Dynamic Predictors Of Sexual Recidivism

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Content

Executive Summary

Given the importance of effective community supervision of sexual offenders, there is surprisingly little research indicating when sexual offenders are likely to re-offend. In the present study, information on dynamic (changeable) risk factors was collected through interviews with community supervision officers and file reviews of 208 sexual offense recidivists and 201 non-recidivists. The sexual offenders were selected from all

regions of the Correctional Service of Canada and from all provinces (except P.E.I.). The recidivists had committed a new sexual offense while on some form of community supervision (probation, parole, mandatory supervision). The non-recidivists were matched to the recidivists on victim type, criminal history, geographical region and jurisdiction. The study examined approximately equal numbers of rapists, boy-victim child molesters and girl-victim child molesters.

Despite efforts to match the recidivistic and non-recidivistic groups, some differences remained in static, historical variables. In comparison to the non-recidivists, the recidivists had a greater history of sexual deviance, such as diverse types of victims, stranger victims, juvenile offenses and paraphilias (e.g., exhibitionism, cross-dressing). As well, the recidivists showed more signs of an antisocial lifestyle than did the non-recidivists. The recidivists were more likely to meet criteria for antisocial personality, psychopathy (PCL-R), and had higher scores on objective risk scales (SIR and VRAG).

Officer interviews indicated that the recidivists displayed more problems while on supervision than did the non-recidivists. In particular, the recidivists were generally considered to have poor social supports, attitudes tolerant of sexual assault, antisocial behaviour, poor self-management strategies and difficulties cooperating with supervision. The overall mood of the recidivists and non-recidivists was similar, but the recidivists showed increased anger and subjective distress just prior to re-offending.

More of the recidivists than the non-recidivists were using sex drive reducing medications (anti-androgens). A possible explanation is that officers insisted on medication only for the most severe cases. The study was not intended to test the efficacy of hormonal treatments; nevertheless, officers should be aware that sexual offenders still present considerable risk for sexual offense recidivism after the introduction of sex drive reducing medication.

The offenders' attitudes and behaviour during supervision continued to be strongly associated with recidivism even after controlling for pre-existing differences in static risk factors (overall $R = .60$, $p < .001$). The dynamic factors identified in the interview data were reflected (to a lesser extent) in the officers' contemporaneous case notes, which suggests that the interview findings cannot be completely attributed to retrospective recall bias.

Carefully monitoring the risk indicators identified in this study should help officers to provide graduated and responsive interventions well before the point of no return.

Dynamic Predictors of Sexual Recidivism

Risk assessment for sexual offenders is, and will remain, an important issue for the criminal justice system. Given the pervasive "get tough on crime" attitude, public concern is often framed as a need to keep sexual offenders in prison for long periods. Economic, ethical, humanitarian and practical concerns, however, rule out the possibility of indefinite detention for all sexual offenders. The purpose of this study was to collect information to improve community supervision practices and help identify those offenders who can (or cannot) be safely managed in the community.

Recidivism risk prediction

There has been considerable research identifying the factors that predict general criminal recidivism (Bonta, Law & Hanson, 1998; Gendreau, Little & Goggin, 1996). Risk predictors can be broadly divided into two general types: static (unchangeable) and dynamic (changeable) risk factors (Bonta, 1996). The dynamic factors can be further divided into stable dynamic and acute dynamic factors. Different types of risk assessments require the consideration of different types of risk factors. Static, fixed predictors, such as gender or criminal record, can be useful for evaluating long-term risk potential (e.g., dangerous offender applications). Stable dynamic factors, such as personality disorders or deviant sexual preferences, may also be used for long-term risk assessments, but they are crucial for assessing enduring changes (e.g., treatment outcome, parole release). In contrast, acute, rapidly changing factors, such as negative mood or alcohol intoxication, can signal the timing of reoffense, and are particularly useful for monitoring risk during community supervision.

Gendreau et al.'s (1996) recent meta-analytic review found that dynamic factors predicted general recidivism as well or better than static risk factors. Criminal companions and "criminogenic needs" (e.g., antisocial attitudes, current employment/education problems) were among the strongest recidivism predictors (average correlations in the .18 to .21 range). The importance of dynamic factors for general criminal recidivism has been supported by other meta-analytic reviews (e.g., Law & Motiuk, 1998) and by studies specifically designed to examine rapidly changing risk factors (Zamble & Quinsey, 1997).

