PREDICTORS OF SEXUAL OFFENDER RECIDIVISM:

A META-ANALYSIS

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Abstract

This review provides a quantitative summary of recidivism risk factors for sexual offenders. Based on 61 different data sets, approximately one third of the 165 predictor variables were significantly related to recidivism (p < .05) with correlations of .10 or greater. Sexual offense recidivism was best predicted by measures of sexual deviance (e.g., deviant sexual preferences, prior sexual offenses), and, to a lesser extent, general criminological factors (e.g., age, total prior offenses). The predictors of nonsexual violent recidivism and general recidivism were similar to those recidivism predictors found among nonsexual criminals. No single factor was sufficiently related to recidivism, however, to justify its use in isolation. There remains a need for research to identify changeable, dynamic risk factors.

Executive Summary

Sexual victimization is a serious social problem. Given the high rates of sexual victimization among women and children (Johnson & Sacco, 1995; Peters et al., 1986), there must also be a significant number of sexual offenders. A large number of sexual offenders raises important public policy questions concerning how such offenders should be managed by the mental health and criminal justice systems. Decisions concerning the management of individual offenders are often based on based on assessments of dangerousness.

It is difficult to estimate the overall recidivism rates of sexual offenders since many offenses remain undetected. Comparisons of the recidivism rates of different types of offenders, however, can yield important information about relative recidivism risk (Furby, Weinrott & Blackshaw, 1989). The main question addressed in the present report was the following: compared to other sexual offenders, what factors increase or decrease their risk for recidivism? The question was addressed through a quantitative summary of a large number of follow-up studies.

To be included in the review, the study had to a) identify a group of sexual offenders, b) include a follow-up period, c) compute the relationship between some initial characteristic and subsequent recidivism, d) record sexual, nonsexual violent, or any recidivism, and e) report sufficient statistical information. Studies were identified through searching computerised data bases, examining the reference lists of available articles, and by contacting established researchers in the field.

As of our deadline of December 31, 1995, our search yielded 87 usable documents (published articles, government reports, unpublished program evaluations, raw data sets, etc.). These 87 articles reported on 61 different data sets from six different countries. Half of the studies were produced after 1989. The median sample size was 198 (mean of 475, range of 12 to 4,428), and the median follow-up period was four years. In total, the report examined 28,972 sexual offenders.

Two raters coded each study using a standard set of categories and coding rules. We examined all predictor variables except treatment outcome. Treatment outcome with sexual offenders was considered a sufficiently important topic to justify separate

reviews (see Hall, 1995). A further restriction was that each predictor variable had to be examined in at least three independent studies. Overall, the review examined 69 potential predictors of sexual recidivism, 38 predictors of nonsexual violent recidivism, and 58 predictors of general (any) recidivism.

The findings of each study were transformed into a common index of predictive accuracy: r. This measure can range between -1 and +1. When r equals zero, there is no relationship between the variables. When r is -1 or +1, there is perfect prediction. A positive value of r indicate that offenders with the characteristic are more likely to recidivate, whereas negative values indicate that recidivism is less likely. In general, the value of r can be interpreted as the percentage difference in recidivism rates between those offenders who have a particular characteristic and those offenders who do not (Farrington & Loeber, 1989). The values of r were adjusted for differences in recidivism baserates and then averaged across studies.

Given the average 4-5 year follow-up period, the overall recidivism rate was 13.4% for sexual offenses (n = 23,393), 12.2% for nonsexual violent offenses (n = 7,155) and 36.3% for any recidivism (n = 19,374). Rapists were much more likely to recidivate with a nonsexual violent offense (22.1%) than were child molesters (9.9%). These averages should be considered cautiously, however, since they were based on diverse studies and many sexual offenses remain undetected.

The strongest predictors of sexual recidivism were characteristics related to sexual deviance, and, to a lesser extent, general criminological variables. These predictors included phallometric assessments of sexual preferences for children (r = .32), prior sexual offenses (.19), age (-.13), early onset of sexual offending (.12), any prior offenses (.13), and never being married (.11). The risk of recidivism was lower for those offenders who were related to, or who knew, their victims (family members < acquaintances < strangers). Those offenders who failed to attend or who dropped out of treatment were higher risk than those who successfully completed treatment. Although based on a limited number of studies, other interesting predictors included a negative relationship with their mother, personality disorders, and the MMPI Masculinity-femininity scale.

