

WHERE SHOULD WE INTERVENE?

Dynamic Predictors of Sexual Offense Recidivism

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Effective intervention with sexual offenders requires the targeting of appropriate risk factors. In this 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 nonrecidivists. The recidivists were generally considered to have poor social supports, attitudes tolerant of sexual assault, antisocial lifestyles, poor self-management strategies, and difficulties cooperating with supervision. The overall mood of the recidivists and nonrecidivists was similar, but the recidivists showed increased anger and subjective distress just before reoffending. The dynamic risk factors reported by the officers continued to be strongly associated with recidivism, even after controlling for preexisting differences in static risk factors. The 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.

When the specific goal is to prevent sexual offense recidivism, there is almost no empirical foundation for identifying treatment targets or determining whether interventions have been successful (Hanson, 1998). All those who provide treatment, community supervision, or risk assessments for sexual offenders must, neverthe-

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less, identify the factors that they believe are related to sexual offense recidivism. This is a difficult task. Experienced clinicians are frequently unable to differentiate between sexual offenders who benefited from treatment and those who did not (Dix, 1976; Rice, Quinsey, & Harris, 1989; Ryan & Miyoshi, 1990).

Hanson and Bussière's (1998) review of 61 studies found that long-term recidivism was best predicted by static (e.g., offense history) or highly stable factors (e.g., personality disorders). Historical factors may indicate an ongoing potential to offend, but future offenses can only be prevented by addressing problems that are currently present (i.e., criminogenic needs or dynamic risk factors, see Andrews & Bonta, 1998; Bonta, 1996).

Dynamic risk factors are characteristics that can change, and when changed, result in a corresponding increase or decrease in recidivism risk. Dynamic risk factors can be further subdivided into stable dynamic factors and acute dynamic factors. Stable dynamic risk factors are expected to remain unchanged for months or years (e.g., alcoholism). Consequently, interventions aimed at creating enduring improvements need to target stable dynamic factors. In contrast, acute dynamic factors, such as alcohol intoxication or negative mood, change rapidly (days, hours, and even minutes). Acute dynamic risk factors are related to the timing of reoffending, but they may have little relationship to long-term risk potential.

Empirical work on nonsexual criminals has found that dynamic risk factors predict recidivism as well as or better than static, historical variables (Gendreau, Little, & Goggin, 1996; Zamble & Quinsey, 1997). However, the dynamic risk factors that predict general criminal recidivism may not predict sexual offense recidivism (Hanson, Scott, & Steffy, 1995).

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The lack of research evidence connecting dynamic factors to sexual recidivism does not mean that these factors are unimportant; instead, it may simply indicate the need for a different type of research design when studying sexual recidivism. Long-term follow-up studies are more likely to identify stable risk factors than rapidly changing risk factors. Consequently, this study aimed to improve our understanding of dynamic risk factors for sexual offenders by using research procedures specifically designed to target changeable factors.

OVERVIEW OF STUDY

The specific design of our study followed the procedure successfully employed by Quinsey, Coleman, Jones, and Altrows (1997) in their research on dynamic risk factors for mentally disordered offenders. This procedure involved retrospective comparisons of offenders who recidivated while on community supervision with offenders who did not recidivate. 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: 6 months (T1) and 1 month (T2) before recidivating. Information was collected at equivalent time periods for the nonrecidivists, with T2 identified as the month before data collection. For both time periods, information was collected through detailed interviews with the supervising officers and by file review. Such a design can provide information on the stable dynamic factors that distinguish recidivists from nonrecidivists and information on the acute dynamic factors that immediately precede reoffending.

The recidivism risk factors targeted in this study were based on previous research (Pithers, Kashima, Cummings, Beal, & Buell, 1988; Proulx, McKibben, & Lusignan, 1996) and social cognitive theory (e.g., Bandura, 1977; Fiske & Taylor, 1991; Johnston & Ward, 1996; Laws, 1989). In this model, recidivistic sexual offenders would be expected to hold a deviant schema or habitual patterns of thought and action that facilitate their offenses. The likelihood that an offender would invoke or enact such a schema would increase if the schema were well rehearsed, were triggered by commonly occurring circum-

stances, were considered socially acceptable in the offender's environment, and were consistent with the offender's personality and values. In addition, those offenders who lacked realistic self-management strategies (e.g., exposing themselves to high-risk situations) would be expected to have the most difficulty inhibiting deviant schema.

Negative affect and deviant sexual schema have been linked in previous research. McKibben, Proulx, and Lusignan (1994) (see also Proulx et al., 1996) found that deviant sexual fantasies tended to follow episodes in which offenders felt stressed or upset. Similarly, 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 et al., 1988). Hanson and Bussière (1998), however, found that subjective distress was unrelated to long-term recidivism. It is possible that distress is an acute dynamic risk factor but not a stable dynamic risk factor.

For dynamic risk factors to be useful to therapists or 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.

METHOD

SUBJECT SELECTION

Offenders were selected from all Canadian provincial correctional systems (except Prince Edward Island) and all regions of the Correctional Service of Canada (the federal service). Given the different community supervision agreements across provinces, the offenders were supervised by provincial probation officers, provincial parole officers, or federal parole officers. 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, or were serving, part of their sentence in the

community (probation, parole, mandatory supervision, and/or statutory release). Offenders who targeted only their biological or stepchildren were also excluded.

The recidivists had committed a new sexual offense (including noncontact offenses, e.g., exhibitionism) while on community supervision. Most of the recidivists (68%) had new charges for a sexual offense, although in 25% of the cases, the offenders' sexual misbehavior only resulted in a parole violation or a breach of probation. In 12 cases (6%), the offender was charged with a nonsexual offense, but the intent of the offense was clearly sexual (e.g., sexual homicide, attempting to abduct a child who escapes). One offender was counted as a recidivist when he self-disclosed in treatment that he had been stalking a particular woman while engaging in rape fantasies.