Predictors of sexual offense recidivism

Although the importance of dynamic factors for predicting general criminal recidivism is firmly established, it is not clear that same factors necessarily predict sexual recidivism. Sexual offending appears to be a distinct type of crime with its own set of risk factors (Hanson, Scott & Steffy, 1995; Hanson & Bussière, 1998). Because the dynamic predictors of general (primarily non-sexual) recidivism have been addressed elsewhere (Andrews & Bonta, 1994, 1995; Bonta, 1996; Gendreau et al., 1996; Quinsey, Coleman, Jones, & Altrows, 1997; Zamble & Quinsey, 1997), the present study focused only on the predictors of sexual offense recidivism.

A recent meta-analytic review of follow-up studies identified numerous individual factors that were reliably related to sexual offense recidivism (Hanson & Bussière, 1996, 1998). Almost all of these identified factors were static (e.g., offense history, victim type, age) and the remainder were highly stable (e.g., antisocial personality disorder, deviant sexual preferences). No acute dynamic factors were identified.

The follow-up studies examined by Hanson and Bussière (1996, 1998) were not designed to identify acute, rapidly changing risk factors (e.g., mood, drunkenness). The lack of research evidence connecting acute factors to recidivism does not mean that these factors are unimportant; instead, it may simply indicate the need for a different type of research design. Consequently, the present study aimed to improve our understanding of dynamic risk factors for sexual offenders by using research procedures specifically

designed to target dynamic acute risk factors.

The recidivism risk factors targeted in this study were based on social cognitive theory (e.g., Bandura, 1977; Fiske & Taylor, 1991) as applied to general criminal behaviour (e.g., Andrews & Bonta, 1994) and sexual offending (Hanson, 1996; Johnson & Ward, 1996; Laws, 1989). In this model, recidivistic sexual offenders would be expected to hold deviant schema, or habitual patterns of thought and action, that facilitate their offenses. The likelihood that an offender would invoke or enact such schema would increase if the schema were well rehearsed, were triggered by common circumstances, were considered socially acceptable in his environment, and were consistent with the offender's personality and values. Although each offender's crime cycle would be somewhat unique, certain characteristics would be expected to provide fertile ground for the development, rehearsal and enactment of deviant sexual schema or "scripts". In particular, those offenders who lacked realistic self-management strategies (e.g., exposing themselves to high risk situations, disengaging from treatment, failing to cooperate with supervision) would be expected to have the most difficulty inhibiting deviant schema.

Previous research has also suggested a number of potentially important dynamic risk factors for sexual offenders. Based on file review, Pithers and his colleagues reported that negative emotional states were common precursors to reoffending for both rapists and child molesters (Pithers, Beal, Armstrong, & Petty, 1989; Pithers, Kashima, Cummings, Beal, & Buell, 1988). Other common risk factors suggested by their review included cognitive distortions, low victim empathy, and social skills deficits. Their results are difficult to interpret, however, because there were no comparison groups of non-recidivistic offenders. As well, because only one time period was considered (the six months prior to reoffending), it is possible that many of the "immediate precursors" may actually be symptoms of enduring problems (e.g., social skills deficits, disordered sexual arousal pattern).

Further evidence that negative mood may be an acute risk factor comes from the research of Proulx, McKibben and Lusignan (1996; McKibben, Proulx & Lusignan, 1994). In their studies, in-patient sexual offenders kept ongoing records of their emotional reactions, deviant sexual fantasies, and masturbatory behaviour. These studies found that deviant sexual fantasies tended to follow episodes in which the offenders felt stressed or upset. Although these studies demonstrated a link between negative mood, deviant sexual fantasies and masturbation, the design of these studies could not directly examine the link between negative mood and sexual offending per se.

Research based on offenders' reports can provide some insight into the recidivism process, but this procedure has significant limitations. For dynamic risk factors to be useful to community supervision officers, the factors must be observable. Consequently, the risk factors targeted in our study were informed not only by theory and previous research, but also by extensive consultation (interviews, focus groups and pilot testing) with more than 60 community supervision officers across Canada.