Among sexual offenders, nonsexual recidivism was predicted by the same variables that predict recidivism among nonsexual criminals (Andrews & Bonta, 1994; Champion, 1994). Both nonsexual violent recidivists and general recidivists tended to be young, single, have antisocial/psychopathic personality disorders, be of a minority race and have a history of prior violent and nonviolent offenses. Rapists recidivated nonsexually more often than did child molesters. Incest offenders were lower risk than other sexual offenders for nonsexual recidivism.

The high statistical power generated by the meta-analysis also allowed for the identification of factors that were not related to recidivism. Sexual offense recidivism was unrelated to having a history of sexual abuse as a child, substance abuse, and general psychological problems (anxiety, depression, low self-esteem, etc.). General psychological problems were also unrelated to nonsexual recidivism. When comparing the findings of the meta-analysis to other research (McKibben, Proulx & Lusignan, 1994), it appears that extent to which sexual offenders are distress does not predict recidivism, but sexual offenders appear to react deviantly when distress.

Although many individual factors were related to recidivism, the relationships tended to be modest (.10 to .20 range). Even the strongest predictors, such as deviant sexual preferences or prior sexual offenses, were not sufficiently reliable to justify their use in isolation. The next logical question was how well recidivism could be predicted by combinations of risk factors. In general, clinical assessments performed poorly (.06 to .14) in comparison to statistical risk procedures (.42 to .46). The statistical risk procedures, however, should be considered to overestimate predictive accuracy since they have yet to be replicated on other samples.

The report concludes with suggestions on how to improve risk assessments of sexual offenders. Almost all the risk factors were historical (e.g., prior offenses) or extremely stable (e.g., personality disorders); consequently, there remains a need to identify changeable, dynamic risk factors. These factors could be used to assess changes due to treatment and to predict when offenders may recidivated. Research to identify dynamic risk factors may require improved assessment procedures and different designs than those reviewed in the current report.

Prediction of sexual offender recidivism:

A meta-analysis

Sexual victimization is a common event (Johnson & Sacco, 1995; Koss, 1993; Peters, Wyatt, & Finkelhor, 1986). Based on victimization surveys, approximately one in ten males and one in five females report being sexually assaulted as children (Peters et al., 1986). Between 10% and 20% of women report being the victim of sexual assault as adults (using criminal code definitions)(Johnson & Vacco, 1995; Koss, 1993). Such surveys suggest that in addition to the large number of victims, there must also be a significant number of sexual offenders. Carefully designed epidemiological studies are unavailable, but studies using convenience samples (e.g., university students, hospital staff) typically find that 10% to 25% of men admit to sexually assaulting women or children (Hanson & Scott, 1995; Lisak & Roth, 1988; Templeman & Stinnett, 1991).

The large number of sexual offenders raises important public policy questions concerning how such offenders should be managed by the mental health and criminal justice systems. Some jurisdictions have opted for indefinite, preventative detention of their most dangerous sexual offenders (Anderson & Masters, 1992). Most sexual offenders, however, are managed with some combination of incarceration, community supervision, and specialized treatment (Knopp, Freeman-Longo & Stevenson, 1992; The Management, 1990). The public policy/legal decisions concerning the management of individual offenders are often guided by the expert testimony of mental health professionals. An important aspect of such expert testimony are clinical assessments of dangerousness.

The assessment of dangerousness of sexual offenders requires information concerning the overall recidivism rate of sexual offenders and information about those factors that

increase or decrease a particular sexual offender's recidivism risk. It is difficult to specify a single recidivism rate for sexual offenders since such rates vary with the different definitions of recidivism. Recidivism rates will be lower for narrow definitions (e.g., repeat the same offense) than for broad definitions (e.g., any reoffense). Recidivism rates will also increase with the length of the follow-up period. Consequently, statements about recidivism rates have little meaning without specifying the definition and follow-up period.

The most serious problem with estimating overall recidivism rates, however, is that a substantial proportion of sexual offenses remain undetected. Comparisons between police statistics and victimization surveys indicate that most sexual offenses, particularly offenses against children, never come to official attention (Bonta & Hanson, 1994). It is also implausible to expect that the offenders themselves will provide thorough accounts of their undetected sexual crimes. Consequently, any empirical estimates of sexual offenders' recidivism rates should be considered underestimates.

Information concerning sexual offenders' relative risk (as opposed to their absolute risk) is more tractible to empirical investigation. By assessing sexual offenders on some characteristics and then recording their subsequent recidivism, it is possible to identify factors that differentiate the recidivists from the nonrecidivists. Clinicians interested in empirically-based risk assessment can then use these identified factors to estimate the relative recidivism risk of similar offenders.