The nonrecidivists were selected from sexual offenders who had successfully completed at least 6 months of community supervision. On average, the nonrecidivists had completed 24 months in the community, whereas most of our recidivistic offenders had reoffended within 15 months. Our sample procedure required matching the recidivistic and nonrecidivistic offenders on previous offense history, victim type, and jurisdiction. The coders began by identifying a recidivist, then they searched for a nonrecidivist matched on the above criteria. If several nonrecidivists were available that met the essential matching criteria, the coders selected the nonrecidivist most similar to the recidivist. Consequently, the recidivists and nonrecidivists tended to be matched on many salient characteristics (e.g., age, schizophrenia). The quality of the informal matching was not explicitly recorded, but, as documented below, it tended to be rather close.

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 Royal Canadian Mounted Police. The background information included basic identifying information, detailed sexual offense histories, and a number of variables used to estimate preexisting or enduring risk for recidivism. Many of the coded items formed

parts of established objective risk assessment instruments. Not all information was available for all offenders.

Objective Risk Scales

Statistical Information on Recidivism (SIR). The SIR Scale (Bonta, Harman, Hann, & Cormier, 1996; Nuffield, 1982) is an objective risk measure developed for use by the Correctional Service of Canada and the National Parole Board. Items include age, marital status, and 11 items related to criminal history (e.g., history of assault, break and 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 nonrecidivists. (SIR scores were not routinely available for provincial offenders.)

Hare Psychopathy Checklist-Revised (PCL-R). The PCL-R (Hare, 1991) 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 antisocial behavior. As in other studies (e.g., Harris, Rice, & Quinsey, 1993; Wong, 1984), PCL-R scores were assessed through file review. 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 have found high rates of recidivism among those offenders who rated highly on both psychopathy and sexual deviance (Gretton, McBride, & Hare, 1995; Rice & Harris, 1997).

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

Violence Risk Appraisal Guide (VRAG). The VRAG (Quinsey, Harris, Rice, & Cormier, 1998) was originally developed to predict sexual or nonsexual violent recidivism among offenders referred to a maximum-security psychiatric institution (Harris et al., 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 nonrecidivists.

Rapid Risk Assessment for Sexual Offense Recidivism (RRASOR). The RRASOR (Hanson, 1997) 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 years. Averaged across eight different follow-up studies ($N = 2,592$), the RRASOR has demonstrated moderate accuracy in predicting sexual offense recidivism ($r = .27$, Receiver Operating Characteristic 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, 1998). These variables included the following.

Sexual offense history. Detailed information was collected on all known sexual offenses (index, recidivism, and priors). This information included the victim's age, gender, 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 the offender at the first known sexual offense (whether adjudicated or not).

Sexual deviance. Sexual deviance was assessed by considering the diversity of sexual acts committed and by direct reports of deviant sexual interests or activities. Reports of phallometric assessment (Lau-nay, 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 before 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 scale is available on request.)

Antisocial personality disorder (APD). File information was used to diagnose APD (American Psychiatric Association, 1994) according to the criteria set in *DSM-IV*.

Miscellaneous variables. Official reports of physical, sexual, or emotional abuse were recorded along with whether the offender had ever been taken into the care of child protection services. We noted indices of psychiatric diagnoses, personality disorder, and intellectual ability. No attempt was made to arrive at independent psychiatric diagnoses, except for the diagnoses of psychopathy and APD 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 the offender. Professionals such as welfare case workers, probation officers, and psychotherapists were excluded because relationships voluntarily initiated and maintained by the offender were considered to be more informative than relationships imposed by the state. The officers rated whether each significant 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 behavior or warning signs that they noticed during the course of supervision. For the recidivists, questions focused on the 6-month period just before the known recidivism event. For the nonrecidivists, officers described the six months before the interview (all the nonrecidivists were currently on community supervision). The specific factors (e.g., employment, sexual preoccupations) examined are reported in the results section.

CASE NOTE CODING

The officers' supervision notes were coded for the same variables 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 before 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 or no problem mentioned).

PROCEDURE

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

The project received ethics approval from the relevant 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 no personal or identifying information would appear in reports of the project. The interviews, lasting approximately 1 hour, were conducted in the officer's normal place of work during working hours. Of the officers with cases appropriate for this study, fewer than 1% 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 judgments of the offender's lifestyle based on their complete knowledge of the case. The officers were then asked about observed changes during the course of supervision. To aid their recall, officers were first presented with a time graph representing the course of supervision. The interviewers marked off two time periods: T2—the month before reoffending (for the recidivists) or the month before the interview (for the non-recidivists), and T1—the month that fell 6 months before T2. 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. To further orient the officers to the time periods of interest, they 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, and T2), officers rated each risk factor 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 to 5 hours. The researcher who coded the files also conducted the corresponding interview.

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 the 50 general content areas (e.g., demographics, characteristics of index offense) (18 content areas for file coding, 19 for interview ratings, and 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). Percentage agreement was used as a convenient measure of rater agreement. To protect against artificial inflation from low frequencies, reliabilities were only calculated when at least one rater coded something (i.e., instances of no information were not included in the reliability calculations).

There were high levels of agreement for all content areas. The average percentage of agreement was 95% for the static file coding, 97% for the interview ratings, and 94% for the supervision case notes. The interrater 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 on request), the variables were organized into internally consistent scales (available on request). 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 reevaluated 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 nonrecidivists.

The scale construction and data reduction stage organized the 128 individual items from the officer interview and note codes into 22 scales. For example, the Victim Access Scale ($\alpha = .72$) included 6 items: general victim access, cruising/creating opportunities to reoffend, grooming of victims, bicycle/4x4/motorcycle/flashy car, computer/surfing the net, and child-oriented hobbies. Each of the 22 scales contained between 2 and 10 items (median = 5). Overall, the reliability of the scales was acceptable (median $\alpha = .72$), with only four scales having internal consistencies less than .65 (psychiatric symptoms, life stress, general social problems, and association with sexual offenders). Eight constructs were assessed with single items (unemployed, problems at work, anti-androgen use, uncontrolled release environment, no opportunities for fun/relaxation, using spirituality as a shield, attends group treatment, attends one-on-one counseling).

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.

COMPARISONS ON STATIC RISK FACTORS

The first stage of the analysis examined static, historical variables that influence the offenders' preexisting recidivism risk. As can be seen in Table 1, the recidivists and the nonrecidivists 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 nonrecidivists (39.1 years) when they began community supervision.