Overview of Study

The specific design of our study followed the procedure successfully employed by

Quinsey et al. (1997) in their research on dynamic risk factors for mentally disordered offenders. This procedure involves retrospective comparisons of offenders who recidivated while on community supervision with offenders who had not recidivated. Our study involved approximately 400 sexual offenders, evenly divided among rapists, boy-victim child molesters, and girl-victim child molesters.

For the recidivists, information was collected at two time periods: six months (T1) and one month (T2) prior to recidivating. Information was collected at equivalent time periods for the non-recidivists. Such a design can provide information on the stable dynamic factors that distinguish recidivists from non-recidivists, as well as information on the acute factors that immediately precede reoffending.

For both time periods, information was collected through interviews with the supervising officers (both federal and provincial) and by examination of the officers' supervision case notes (the offenders were not interviewed). Interviews can provide detailed information, but could be influenced by recall bias. Behaviour may take on new significance after the officer knows the offender has recidivated. Case notes written before the recidivism event are not vulnerable to recall bias. Consequently, information from both interviews and note coding were considered, although each was analyzed separately.

The recidivists and non-recidivists were expected to differ on several dimensions. In particular, the recidivists were expected to have attitudes tolerant of sexual assault, unstable lifestyles, poor self-management skills, and negative social influences. Based on previous research (Pithers et al., 1988; Proulx et al., 1996), offenders were expected to display increasingly negative mood just prior to recidivating. The extent to which recidivists would have overall lower mood than the non-recidivists was unclear. Although self-esteem has been considered an important treatment target (Marshall, 1996), negative mood / self-esteem has not been related to recidivism over the long-term (Hanson & Bussière, 1996). It is possible, however, that mood is an acute, but not a stable dynamic risk factor.

Method

Subject Selection

Offenders were selected from all provincial correctional systems (except Prince Edward Island) and all regions of the Correctional Service of Canada. Given the different community supervision agreements across provinces, the offenders were supervised by provincial probation officers, provincial parole officers, or federal parole officers (case management officers). Once a recidivist was located, a non-recidivist was selected from the same geographic region and jurisdiction. The number of offenders per province was approximately proportional to each province's population.

All offenders had been convicted of a sexual offense involving physical contact with the victim (pure voyeurs and exhibitionists were excluded) and had served part of their sentence in the community (probation, parole, mandatory supervision and / or statutory release). Offenders who targeted only their biological or step children were excluded, except when the offender entered an existing family in order to access victims. Offenders

who targeted members of their extended family (e.g., nieces, grandchildren) were included.

The recidivists had committed a new sexual offense (including non-contact offenses, e.g., exhibitionism) while on community supervision during the last five years (1992-1997). A new conviction was not required, but a new sexual offense must have been documented with reasonable evidence. The following were considered sufficient evidence of a new sexual offense: a) convictions for a new sexual offense; b) charges for a new sexual offense; c) non-sexual criminal charges (e.g., B & E, assault) where there were reasonable grounds to believe that the offender intended to commit a new sexual offense; d) breaches while on supervision for sexual reasons; and e) self-disclosures by the offender that they were re-offending while on community supervision.

The non-recidivists were selected from sexual offenders who had successfully completed at least six months of community supervision. On average, the non-recidivists had completed 24 months in the community, whereas most of our recidivistic offenders had re-offended within 15 months. They were explicitly matched to the non-recidivists on victim type (boy, girl, adult) and province / geographic region (Pacific, Prairies, Ontario, Quebec, Atlantic). As well, we attempted to match the recidivists and non-recidivists on other relevant characteristics. If, for example, a recidivist had schizophrenia, we looked for a non-recidivist with schizophrenia. Similarly, if there were several non-recidivists to choose from, we selected non-recidivist cases that were higher rather than lower risk. The matching minimized pre-existing (static) differences between the recidivists and non-recidivists.

File Review Variables

A standardized coding manual was used to record background information for each case (i.e., static factors). This information was based on complete file reviews and national criminal history records obtained from the RCMP (FPS records). The background information included basic identifying information, detailed sexual offense histories, and a number of variables used to estimate pre-existing, or enduring risk for recidivism. Many of the coded items formed part of established objective risk assessment instruments.

The amount of information varied widely, so that not all variables were available for all offenders. In general, the most complete information was available for those who had served federal sentences.