Criminological researchers have made an important distinction between static and dynamic risk factors (Andrews & Bonta, 1994; Bonta, 1996; Jones, 1996). Static factors, such as age and offense history, predict recidivism, but are immutable to outside influences. In contrast, dynamic risk factors (or "criminogenic needs"), such as criminal attitudes and criminal associates, are potentially changeable. An important characteristic of dynamic risk factors is that reductions in such factors are associated with reduced recidivism (Bonta, 1996). Static factors are useful for making assessments of an offender's overall risk level. Knowledge of dynamic factors, however, is required to identify targets for intervention, assess changes in risk (e.g., benefit from treatment), and predict the timing of reoffenses.

Previous reviews of sexual offender recidivism have been limited to a narrow range of predominantly static risk factors (Furby, Weinrott & Blackshaw, 1989; Hall, 1990; Quinsey, Lalumière, Rice & Harris, 1995). Hall's (1990) review was primarily concerned with the identification of sexual offenders, but he did review a small number of recidivism studies. He concluded that there were "relatively small" differences in recidivism rates between the various offender types. Furby et al. (1989) similarly devoted a small portion of their review to recidivism risk predictors. They stated that "by far the best sources of data for comparing different offender types are individual studies whose samples include more than one type and whose results are presented separately for each type" (p. 26). Unfortunately, they were only able to locate five such studies, from which they tentatively concluded that child molesters had lower recidivism rates than did rapists or exhibitionists and that men who molest boys may be higher risk than those who molest girls.

Quinsey, Lalumière et al. (1995) were able to locate additional studies that compared

the recidivism rates of different types of sexual offenders (see also Quinsey, 1984, 1986). In contrast to Furby et al. (1989), Quinsey, Lalumière et al. (1995) concluded that the sexual offense recidivism rates were similar for rapists and child molesters. Quinsey, Lalumière et al. (1995) did report, however, that a number of characteristics were associated with recidivism risk. Boy-victim child molesters were found to be higher risk than men who molested extrafamilial girls, who, in turn, were higher risk than incest offenders. For both rapists and child molesters, those with prior sexual or nonsexual offenses recidivated more frequently than those without prior offenses. They also concluded that laboratory assessed deviant sexual interests was related to recidivism. This latter finding is important since it was the only identified risk factor that is potentially changeable (dynamic).

Quinsey, Lalumière et al. (1995) have provided the most thorough recent review, but they still only focussed on a limited number of variables and a modest number of studies (10 to 15 different data sets). As well, little information was provided concerning the relative importance of the various risk factors. Such limitations are to be expected in any purely narrative review. It is difficult to summarize the magnitude of findings across a large number of studies without resorting to numbers.

Quantitative summaries have become a standard feature of research reviews (Rosenthal, 1995). Such quantitative reviews are often called "meta-analyses" since they statistically analyze the statistics reported by other researchers (e.g., Hedges & Olkin, 1985; Hunter & Schmidt, 1990; Rosenthal, 1991). There are several reasons why meta-analytic techniques are useful in the review of sexual offender recidivism studies. As previously suggested, meta-analyses makes it easy to combine and organize the results of many studies. In this study we identified over 1,200 findings relating various characteristics of sexual offenders to recidivism; the sheer volume of such information would overwhelm any attempt at narrative review.

Another important feature of meta-analyses is that they can provide sufficient statistical power to detect medium-sized and small effects. By pooling the results of different studies, it is possible to obtain sample sizes (and the corresponding statistical power) that are much larger than could be found in any individual study. Meta-analytic techniques also provide numeric estimates of effects, which facilitates comparisons of the relative importances of various risk indicators. As well, by calculating the variance in the findings across studies, it is possible to examine the extent to which risk factors generalize across settings and samples.

One common concern with meta-analyses is whether it is appropriate to combine studies with different characteristics. Is it reasonable, for instance, to combine the findings of a European study from the 1940s with a recent study from California? Sexual offender recidivism studies vary considerably on their definitions of recidivism, their follow-up periods, their subject populations, and the juridictions in which they are conducted. Although such factors are potential threats to generalizability, one advantage of a quantitive review is that it is possible to test the significance of such differences. It is also possible to select studies and meta-analytic methods that maximize the comparibility of the research findings.

To facilitate comparibility, all the studies included in our meta-analysis employed the