TABLE 1: Comparison of Recidivists and Nonrecidivists on Static, Historical Variables

<i>Measure</i>	<i>Recidivist</i>	<i>Nonrecidivist</i>	<i>Significance</i>
Sample size	208	201	
Median release date (range)	1994 (84 to 97)	1996 (81 to 97)	
Months in community (time at risk)	15.4 (17.1)	24.0 (24.8)	< .001
Demographic factors			
Mean age at index (<i>SD</i>)	34.2 (11.0)	34.9 (11.6)	n.s.
Mean age at exposure to risk (<i>SD</i>)	36.3 (11.2)	39.1 (11.6)	< .05
Ever married, in percentage	59.2	62.8	n.s.
Minority race, in percentage	14.0	11.5	n.s.
Unemployed at index, in percentage	55.6	50.3	n.s.
Sexual offense history			
Number of predominant victim type			
Adult women (rapists)	71	66	
Boys	61	61	
Girls	76	74	
Total known victims			
Mean (<i>SD</i>)	9.4 (20.1)	7.8 (27.2)	n.s.
Median	5	3	
Ever offended against, in percentage			
Adult females	55.1	46.2	n.s.
Adult males	6.4	4.5	n.s.
Boys	40.9	37.5	n.s.
Girls	60.4	50.7	n.s.
Diverse victim types, in percentage	53.8	33.3	< .001
Relationship to victim, in percentage			
Only related	0.4	8.0	< .001
Any acquaintances	80.8	73.0	n.s.
Any strangers	50.2	35.0	< .01
Sexual deviance			
Any juvenile sex offenses, in percentage	37.7	21.7	< .001
Any diagnosis of deviant sexual preferences, in percentage	51.0	43.0	n.s.
Phallometric assessments, in percentage			
Conducted (deviant or not)	30.8	29.9	n.s.
Deviant age preference (children)	23.6	20.9	n.s.
Deviant activity preference (e.g., violence)	14.4	14.9	n.s.
Number of paraphilias (e.g., voyeurism, exhibitionism, fetishes, etc.) (<i>SD</i>)	1.5 (1.5)	1.0 (1.1)	< .001
Lifestyle congruent with sexual deviance, in percentage	60.6	50.2	< .05
Sex offender treatment history			
Ever attended, in percentage	76.3	77.1	n.s.
Number of different programs (<i>SD</i>)	2.1 (1.8)	1.9 (1.4)	n.s.

TABLE 1 Continued

<i>Measure</i>	<i>Recidivist</i>		<i>Nonrecidivist</i>		<i>Significance</i>
Number of poor treatment candidates (low motivation, dropout) (<i>SD</i>)	2.6	(6.4)	-1.2	(6.8)	< .001
Family background					
Physical abuse, in percentage	46.8		40.5		n.s.
Sexual abuse, in percentage	61.3		44.2		< .001
Other abuse (emotional/neglect), in percentage	54.8		36.8		< .001
Apprehended by child protective services, in percentage	26.9		14.9		< .01
Any long-term separation from parents before age 16, in percentage	42.8		28.9		< .01
Negative relationship with mother, in percentage					
During childhood	33.7		20.9		< .01
As an adult	23.1		20.4		n.s.
Score of the overall negative childhood environment (6-item scale) (<i>SD</i>)	2.6	(1.9)	1.8	(1.7)	< .001
Criminal record					
Number of prior offenses (<i>SD</i>)					
Sexual	2.4	(3.8)	2.2	(4.1)	n.s.
Nonsexual violent	1.5	(2.4)	1.7	(3.8)	n.s.
Nonviolent	7.7	(10.3)	6.4	(15.1)	n.s.
Total	11.6	(12.8)	10.3	(17.6)	n.s.
Number of index/current offenses (<i>SD</i>)					
Sexual	3.1	(3.8)	3.2	(3.3)	n.s.
Nonsexual violent	0.56	(1.6)	0.77	(2.4)	n.s.
Nonviolent	0.48	(1.3)	0.33	(0.8)	n.s.
Total	4.2	(4.6)	4.3	(4.4)	n.s.
Clinical assessment ^a					
IQ (<i>SD</i>)	94.4	(14.6)	100.1	(14.5)	< .001
PCL-R psychopathy					
Mean (<i>SD</i>)	23.4	(6.8)	16.7	(8.7)	< .001
Percentage greater than 29	20.5		8.0		
Antisocial personality, in percentage	64.4		49.3		< .01
Any personality disorder mentioned in file, in percentage	40.9		35.8		n.s.
Any psychotic disorder, in percentage	5.3		5.0		n.s.
Objective risk scales ^b					
SIR (<i>SD</i>)	1.6	(9.0)	7.2	(8.8)	< .001
Sample size	84		90		
VRAG (<i>SD</i>)	10.9	(8.6)	4.3	(9.0)	< .001
Sample size	146		121		
RRASOR (<i>SD</i>)	2.6	(1.3)	2.3	(1.3)	n.s.

a. PCL-R = Hare Psychopathy Checklist-Revised.

b. SIR = Statistical Information on Recidivism; VRAG = Violence Risk Appraisal Guide; RRASOR = Rapid Risk Assessment for Sexual Offense Recidivism.

Although there were no significant differences in the number of known victims or officially recorded offenses (sexual or otherwise), the recidivistic group appeared more sexually deviant on several indices. In comparison to the nonrecidivists, the recidivists had more diverse victims (in age and/or gender), fewer related victims, more strangers as victims, more juvenile sexual offenses, and more paraphilias. The recidivists (61%) were judged more likely than the nonrecidivists (50%) to have a lifestyle congruent with sexual deviance.

Both groups were equally likely to have attended specialized sexual offender treatment programs (76%); however, the recidivists were more likely than the nonrecidivists to have dropped out of treatment or to have been considered a treatment failure, $t(407) = 5.8, p < .001$. The extent to which the known recidivism event contributed to attrition or to the clinical ratings of treatment failure was not recorded, but it 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 nonrecidivists in terms 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 nonrecidivists ($\chi^2 = 8.86, df = 1, n = 409, p < .003$).