Objective Risk Scales

Statistical Information on Recidivism (SIR).

(Bonta, Harman, Hann & Cormier, 1996; Nuffield, 1982). The SIR scale is an objective risk measure developed for use by the Correctional Service of Canada and the National Parole Board. It includes items related to age, marital status, and 11 items related to criminal history (e.g., history of assault, break & enter, prior imprisonment). The SIR has been a consistent predictor of recidivism among general criminal populations (Cormier, 1997). Although there has been little research using the SIR with sexual offenders, the

available research suggests that it is a good predictor of general recidivism among sexual offenders (r = .41), but a poor predictor of sexual offense recidivism (r = .09) (Bonta & Hanson, 1995). SIR scale scores were available for 84 recidivists and 90 non-recidivists. (SIR scores were not routinely available for provincial offenders).

Psychopathy Checklist - Revised

(PCL-R; Hare, 1991). The PCL-R was constructed to provide a reliable and valid measure of the psychopathic personality described by Cleckley (1976). Hare's 20 - item measure has two correlated factors: the first factor taps core personality traits of impulsivity, irresponsibility, and callousness; and the second factor addresses anti-social behaviour. Each of the 20 items (e.g., lack of remorse, parasitic lifestyle) is rated either "2 - definitely applicable", "1 - potentially applicable" or "0 - absent". The diagnostic cut-off is 30 out of a potential top score of 40.

The current study assessed PCL-R scores through file review. Wong (1984) found that psychopathy ratings based on file review were virtually identical to ratings that included both file review and interview (the file reviews were slightly conservative). The PCL-R has been a reliable predictor of general (Wong, 1984) and violent recidivism (Serin, 1996). Although previous research has not found large direct relationships between psychopathy and sexual offense recidivism, these studies found high rates of sexual offense recidivism among those offenders who rated highly on both psychopathy and sexual deviance (Gretton, McBride, & Hare, 1995; Rice & Harris, 1997). Among sexual offender samples, psychopathy is more common among rapists than child molesters (Brown & Forth, 1997; Forth & Kroner, 1996).

Because relatively complete file information is required to code the PCL-R, scores were only available for 190 recidivist and 162 non-recidivists.

Violence Risk Appraisal Guide (VRAG).

(Webster, Harris, Rice, Cormier & Quinsey, 1994). Originally developed to predict sexual or nonsexual violent recidivism among offenders referred to a maximum security psychiatric institution (Harris, Rice & Quinsey, 1993), the VRAG has attracted considerable interest as an actuarial predictor of violence (Borum, 1996). Its 12 items include the PCL-R, other personality disorders, early school maladjustment, age, marital status, criminal history, schizophrenia and victim injury. An application of the VRAG to a replication sample of 159 sexual offenders (Rice & Harris, 1997) found that it correlated .47 with violent recidivism (sexual and nonsexual violence), but only .20 with sexual offense recidivism. Due to incomplete files, VRAG scores were available for 146 recidivist and 121 non-recidivists.

Rapid Risk Assessment for Sexual Offense Recidivism (RRASOR).

(Hanson, 1997). The RRASOR is a brief actuarial risk scale designed to predict sexual offense recidivism. The RRASOR contains four items: a) officially recorded sexual offenses; b) any unrelated victims; c) any male victims; and d) age less than 25. Averaged across eight different follow-up studies (total sample of 2,592), the RRASOR has demonstrated moderate accuracy in predicting sexual offense recidivism (r = .27,

ROC area = .71).

Other risk factors from file review

In addition to the established risk scales, we coded a number of individual variables that research has suggested should be related to recidivism risk (Hanson & Bussière, 1996). These variables included the following:

Sexual offense history.

Detailed information was collected on all known sexual offenses (index, recidivism, and priors). This information included victim age, sex, and relationship to offender, the specific sex acts committed (e.g., fellatio, touching over clothes), weapons use, brutality and victim injury. We also coded the lifetime total number of victims and the age of first known sexual offense (whether adjudicated or not).

Sexual deviance

Sexual deviance was assessed by considering the diversity of sexual acts committed, as well as by direct reports of deviant sexual interests or activities. Reports of phallometric assessment (Launey, 1994) were available for 30% of the sample. We also coded whether offenders appeared to have arranged their lifestyle to facilitate, or be congruent with, their sexual deviance (e.g., moves in with single mothers, works in an "adult" bookstore).

