems as rated by the MAST than those who did not reoffend. The statistically significant differences found on the DSFI and the BDHI must be viewed with caution. The lack of conver-

gent findings from other categories on these tests suggests that they may be spurious.

In terms of any criminal recidivism, several items discriminated between those who reoffended and those who did not. Of note, the recidivists were younger, had more alcohol abuse in their lives, had committed more violent acts, and had a history of being charged with more general criminal offenses. These findings are generally similar to those reported by others.[10, 15, 16] In the present study, the combination of age and MAST scores was able to predict 92.6 percent of the nonrecidivists and 53.3 percent of the recidivists. However, one should view this predictive ability with some caution if considering prediction in other populations. There is considerable evidence such statistical modeling is highly sensitive to the particular population under consideration.[10, 14, 48]

Psychometric tools have generally shown an inability to discriminate between recidivists and nonrecidivists in sex offenders.[9, 10, 16, 22] Therefore, the inability of the DSFI and the BDHI to identify recidivists should not be surprising, because these tests were not designed to be used with forensic populations. It is possible that such tests tap necessary conditions for sexual aggression to occur, but that they may be insensitive to other factors, such as cognitive distortions, availability of victims, and substance abuse, that need to be present. These factors may act as disinhibitors allowing sexual offenses to occur. As an example, although not differentiating between recidivists and nonrecidivists, the average DSFI Sexual Functioning Index scores of 34 for the total group of rapists in the present study places them in approximately the seventh percentile of the population at large.[49] This suggests that the sexual functioning of rapists is far from normal. In addition, several of the items on the BDHI are in the clinical range (5.6 on Assault, 4.1 on Suspicion, and 4.9 on Guilt), suggesting rapists may have ingrained problems with hostility. The range of scores on the MAST also indicate that rapists have serious problems with alcohol, since scores higher than seven are considered highly indicative of alcoholism.[32, 34]

The ability of phallometric measures to distinguish between rapists and normal controls and/or other sex offenders has been questioned[50, 51] (Table 3). Factors related to stimulus sets, procedures, statistical transformations, and subject selection have been implicated in the conflicting findings.[52] Phallometric assessment has also failed to be a meaningful predictor of recidivism for rapists.[10] Of the two other Canadian recidivism studies with rapists, one reported that phallometric scores were related to recidivism[15] but the other was unable to replicate this finding.[16] Differences in measurement procedures may have lead to these discrepant findings, but more likely, dissimilarities in the populations contributed to the difference. Less expected was the inability of psychopathy as measured by the PCL-R to distinguish between recidivists and nonrecidivists in the present group of rapists. The PCL-R has been found to predict recidivism in a number of offender populations,[48] and it has been sen-

Table 3
Degree of Sexual Violence Used in the Index Offense, Number of DSM Diagnoses, Phallometric Responses, and Offense History of Rapists

	Sexual Recidivism (a)		Violent Recidivism (b)		Criminal Recidivism (c)				
Variables	Yes	No	Yes	No	Yes	No	t or χ^2	df	$p<$
Sexually Aggressive scale									
Attempt or touching Fondling, masturbation, and/or kissing	38.5 (5)	13.2 (9)	25.0 (5)	14.8 (9)	14.3 (6)	20.5 (8)			
Serious assault Genital and/or anal and/or oral penetration	7.7 (1)	14.7 (10)	5.0 (1)	16.4 (10)	9.5 (4)	17.9 (7)			
Assault with excessive violence Use of violence, weapons, and/or mutilation of body	53.8 (7)	72.1 (49)	70.0 (14)	68.9 (42)	76.2 (32)	61.5 (24)			
Number of DSM diagnoses[a]	.9 ± 1.1 (14)	.9 ± 1.4 (72)	.6 ± 1.0 (22)	1.0 ± 1.5 (64)	.7 ± 1.2 (45)	1.1 ± 1.5 (41)			
Phallometric responses									
Rape index	.6 ± .7 (13)	.7 ± .7 (68)	.6 ± .7 (21)	.7 ± .7 (60)	.6 ± .58 (42)	.7 ± .74 (39)			
Assault index	.3 ± .4 (13)	.2 ± .3 (67)	.3 ± .4 (21)	.2 ± .3 (59)	.2 ± .34 (42)	.2 ± .31 (38)			
Highest rape or assault index	.6 ± .7 (13)	.7 ± .7 (68)	.6 ± .7 (21)	.7 ± .7 (60)	.6 ± .58 (42)	.7 ± .74 (39)			
Number of previous offenses (CPIC)[b]									
Sexual	.9 ± 1.2 (14)	.4 ± .9 (71)	.6 ± 1.1 (22)	.4 ± .9 (63)	.6 ± 1.0 (45)	.3 ± .8 (40)			
Violent	2.5 ± 2.7 (14)	1.7 ± 2.4 (71)	2.2 ± 2.7 (22)	1.7 ± 2.4 (63)	2.3 ± 2.8 (45)	1.3 ± 1.9 (40)	c, 2.04	78.3	.022
Criminal	6.0 ± 6.1 (14)	5.9 ± 6.3 (71)	6.1 ± 6.2 (22)	5.8 ± 6.3 (63)	7.0 ± 6.5 (45)	4.7 ± 5.7 (40)	c, 1.71	84	.045

[a] Individual DSM categories were also analyzed without significant findings.
[b] One-tailed t tests.

sitive to recidivism in populations of child molesters and rapists.[10, 14, 15] The inability of the PCL-R to predict recidivism in the present population may be due to the distribution of scores. Rice *et al.*[15] reported mean PCL-R scores of 21.53 and 15.73 for recidivists and nonrecidivists, respectively, in their population of rapists. In the present study, the corresponding PCL-R scores were 26.7 and 23.3. It is not clear why our population, which should be less pathological, were rated higher on psychopathy. The inability of DSM diagnoses to distinguish recidivists from nonrecidivists replicates the findings of others[14,15] and may speak to the fact that such diagnoses are not sensitive to factors related to recidivism in this population.

A shortcoming in the present investigation was that only static features, were considered in relation to recidivism. Recently, there has been interest in the role of dynamic features such as treatment response in recidivism.[10, 54] Unfortunately, the evaluation of the influence of treatment on recidivism rates was beyond the scope of the present study. Nevertheless, the results are quite revealing. In the present investigation, because most of the rapists were assessed prior to incarceration as opposed to after being imprisoned, they are a more representative group than rapists used in most investigations. The results make it clear that even though this group of rapists is less mentally ill than those from maximum security psychiatric hospitals and are less criminogenic than those from the federal penitentiary system, as a group they are very problematic. Almost 50 percent of this group had returned to prison by the end of the fifth year. They seem to share a very disturbed childhood marked by violence, family disruption, and removal from the home, considerable alcoholism, difficulty with managing hostility, poor sexual functioning a great deal of psychopathy. It is also evident they have a substantial criminal history. In general, the results support the greater body of literature suggesting that it is difficult to find factors that predict any type of recidivism in rapists, other than those relating to general criminality.[10,16] There are a few reports of other factors, such as deviant sexual arousal, that have shown such an ability, but these come from men in a maximum security psychiatric hospital, suggesting that such variables are useful only with the most disturbed groups of rapists.[11, 15]

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