In adulthood, the recidivists were more likely than the nonrecidivists to meet the diagnostic criteria for APD (64% vs. 49%, $p < .002$) and psychopathy (21% vs. 8%, $p < .001$). In addition, the measured intelligence of the recidivists (Full Scale Intelligence Quotient [FISQ] = 94.4) was lower than that of the nonrecidivists (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, APD), the recidivists had significantly higher scores than the nonrecidivists on the objective criminal risk scales such as the SIR Scale, $t(172) = 4.21, p < .001$ and the VRAG, $t(265) = 6.14, p < .001$. The SIR scores (Bonta et al., 1996) indicated a low to moderate risk for general criminal recidivism (16% over 3 years for the nonrecidivists and 40% for the recidivists). The VRAG scores (Quinsey et al.,

1998) suggested a 48% probability of violent recidivism over 10 years for the nonrecidivists and a 58% probability for the recidivists.

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 a moderate risk for sexual offense recidivism (21% to 37% over 10 years).

COMPARISONS ON DYNAMIC FACTORS

Table 2 examines the dynamic risk factors as reported by the supervising officers. The first column of Table 2 displays the correlation between recidivism status (recidivist or nonrecidivist) and whether particular risk factors were ever noted during supervision. In this analysis, the risk factors noted were assumed to reflect relatively stable characteristics because neither the timing of the problems nor changes during the course of supervision were addressed.

The second column displays the correlation between recidivism status and whether risk factors were noted as changing during supervision (acute dynamic factors). Each rating was recoded as -1 (a change for the worse), +1 (a change for the better), or 0 (no change—continuously bad or never a problem). Some variables were not reassessed, as reliable changes were not expected. Thirty-three offenders were excluded because the officers felt that they had insufficient information to rate change (mostly because the offenders recidivated soon after release).

As an aid to interpreting the correlations, the 95% confidence interval for the correlations involving the total group ($n = 409$) is approximately .10. 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). In other words, if the difference between the correlations is .20 or greater, then the correlations can be considered to be significantly different from each other. The variables were coded such that positive correlations indicate that the characteristic was more common among the recidivists than the nonrecidivists.

As can be seen in Table 2, there were significant differences between the recidivists and the nonrecidivists on most of the dynamic

TABLE 2: Stable and Acute Dynamic Risk Factors Predicting Sexual Offense Recidivism

<i>Measure</i>	<i>Correlation</i>	
	<i>Stable Dynamic (ever a problem)</i>	<i>Acute Dynamic (change for the worse)</i>
Employment		
Unemployment	.10*	-.04
Type of employment a problem	.02	.07
Drug use		
Substance abuse	.17**	.16**
Ever used anti-androgens	.15**	—
Started anti-androgens at T2	—	.11*
Psychological symptoms		
Negative mood	-.01	.16**
Anger	.07	.20***
Psychiatric symptoms (any)	-.03	.11*
Life stress	-.02	.06
Social adjustment		
Number of significant influences		
Positive	-.29***	—
Neutral	.07	—
Negative	.23***	—
Global problems with intimacy	.10*	—
Increased conflict with partner	—	.01
General social problems	.05	.11*
Association with sex offenders	-.04	-.00
Attitudes		
Low remorse/victim blaming	.28***	.19***
Rape attitudes	.19***	—
Child-molester attitudes	.19***	—
Sexual entitlement	.29***	—
Self-management		
Sees self as no risk to recidivate	.38***	.13*
Victim access	.26***	.24***
Sexual deviancy		
Sexual preoccupations	.20***	.09
Appearance		
Dirty/smelly/inappropriate	.10*	.12*
Any strong change		
for the worse	.04	.10
for the better	-.19***	.08
Lifestyle		
Antisocial lifestyle	.26***	.06
Uncontrolled release environment	.17**	—
No opportunities for fun/relaxation	.04	.06
Using religion as a shield	-.00	-.07

TABLE 2 Continued

Measure	Correlation	
	Stable Dynamic (ever a problem)	Acute Dynamic (change for the worse)
Cooperation with supervision		
Treatment attendance (any)	-.10	—
Started	—	.02
Ended	—	.02
Disengaged	.30***	.22***
Manipulative	.29***	.10*
No show/late for appointments	.22***	.10*
Overall cooperation	.36***	.23***

NOTE: The variables were coded such that positive correlations indicate characteristics more common among recidivists than nonrecidivists.

* $p < .05$. ** $p < .01$. *** $p < .001$.

variables examined in this study. Most of the factors that were stable risk predictors were also acute risk predictors. The dynamic acute effects tended to be somewhat smaller than the stable dynamic effects; this is perhaps because there was relatively little change on the risk factors during the 6-month study period. For any individual item, 89% of the ratings indicated no change. Nevertheless, almost all the offenders (99%) showed some change on at least one item during the course of supervision. Although the effects were small, they were consistently in the predicted direction, with the nonrecidivists' behavior tending to improve and the recidivists' behavior tending to deteriorate during the course of supervision.

Compared to nonrecidivists, recidivists were more frequently unemployed ($r = .10$, $p < .05$), but neither a loss of employment ($r = -.04$) nor problems with the type of employment were a significant risk predictor for sexual offense recidivism.

The recidivists were those most likely to abuse drugs and/or alcohol during the course of supervision ($r = .17$, $p < .01$), and the amount of substance abuse increased just before recidivating ($r = .16$, $p < .01$). More recidivists (10.1%) than nonrecidivists (3.0%) had ever used anti-androgens (sex-drive-reducing medications) ($r = .15$, $p < .01$). Of the 22 offenders who were taking anti-androgen medication at T2, 17 were recidivists ($p < .05$). Although four of the five cases who stopped

taking anti-androgens recidivated, all eight cases who started anti-androgen medication during T2 recidivated ($p < .05$).

The recidivists and nonrecidivists were equally likely to display psychological symptoms at some point during their supervision. The recidivists' mood decreased, however, just before committing their new offense ($r = .16$ for negative mood, $.20$ for anger, and $.11$ for general psychiatric symptoms). The officers' reports of the offenders' general life stress (e.g., major life change, health, and financial problems) were unrelated to recidivism.

The officers perceived the nonrecidivists' social environment to have more positive than negative social influences (average of 2.1 vs. 0.72), whereas the pattern was reversed for recidivists (1.3 negative vs. 1.1 positive). Similarly, intimacy problems (no intimate partner, relationship conflicts) were more commonly observed among the recidivists than the nonrecidivists ($r = .10, p < .05$). Contrary to expectation, there was no overall difference in the frequency with which the recidivists and nonrecidivists were known to associate with other sexual offenders ($r = -.04$).