Treatment history

We recorded the number of treatment programs attended prior to the index offense, including sexual offense specific treatments, alcohol programs (e.g., Alcoholics Anonymous), and general counseling. Indices of treatment failure, compliance and motivation were combined into a 13-item scale (alpha = .85). The complete Sex Offense Treatment History scale is presented in Appendix I.

Antisocial personality disorder

(American Psychiatric Association, 1994). A diagnosis of Anti-social Personality Disorder (APD) was made by scoring all items from the DSM-IV manual for APD by file review. The four necessary diagnostic criteria are as follows: a) three or more specific behaviours indicating persistent disregard for and violation of the rights of others (e.g., deceitfulness, irresponsibility), b) age 18 or older, c) conduct disorder (see below) prior to age 15, and d) that the recorded anti-social behaviours did not occur exclusively during the course of a schizophrenic or manic-depressive episode.

Conduct Disorder (DSM-IV) was also coded from file review. Conduct disorder denotes a pattern of repetitive and persistent social rule-breaking prior to age 18. There are four primary behavioural areas covered in this diagnosis: aggression to people and animals, destruction of property, deceitfulness or theft, and serious violations of rules in such a manner that there is significant impairment in social, academic or occupational functioning. A diagnosis of conduct disorder (DSM-IV) may be given to a person over

the age of 18 who does not meet the criteria for APD.

Miscellaneous variables

Official reports of physical, sexual or emotional abuse were recorded along with whether they had ever been taken into the care of child protection services. We also noted indices of psychiatric diagnoses, personality disorder, and intellectual ability. No attempt was made to arrive at independent diagnoses, except for the diagnoses of psychopathy and antisocial personality disorder noted above.

Interview Variables

Social influences

During the interview, community supervision officers were asked to list all the important people in the offender's life who were not paid to be with him (welfare case workers, ministers, psychotherapists were excluded). The officers then rated whether each individual was a positive, negative, or neutral influence on the offender. Officers were asked whether offenders were released into relatively controlled, moderately controlled, or uncontrolled environments in terms of access to victims, drugs and alcohol.

Problems evident during supervision

Officers were asked to report on any problematic behaviour or warning signs that they noticed during the course of supervision. For the recidivists, questions focused on the six month period just prior to the known recidivism event. For the non-recidivists, officers described the six months prior to the interview (all the non-recidivists were currently on community supervision). The specific factors examined are presented in Appendix II.

Case Note Coding

The officers' supervision notes were coded for the same problems examined in the interview. All reports, case notes and summaries that applied to the T1 and T2 time periods were used, provided that the materials were written prior to knowing that the offender had recidivated. Each separate mention of a problem area was counted separately; however, because there were few problems indicated in the case records, only dichotomous scores were analyzed (any problem mentioned / no problem mentioned).

Procedure

The data were collected by four field researchers working under the supervision of the project manager (Andrew Harris). In order to enhance reliability, the field researchers received a week of group training before data collection began. The project manager also accompanied each researcher during their first week in the field, and re-visited each of them for 1-2 weeks during the course of data collection. Periodic teleconferences were also held to resolve ongoing problems and to reduce rater drift.

The project received ethics approval from the relevant provincial / regional review boards (14 in total) and from the correctional managers involved.

Interview

Before being interviewed, each community supervision officer signed an informed consent indicating that their participation was voluntary, the information was for research purposes only, and that no personal or identifying information would appear in reports of the project. The interviews, lasting approximately one hour, were conducted in the officer's normal place of work during working hours. Of the officers with cases appropriate for this study, less than one percent declined participation.

The officer interview began with general questions about the officers' experience with sexual offenders and an overview of the case to be discussed. Next, officers were asked to make overall judgements of the offenders lifestyle based on their complete knowledge of the case. The officers were then asked about observed changes during the course of supervision. In order to aid recall, officers were first presented with a time graph representing the course of supervision. The interviewers then marked off two time periods: "T2" - the month prior to the end of the supervision period, and "T1" - the month that fell six months prior to the end of supervision. The length of these "month long" time periods was allowed to vary somewhat (4 to 6 weeks) due to holidays and the timing of reports and office visits. As a further aid to recall, officers were asked about specific events or changes (e.g., office moves, Christmas holidays) present during each of the time periods. Officers indicated whether each problem area had ever been a concern during the whole course of supervision, and, if so, whether the problem was worse at T1 or T2. For each time period (ever, T1, T2) officers rated each risk factors as '0 - no, never a problem', '1 - very slight or possible problem or concern', or '2 - yes, some problem'.