All of the attitude measures differentiated the recidivists from the nonrecidivists. In general, the officers reported that the recidivists showed little remorse or concern for their victims, believed that sexual crimes can be justified ($r = .28$), and felt 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, and recidivistic child molesters sexualized children), but the differences between the groups were not statistically significant.

The recidivists tended to view themselves as being at 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 nonrecidivists were to create or expose themselves to situations in which access to potential victims was likely (e.g., child-oriented hobbies and flashy cars).

The recidivists were also more likely than the nonrecidivists to engage in socially deviant (although not necessarily illegal) sexual activities such as the use of prostitutes, excessive masturbation, and self-reported deviant sexual fantasies/urges ($r = .20, p < .001$). These sexual preoccupations appeared to be a stable factor because there was

no noticeable increase in sexual preoccupations before reoffending ($r = .08, p < .06$).

The physical appearance and grooming of the recidivists tended to be slightly worse overall than that of the nonrecidivists ($r = .10, p < .05$). Although strong changes in appearance were rarely noted, the nonrecidivists were more likely than the recidivists to improve their appearance during the course of supervision ($r = -.19, p < .001$).

The recidivists were more likely than the nonrecidivists to have a generally chaotic, antisocial lifestyle ($r = .26, p < .001$). The recidivists tended to use their leisure time aimlessly, to resist personal change (even when it was to their obvious benefit), and to hold strongly antisocial attitudes. In addition, the release environment of the recidivists was described as relatively uncontrolled in terms of access to victims, drugs, and alcohol ($r = .17, p < .01$). There were no differences in the rate at which the offenders took shelter in religion ($r = .00$) and in the frequency of constricted lifestyles (i.e., no opportunity for fun/relaxation). The lifestyle variables tended to be stable, and there were no significant relationships between acute lifestyle changes and recidivism.

The officers described the nonrecidivists as more cooperative with supervision than the recidivists ($r = .36, p < .001$). Although both groups attended equal numbers of treatment programs, the recidivists tended, more often, to be disengaged from treatment and community supervision ($r = .30, p < .001$), to attempt to deceive and manipulate the officers ($r = .29, p < .001$), and to miss scheduled appointments ($r = .22, p < .001$).

Not only were the recidivists generally noncooperative, their compliance deteriorated just before reoffending ($r = .22, p < .001$). Ending (or starting) treatment was unrelated to recidivism, but the officers considered the recidivists to become increasingly disengaged, absent, or generally noncooperative during the course of supervision. It is interesting to note that even the nonrecidivists tended to miss more and more appointments as supervision progressed, but recidivists missed the most appointments ($r = .10, p < .05$).

With rare exceptions, the same risk factors were considered important for rapists, boy-victim child molesters, and girl-victim child molesters. Of these three groups, the girl-victim child molesters appeared to be the most distinct. The same risk factors seemed impor-

tant for all groups, but the effects were generally smaller for the girl-victim child molesters than for the rapists or boy-victim child molesters. Despite having a slightly larger sample size, only 8 out of 33 correlations for the stable dynamic factors were statistically significant for the girl-victim child molesters, compared to 17 out of 33 for the boy-victim child molesters and 19 out of 33 for the rapists. Considering the number of comparisons, it is difficult to determine the extent to which the observed differences are attributable to random fluctuation.

CASE NOTE CODING

The officers' case notes tended to be brief, with little direct reference to the risk factors targeted in the interview. Approximately 10% of the files contained no information at all (either no notes or no content). The proportion of uninformative records was not significantly different between the recidivists and the nonrecidivists.

The case notes allowed group comparison on 24 of the 34 variables examined in the interview (intimacy deficits, the number of positive/negative/neutral social influences, attitudes tolerant of sexual assault, and the quality of the release environment were not coded).

The information coded from the case notes was only weakly correlated with the information obtained from the officer interviews. The average correlation between the scales scored from case notes and from the interview was .25 ($SD = .08$) at T1 and .27 ($SD = .11$) at T2. All the correlations were statistically significant, with the exception of the Sees Self as No Risk Scale at T2 ($r = .09, p > .05$).

Only 1 of the 24 comparisons between the recidivists and the nonrecidivists was significant at T1 (6 months before recidivating). At T1, the recidivists, in comparison to the nonrecidivists, failed to acknowledge their risk for recidivism ($r = .11, p < .05$, Sees Self As No Risk Scale). As expected, more of the T2 variables than the T1 variables were related to recidivism. Just before reoffending, the officers noted that the recidivists showed increased signs of sexual preoccupation and deviance ($r = .12, p < .05$, Sexual Preoccupations Scale), had access to potential victims ($r = .11, p < .05$, Victim Access Scale), and failed to acknowledge their recidivism risk ($r = .10, p < .05$, No Risk Scale). The recidivists showed increased anger just before sexually reoffending ($r = .11, p < .05$). Six of the seven cases in which the notes

TABLE 3: The Unique Contribution of the Best Three Static, Stable, and Acute Risk Factors

<i>Predictor Variable</i>	<i>r</i>	<i>Beta</i> ^a	<i>R (for set)</i>	<i>Unique R</i> ² <i>(for set)</i>
Static				
VRAG	.32***	.02	.40***	.035*
Sexual deviance	.24**	.12		
IQ	-.24**	-.16*		
Stable				
Sees self as no risk	.47***	.27**	.53***	.141***
Poor social influences	.39***	.15*		
Sexual entitlement	.37***	.10		
Acute				
Access to victims	.28***	.12	.32***	.035*
Noncooperation with supervision	.25***	.13		
Anger	.19**	-.01		
Total (<i>df</i> = 9, 170)			.60***	.360***

NOTE: The sample consists of 86 recidivists and 94 nonrecidivists. VRAG = Violence Risk Appraisal Guide.

a. Beta values are when all nine predictors are included in the analysis.

* $p < .05$. ** $p < .01$. *** $p < .001$.

mentioned that the offender was taking anti-androgens were recidivists ($p < .05$). For an additional 15 cases, the offenders were known, by file review, to be taking anti-androgen medication at T2, but this was not recorded in the officers' T2 case notes.

Difference scores (T1 – T2) were used to examine the changes recorded just before recidivating. Of the 24 comparisons, only 2 were significant. Officers noted an increase in anger ($r = .12$, $p < .05$) between T1 and T2 for the recidivists, and the eventual recidivists were those most likely to start anti-androgen medication during T2 ($r = .12$, $p < .05$).

UNIQUE CONTRIBUTION OF DYNAMIC FACTORS

The next set of analyses examined the extent to which the dynamic factors (stable and acute) contributed new information after controlling for preexisting differences in static risk factors. The three best predictors in each domain (static, stable, and acute) were selected through stepwise regression. Next, the unique contributions of each set of predictors were compared using hierarchical regression (see

Table 3). As only cases with complete information were included, the sample size was substantially reduced ($n = 180$).

Static Predictors

The three best static predictors were the VRAG, IQ, and sexual deviance (a composite measure with one point given for any juvenile sexual offenses; any paraphilias, for example, exhibitionism and cross-dressing; any stranger victims; and having a diverse age/gender of victims). Overall, these static variables produced a multiple correlation R of .40 ($p < .001$) with sexual recidivism.

Stable Predictors

The best three stable predictor variables (Sees Self as No Risk, Poor Social Influences, and Sexual Entitlement) from the officer interview strongly differentiated the groups ($R = .53$, $p < .001$).

Acute Predictors

Similarly, the three best interview acute variables (Access to Victims, Noncooperation with Supervision, and Anger) produced an R of .32 ($p < .001$).

When the variables from each set were combined, the multiple R increased to .60 ($p < .001$). Not all of the individual variables were significant in the final regression equation. Nevertheless, each set of predictors contributed unique variance (using equation 3.27 from Pedhazur, 1982). When entered last in the regression equation, R^2 increased by .035 ($p < .05$) for the static factors, .141 ($p < .001$) for the stable factors, and .035 ($p < .05$) for the acute factors.

Because the interview data were vulnerable to retrospective recall bias, separate analyses compared the static and dynamic risk factors using only file information. The static variables were the same as shown above (VRAG, IQ, and sexual deviancy), but the values change slightly due to the increased sample size ($n = 219$). Only two of the dynamic factors (Anger and Sexual Preoccupations at T2) from the note codes contributed unique variance in stepwise regression ($R = .21$, $p < .01$). The case note variables only marginally contributed vari-

ance over that covered by the static variables (R^2 increased by .018, $p < .08$, two tailed). The case note Sexual Preoccupations Scale, however, significantly predicted recidivism after controlling for the three best static predictors (beta = $-.12$, $p < .05$) (overall $R = .45$; $df = 5$, 213; $p < .001$).

DISCUSSION

The purpose of this study is to identify dynamic risk factors that could be useful for the treatment and community supervision of sexual offenders. Overall, substantial differences were observed between the 208 sexual offenders who sexually recidivated while on community supervision and a comparison group of 201 nonrecidivists. The recidivists were considered to have poor social supports, attitudes tolerant of sexual assault, antisocial lifestyles, and poor self-management strategies. Not surprisingly, the officers considered the recidivists to have displayed poor cooperation with supervision, as indicated by being disengaged, manipulative, or absent. Recidivists and nonrecidivists had equivalent levels of life stress and negative affect, but the recidivists tended to show an increase in anger and subjective distress just before reoffending. In other words, psychological symptoms appeared as acute dynamic, but not as stable dynamic, risk factors. The same risk factors generally applied to both rapists and child molesters.

The interview-based results were informative but open to alternative interpretations. The first concern is that the supposedly dynamic problems observed during the course of supervision could be proxies for enduring (static or highly stable) risk factors. Despite our efforts to match the recidivists and nonrecidivists on many static predictors, the background characteristics of recidivists remained the most problematic. In particular, the recidivists were more likely than the nonrecidivists to have chronic antisocial lifestyles, long histories of diverse sexually deviant behavior, prior treatment failure, low intelligence, and poor childhood environments. Nevertheless, even after statistically controlling for many preexisting group differences, the dynamic variables continued to be strongly associated with recidivism. The recidivists were generally more problematic than the nonrecidivists, and their behavior deteriorated just before recidivating.

The second concern is the extent to which the findings were influenced by retrospective recall bias. Both the officers and the field researchers were fully aware of who had, or had not, recidivated. Consequently, old information may take on new significance once the offender is known to have reoffended. Such hindsight biases were of particular concern for the officer interviews, because in some cases, the officers were asked to recall events that transpired 4 to 5 years earlier.

Rater bias was a concern. Although the coders were instructed to separate the information related to the recidivism offense from the rest of the file information, such a separation was often difficult if not impossible (e.g., extracting information from summary reports that included both index and recidivism information). In addition, the PCL-R was explicitly scored using all file information, which would have artificially increased the PCL-R (and the VRAG) scores of the recidivists.

This study attempted to control for retrospective recall biases by examining the case notes completed by the officers before they knew of the recidivism event. This strategy was only partially successful due to the limited information available in the case notes. Nevertheless, the major dynamic risk factors reported in the interview were also present in the contemporaneous case notes. The officers recorded concerns about sexual preoccupation/compulsivity, poor self-management strategies (sees self as no risk), increased victim access, and increased anger in the 4 to 6 weeks before recidivating. The effects were small, but the consistency of these findings with the interview results suggests that the interview results cannot be completely attributed to recall bias.

The dynamic risk factors identified in this study were similar to those identified by research on (predominantly) nonsexual criminals (Quinsey et al., 1997; Zamble & Quinsey, 1997). Quinsey et al. (1997) found that the strongest predictor of violent recidivism among mentally disordered offenders was a dimension they called *dynamic anti-sociality*. The components of dynamic antisociality (e.g., complains about the staff, no remorse, ignores previous violent acts, unrealistic discharge plans) were similar to our measures of negative attitudes, poor self-management, and lack of cooperation with supervision (e.g., No Risk, Low Remorse/Victim Blaming, Antisocial Lifestyle, and

Victim Access). Quinsey et al. (1997), however, found much larger effects in the case notes ($R = .61$) than we did ($R = .21$). The larger effects may be attributable to better record keeping, different scoring procedures, or differences in sampling procedures. Quinsey et al. (1997) eliminated from their yoked comparison groups offenders who had already eloped or offended while under supervision, which would increase the differences between their recidivistic and nonrecidivistic groups. In contrast, 40% of our nonrecidivist comparison group had previously failed on conditional release.