File coding

The field researchers coded the file material before or after the interview depending on the availability of the officer. The file coding was based on all available information and typically took 3-5 hours. In many cases, records needed to be retrieved from archives, distant institutions or alternate jurisdictions. The researcher who coded the files also conducted the corresponding interviews.

Reliability

Approximately 10% of the cases (43) were coded separately by two raters in order to estimate reliability. Overall agreement was calculated separately for each of 50 general content area (e.g., demographics, characteristics of index offense) (18 content areas for file coding; 19 for interview ratings; 13 for case note codes). Each content area typically contained between 5 and 15 items that were either categorical (any boy victims) or interval (total number of victims). The percent agreement was used as a convenient measure of rater agreement. In order to protect against artificial inflation due to low frequencies, cases in which both raters indicated missing data were not included.

There were high levels of agreement for all content areas. The average percent agreement was 95% for the static file coding, 97% for interview ratings, 94% for supervision case notes. The inter-rater reliability was consistently high for all coders in the study.

Data Reduction

Because information was collected on a large number of individual variables (the complete list is available upon request), the variables were organized into internally consistent scales. Scale construction began by identifying conceptually similar items. Next, the internal consistency of these items was calculated using Cronbach's alpha (Ghiselli, Campbell, & Zedeck, 1981). Items with low item-total correlations were eliminated, or analyzed separately. If a proposed scale contained eight or more items and the internal consistency of the scale was low to moderate, exploratory factor analyses were conducted to identify possible subscales. Following Cattell (1966), the scree test was used to determine the number of factors to extract. The resulting factors were rotated orthogonally (Varimax in SPSS) and the internal consistencies of the resulting scales were re-evaluated using Cronbach's alpha. Overall, the goal of the data reduction was to minimize redundancy while maintaining sufficient detail to identify useful distinctions between recidivists and non-recidivists. The scale construction / data reduction stage organised the 136 individual items from the officer interview / note codes into 30 scales (see Appendix II).

Results

Information was collected on a total of 208 recidivists and 201 non-recidivists. Following the predetermined sampling frame, the study examined approximately equal numbers of rapists, boy-victim child molesters and girl-victim child molesters (See Table 1). When offenders had diverse victims, they were classified according to their predominant victim type. The cells were not precisely equal as some of the offenders needed to be reclassified when additional information became available.

Table 1

Comparison of the recidivists and non-recidivists on static, historical variables.

Measure	Recidivists	Non-recidivists	Sig
Sample size	208	201	
Median release date (range)	1994 (84-97)	1996 (81-97)	
Months in community	15.4 (17.1)	24.0 (24.8)	<.001
(time at risk)			
Demographic factors			

Age at index	34.2 (11.0)	34.9 (11.6)	ns
Age at exposure to risk	36.3 (11.2)	39.1 (11.6)	.05
Ever married (%)	59.2	62.8	ns
Minority race (%)	14	11.5	ns
Unemployed at index (%)	55.6	50.3	ns
Location (n)			
Western / prairies	70	69	
Ontario	51	48	
Quebec	50	57	
Eastern	36	27	
Sexual offense history			
Predominant victim type (n)			
adult women (rapists)	71	66	
boys	61	61	
girls	76	74	
Total known victims			
mean (SD)	9.4 (20.1)	7.8 (27.2)	ns
median	5	3	
Ever offended against (%)			
adult females	55.1	46.2	ns
adult males	6.4	4.5	ns
boys	40.9	37.5	ns
girls	60.4	50.7	ns
Diverse victim types (%)	53.8	33.3	<.001