Whereas Quinsey et al. (1997) focused primarily on nonsexual recidivism, Pithers et al. (1988) looked specifically for the precursors of sexual recidivism. Because no comparison group was used, it is difficult to know whether the factors considered by Pithers et al. were more common among recidivists than nonrecidivists. Nevertheless, it is interesting to note that those factors deemed to be important in at least 70% of Pithers et al.'s (1988) cases (anger, cognitive distortions, low victim empathy, and offense planning) were similar to the factors that differentiated the recidivists and the nonrecidivists in both the current study and that of Quinsey et al. (1997).

Although the study assessed offender behavior as independent from the behavior of their supervising officers, in practice, the two are highly related. Our measures of cooperation with supervision would not only be influenced by the offenders' behavior but also by the officers' capacity to establish rapport with difficult clients. Similarly, the association between observed dynamic risk factors and recidivism should be reduced when officers are able to effectively intervene in high-risk cases.

Of the three main types of risk factors (static, stable dynamic, and acute dynamic), the stable dynamic factors most strongly differentiated the recidivists from the nonrecidivists. This finding is partially a function of the research design, which matched the groups on many static variables. It was impossible, for example, for RRASOR scores (Hanson, 1997) to differentiate the groups because we explicitly matched the offenders on these variables. The finding that some static factors continued to differentiate the groups supports the tenacity of historical variables.

Hanson and Bussière's (1998) meta-analytic review found that sexual offense recidivism was most strongly related to sexual deviancy,

and to a lesser extent, general criminality. In contrast, this study found that criminal lifestyle variables (e.g., the VRAG scores) tended to be stronger predictors than measures of sexual deviancy. Although this pattern may simply reflect random variation, there are two features of the sampling procedure that would reinforce the salience of general criminality. First, the offenders were closely matched on historical measures of sexual deviancy, which would reduce the relative contribution of sexual deviancy variables. Second, the nonrecidivists were selected from offenders who had successfully served at least 6 months of their community sentence. Consequently, serious nonsexual recidivists would be eliminated from the comparison group.

The study found similar risk factors for the different types of sexual offenders, but fewer factors were significant for the girl-victim child molesters than for the rapists or the boy-victim child molesters. Assuming that this pattern is more than a statistical anomaly, it may be that girl-victim child molesters follow a different offense cycle than other sexual offenders. One possibility is that the girl-victim child molesters may be less socially and sexually deviant. Rather than sharing the courtship disorder of the rapists (Freund, 1990; Freund, Seto, & Kuban, 1997) or the deviant victim choice of the boy-victim child molesters, some girl-victim child molesters may simply occupy the low end of a continuum of normal age preference. Similarly, some men may choose to have sex with girls when their preferred sexual partners (mature females) are not immediately available. Until the effects are replicated, any interpretation of the relative unpredictability of girl-victim child molesters is, at best, tentative.

An interesting finding of this study is the striking failure of anti-androgen medications to prevent sexual offense recidivism. Uncontrolled case studies have typically found anti-androgen use to be associated with a decreased sexual drive and reduced temptations to reoffend (Fedoroff, Wisner-Carlson, Dean, & Berlin, 1992; Money & Bennett, 1981). The finding in this study that a greater number of recidivists than nonrecidivists were taking sex-drive-reducing medications can probably be explained by the officers' desire to intervene in the highest risk cases. Given that all the offenders who started anti-androgens (most typically, cyproterone acetate) recidivated, hormonal intervention was clearly insufficient. It is possible that anti-androgens could increase the risk if their introduction is associated

with decreased vigilance on the part of the offender and/or his supervising officer. This study was not designed to test the efficacy of anti-androgen medication, and the sample size was too small to make strong conclusions. Nevertheless, officers should be aware that sexual offenders still present a considerable risk for sexual offense recidivism after the introduction of sex-drive-reducing medication.

Conclusions and Recommendations

Low recidivism base rates present special challenges to prospective designs. The recidivism rate in this study was artificially set at 50%, which would be considerably higher than the 10% to 15% sexual offense recidivism rates typically found after 4 to 5 years in the community (Hanson & Bussière, 1998). Prospective designs provide the best information, but they require either long follow-up periods (5 years minimum), large sample sizes, or exceptionally high-risk offenders. Researchers interested in retrospective matched designs (as in this study) may want to begin by ensuring that the quality of case records is sufficient for their purposes.

Despite the study's limitations, this research provides some guidance to those interested in improving the treatment and community supervision of sexual offenders. Many of the stable dynamic risk factors identified in this study are useful treatment targets. In addition, dynamic risk factors should be routinely evaluated during supervision. The results suggest that offenders are most at risk for reoffending when they become sexually preoccupied, have access to victims, fail to acknowledge their recidivism risk, and show sharp increases in dysphoric moods such as anger, in particular. By carefully monitoring the offender's risk indicators, we may be able to provide graduated and responsive interventions well before the point of no return.

REFERENCES

- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.). Washington, DC: Author.
- Andrews, D. A., & Bonta, J. (1998). *The psychology of criminal conduct* (2nd ed.). Cincinnati, OH: Anderson.

- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- Bonta, J. (1996). Risk-needs assessment and treatment. In A. T. Harland (Ed.), *Choosing correctional options that work* (pp. 18-32). Thousand Oaks, CA: Sage.
- Bonta, J., & Hanson, R. K. (1995, August). *Violent recidivism of men released from prison*. Paper presented at the 103rd Annual Convention of the American Psychological Association, New York.
- Bonta, J., Harman, W. G., Hann, R. G., & Cormier, R. B. (1996). The prediction of recidivism among federally sentenced offenders: A re-validation of the SIR scale. *Canadian Journal of Criminology*, 38, 61-79.
- Borum, R. (1996). Improving the clinical practice of violence risk assessment: Technology, guidelines, and training. *American Psychologist*, 51, 945-956.
- Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research*, 1, 245-276.
- Cleckley, H. (1976). *The mask of sanity* (5th ed.). St. Louis, MO: Mosby.
- Cormier, R. B. (1997). Yes, SIR! A stable risk prediction tool. *Forum on Corrections Research*, 9, 3-7.
- Dix, G. E. (1976). Differential processing of abnormal sex offenders. *Journal of Criminal Law, Criminology, & Police Science*, 67, 233-243.
- Fedoroff, J. P., Wisner-Carlson, R., Dean, S., & Berlin, F. S. (1992). Medroxy-progesterone acetate in the treatment of paraphilic sexual disorders. *Journal of Offender Rehabilitation*, 18, 109-123.
- Fiske, S., & Taylor, S. (1991). *Social cognition* (2nd ed.). New York: McGraw-Hill.
- Freund, K. (1990). Courtship disorder. In W. L. Marshall, D. R. Laws, & H. E. Barbaree (Eds.), *Handbook of sexual assault: Issues, theories, and treatment of the offender* (pp. 195-207). New York: Plenum.
- Freund, K., Seto, M. C., & Kuban, M. (1997). Frottuerism and the theory of courtship disorder. In D. R. Laws & W. O'Donohue (Eds.), *Sexual deviance: Theory, assessment, and treatment* (pp. 111-130). New York: Guilford.
- Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: What works! *Criminology*, 34, 575-607.
- Ghiselli, E. E., Campbell, J. P., & Zedeck, S. (1981). *Measurement theory for the behavioral sciences*. San Francisco: W. H. Freeman.
- Gretton, H., McBride, M., & Hare, R. D. (1995, October). *Psychopathy in adolescent sex offenders: A follow-up study*. Paper presented at the Annual Conference of the Association for the Treatment of Sexual Abusers, New Orleans, LA.
- Hanson, R. K. (1997). *The development of a brief actuarial risk scale for sexual offense recidivism* (User Report No. 1997-04). Ottawa: Department of the Solicitor General of Canada.
- Hanson, R. K. (1998). What do we know about sex offender risk assessment? *Psychology, Public Policy and Law*, 4, 50-72.
- Hanson, R. K., & Bussière, M. T. (1998). Predicting relapse: A meta-analysis of sexual offender recidivism studies. *Journal of Consulting and Clinical Psychology*, 66, 348-362.
- Hanson, R. K., Scott, H., & Steffy, R. A. (1995). A comparison of child molesters and non-sexual criminals: Risk predictors and long-term recidivism. *Journal of Research in Crime and Delinquency*, 32, 325-337.
- Hare, R. D. (1991). *Manual for the Hare Psychopathy Checklist-Revised*. Toronto, Canada: Multi-Health Systems.
- 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, 315-335.

- Johnston, L., & Ward, T. (1996). Social cognition and sexual offending: A theoretical framework. *Sexual Abuse: A Journal of Research and Treatment*, 8, 55-80.
- Launay, G. (1994). The phallometric assessment of sex offenders: Some professional and research issues. *Criminal Behavior and Mental Health*, 4, 48-70.
- Laws, D. R. (Ed.). (1989). *Relapse prevention with sex offenders*. New York: Guilford.
- McKibben, A., Proulx, J., & Lusignan, R. (1994). Relationships between conflict, affect and deviant sexual behaviors in rapists and child molesters. *Behaviour Research and Therapy*, 32, 571-575.
- Money, J., & Bennett, R. G. (1981). Post-adolescent paraphilic sex offenders: Anti-androgenic and counseling therapy follow-up. *International Journal of Mental Health*, 10, 122-133.
- Nuffield, J. (1982). *Parole decision-making in Canada: Research towards decisions guidelines*. Ottawa, Canada: Ministry of Supply and Services.
- Pedhazur, E. J. (1982). *Multiple regression in behavioral research: Explanation and prediction* (2nd ed.). New York: Holt, Rinehart and Winston.
- Pithers, W. D., Beal, L. S., Armstrong, J., & Petty, J. (1989). Identification of risk factors through clinical interviews and analysis of records. In D. R. Laws (Ed.), *Relapse prevention with sex offenders* (pp. 77-87). New York: Guilford.
- Pithers, W. D., Kashima, K., Cummings, G. F., Beal, L. S., & Buell, M. (1988). Relapse prevention of sexual aggression. In R. Prentky & V. Quinsey (Eds.), *Human sexual aggression: Current perspectives* (pp. 244-260). New York: New York Academy of Sciences.
- Proulx, J., McKibben, A., & Lusignan, R. (1996). Relationships between affective components and sexual behaviors in sexual aggressors. *Sexual Abuse: A Journal of Research and Treatment*, 8, 279-289.
- Quinsey, V. L., Coleman, G., Jones, B., & Altrows, I. (1997). Proximal antecedents of eloping and reoffending among supervised mentally disordered offenders. *Journal of Interpersonal Violence*, 12, 794-813.
- Quinsey, V. L., Harris, G. T., Rice, M. E., & Cormier, C. A. (1998). *Violent offenders: Appraising and managing risk*. Washington, DC: American Psychological Association.
- Rice, M. E., & Harris, G. T. (1997). Cross-validation and extension of the Violence Risk Appraisal Guide for child molesters and rapists. *Law and Human Behavior*, 21, 231-241.
- Rice, M. E., Quinsey, V. L., & Harris, G. T. (1989). *Predicting sexual recidivism among treated and untreated extrafamilial child molesters released from a maximum security psychiatric institution* (Research Report No. VI-III). Penetanguishene, Ontario, Canada: Mental Health Centre.
- Ryan, G., & Miyoshi, T. (1990). Summary of a pilot follow-up study of adolescent sexual perpetrators after treatment. *Interchange*, 1, 6-8.
- Schmidt, F. L. (1996). Statistical significance testing and cumulative knowledge in psychology: Implications for training of researchers. *Psychological Methods*, 1, 115-129.
- Serin, R. (1996). Violent recidivism in criminal psychopaths. *Law and Human Behaviour*, 20, 207-217.
- Wong, S. (1984). *The criminal and institutional behaviour of psychopaths* (User Report No. 1984-87). Ottawa: Ministry of the Solicitor General of Canada.
- Zamble, E., & Quinsey, V. L. (1997). *The criminal recidivism process*. Cambridge, UK: Cambridge University Press.