Measure	Recidivists	Non-recidivists	Sig

Relationship to victim (%)			
only related	0.4	8	<.001
any acquaintances	80.8	73	ns
any strangers	50.2	35	.002
Sexual deviance			
Any juvenile sex offenses (%)	37.7	21.7	<.001
Any diagnosis of deviant	51	43	ns
sexual preferences (%)			
Phallometric assessments (%)			
Conducted (deviant or not)	30.8	29.9	ns
Deviant age preference	23.6	20.9	ns
(children)			
Deviant activity preference	14.4	14.9	ns
(e.g., violence)			
Number of paraphilias	1.5 (1.5)	1.0 (1.1)	<.001
(voyeurism, exhibitionism,			
fetishes, etc.)			
Lifestyle congruent with	60.6	50.2	.037
sexual deviance (%)			
Sex offender Treatment history			
Ever attended (%)	76.3	77.1	ns
Number of different programs	2.1 (1.8)	1.9 (1.4)	ns
Poor treatment candidate	2.6 (6.4)	-1.2 (6.8)	<.001
(low motivation, drop-out)			
Family Background (%)			
Physical abuse	46.8	40.5	ns
Sexual abuse	61.3	44.2	.001
Other abuse (emotional / neglect)	54.8	36.8	<.001

PCL-R Psychopathy			
mean (SD)	23.4 (6.8)	16.7 (8.7)	<.001
% > 29	20.5	8	
Antisocial personality (%)	64.4	49.3	0.002
Any personality disorder	40.9	35.8	ns
mentioned in file (%)			
Any psychotic disorder (%)	5.3	5	ns
Objective risk scales			
SIR	1.6 (9.0)	7.2 (8.8)	<.001
sample size	84	90	
VRAG	10.9 (8.6)	4.3 (9.0)	<.001
sample size	146	121	
RRASOR	2.6 (1.3)	2.3 (1.3)	ns

Note. Standard deviations in parentheses

Comparisons on Static Risk Factors

The first stage of the analysis examined static, historical variables that influence the offenders' pre-existing recidivism risk. As can be seen in Table 1, the recidivists and the non-recidivists were well matched on many variables. The groups did not differ on marital status, race, employment status or age at index offense. The recidivists, however, were somewhat younger (36.3 years) than the non-recidivists (39.1 years) when they began community supervision. As specified by the research design, the groups were closely matched on geographic location and primary victim type (boys, girls, adult females). As well, there were no significant differences in the number of officially recorded offenses (sexual or otherwise).

Even though the groups were matched on the total number of known victims, the recidivistic group appeared more sexually deviant on several indices. In comparison to the non-recidivists, the recidivists had more diverse victims (age / sex), fewer related victims, more stranger victims, more juvenile sexual offenses, and more paraphilias. The recidivists (61%) were judged more likely than the non-recidivists (50%) to have a lifestyle congruent with sexual deviance.

Both groups were equally likely to have attended specialized sexual offender treatment programs (76%), but the recidivists were most likely to have dropped-out or otherwise be considered treatment failures ($t [407] = 5.8$, $p < .001$). The extent to which the known

recidivism event contributed to attrition or to the clinical ratings of "treatment failure" was not recorded, but would be expected to be minimal because few of the offenders were in active treatment when they recidivated.

The early family background of the recidivists was significantly worse than that of the non-recidivists. The recidivists were those most likely to have histories of sexual / emotional abuse, neglect, long-term separations from parents and negative relationships with their mothers. Twenty-seven percent of the recidivists had been taken into the care of child protective services compared to 15% of the non-recidivists (c^2 = 8.86, df = 1, n = 409, $p < .003$).

In adulthood, the recidivists were more likely than the non-recidivists to meet the diagnostic criteria for antisocial personality disorder (64% versus 49%, $p < .002$) and psychopathy (21% versus 8%, $p < .001$). As well, the measured intelligence of the recidivists (FSIQ = 94.4) was lower than that of the non-recidivists (FSIQ = 100.1) (t [314] = 3.34, $p < .001$). The available file information revealed low frequencies of psychotic disorders in both groups (approximately 5%).

Consistent with the differences on criminal lifestyle measures (psychopathy, antisocial personality disorder), the recidivists had significantly higher scores than the non-recidivists on the objective criminal risk scales, such as the SIR scale (t [172] = 4.21, $p < .001$) and the VRAG (t [265] = 6.14, $p < .001$). Overall, however, the scores for both groups were quite similar, with the SIR scores (Bonta et al., 1996) indicating low to moderate risk for general criminal recidivism (16 - 40% recidivism risk over three years), and the VRAG scores (Webster et al., 1994) indicating moderate risk for violent recidivism (48 - 58% violent recidivism risk over 10 years).

Due to deliberate matching, the objective measure of risk for sexual offense recidivism (RRASOR, Hanson, 1997) was not significantly different between the groups. Overall, the average RRASOR score indicated moderate risk for sexual offense recidivism (21 - 37% over 10 years).

Comparisons on Stable Dynamic Factors

The next section examines the dynamic risk factors as reported by the supervising officers. These analyses first examined whether particular risk factors were ever noted during supervision. Because neither the timing of the problems nor changes during the course of supervision were addressed at this stage, the risk factors noted were assumed to reflect relatively stable characteristics.

The relationship between stable dynamic risk factors and recidivism is presented in Table 2 for the total sample, as well as for the subsamples of rapists, boy-victim child molesters and girl-victim child molesters. To facilitate comparisons across subsamples, the findings are reported as correlation coefficients. Correlations provide equivalent tests of statistical significance, as do t, F, or c^2 , but have the advantage of providing an effect size estimate that is independent of sample size (Rosenthal, 1991). The same small correlation may be statistically significant in the total sample but, due to reduced sample size, not in a subsample. By observing the magnitude of the correlations across

the groups, readers can judge whether the variability is likely attributable to random fluctuation or to meaningful group differences. As an aid in interpreting the correlations, the 95% confidence interval for the correlations involving the total group (n = 409) is approximately ± .10, and for the subgroups, ± .17 (for n = 120). Confidence intervals decrease somewhat as the size of the correlation increases. Correlations whose 95% confidence intervals do not overlap would be considered to be different from each other while preserving the overall Type I error rate at 5% (Schmidt, 1996). The variables were coded such that positive correlations indicate that the characteristic was more common among the recidivists than the non-recidivists.

As can be seen in Table 2, there were significant differences between the recidivists and non-recidivists on most of the dynamic variables examined in this study. Compared to the non-recidivists, recidivists were frequently unemployed ($r = .10$, $p < .05$), although this effect appeared to be more important for the rapists ($r = .31$, $p < .001$) than the girl-victim child molesters ($r = -.08$, ns). Substance abuse problems during supervision were also more common among the recidivistic sexual offenders ($r = .17$) and more recidivists (10.1%) than non-recidivists (3.0%) had used anti-androgens (sex drive reducing medications) ($r = .15$, $p < .01$).

None of the measures of general psychological symptoms differentiated the recidivists from the non-recidivists. Negative mood, anger, and general life stress were equally common in both groups. The rates of serious psychiatric symptoms (hallucinations, major depression) were similar in both groups, but this was expected given our attempt to match offenders on serious psychiatric history.

The non-recidivists' social environment tended to have more positive than negative social influences (average of 2.1 versus .72), whereas the pattern was reversed for recidivists (1.3 negative versus 1.1 positive). Intimacy problems were more common among the recidivists than the non-recidivists ($r = .10$, $p < .05$). Intimacy problems were unrelated to recidivism for the boy-victim child molesters ($r = -.01$), but this may be due to restriction of range - almost all had severe intimacy problems. Only 16% of the boy-victim child molesters had any current intimate relationship (16%) compared to 34% of the girl-victim child molesters and 35% of the rapists. Contrary to expectation, there was no overall difference in the frequency with which the recidivists and non-recidivists were known to associate with other sexual offenders ($r = -.04$).

All of the attitude measures differentiated the recidivists from the non-recidivists. In general, the recidivists were described as showing little remorse or concern for their victims, believing that sexual crimes can be justified ($r = .28$), feeling that some women deserved to be raped ($r = .19$), having attitudes that sexualized children ($r = .19$), and feeling that they were entitled to express their strong sexual drive ($r = .29$). In general, there was some specialization between the type of attitudes and the type of victim (recidivistic rapists espoused rape attitudes; recidivistic child molesters sexualized children) but the differences between the groups were not statistically significant.

The recidivists tended to view themselves as little risk for committing new sexual offenses and took few precautions to avoid high risk situations ($r = .38$, $p < .001$). Not surprisingly, they were more likely than the non-recidivists to create or expose themselves to situations in which access to potential victims was likely (e.g., child