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**Predictors of
Sexual Recidivism:
An Updated Meta-Analysis**

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Results

The 95 studies produced 1,974 effect sizes on a combined sample of 31,216 sexual offenders (750 effects for sexual recidivism, 307 for violent non-sexual recidivism, 412 for violent recidivism and 505 for any recidivism). On average, the observed sexual recidivism rate was 13.7% (n = 20,440, 84 studies), the violent non-sexual recidivism rate was 14.0% (n = 7,444, 27 studies), the violent recidivism rate (including sexual and non-sexual violence) was 25.0% (n = 12,542, 34 studies) and the general (any) recidivism rate was 36.9% (n = 13,196, 56 studies). Studies that used artificial base rates (e.g., Dempster, 1998) were excluded from the rate calculations. The average follow-up time was 5-6 years. These figures should be considered to underestimate the real recidivism rates because not all offences are detected.

How to read the tables

Table 1 provides a broad comparison of the main categories of risk factors, followed by detailed presentations of the individual risk factors for each type of recidivism: sexual recidivism (Table 2), violent non-sexual recidivism (Table 3), any violent recidivism (sexual and non-sexual; Table 4) and general (any) recidivism (Table 5). Only predictor variables examined in at least three studies are presented. Table 6 provides a key to the studies used in the meta-analysis.

The primary consideration when estimating the importance of a risk predictor is the size of its relationship with recidivism, as indicated by the median d values and the weighted average (d.). According to Cohen (1988), d values of .20 are considered “small”, values of .50 are considered “medium”, and values of .80 are considered “large”. The value of d is approximately twice as large as the correlation coefficient calculated from the same data.

The most reliable findings are those with low variability across studies. If Q is significant, the variability is greater than would be expected by chance. With large samples sizes (greater than 1,000), even small differences between studies will be statistically significant. Another indicator of variability is the similarity between the weighted average, d., and the median. When the median and the mean suggest substantially different interpretations, then neither should be considered reliable.

When the confidence interval does not contain zero, it is equivalent to being statistically significant at $p < .05$. When the confidence intervals for two predictor variables do not overlap, then they can be considered statistically different from each other.

Comparison across categories of risk predictors

The broad comparison in Table 1 included all the individual variables in the detailed tables (Tables 2 through 5 are at the back) as well as relevant individual variables examined in less than three studies. When studies included multiple indicators of a larger category, the median value was selected (and the median variance). The values in Table 1 were, on average, based on 18 studies each (range 5 to 65 studies). Outliers were excluded from each category using the usual criteria (an extreme value accounting for more than 50% of the total variance).

As can be seen in the Table 1, the strongest predictors of sexual recidivism were sexual deviancy (d. = .30) and antisocial orientation (.23). The general categories of sexual attitudes (d. = .16) and intimacy deficits (d. = .15) also significantly predicted sexual recidivism, but there was substantial variation in the predictive accuracy of the subcomponents of these categories (see Table 2). The general categories of adverse childhood environment (d. = .09), general psychological problems (d. = .02) and clinical presentation (d. = -.02) had little or no relationship with sexual recidivism.

Table 1. The predictive accuracy of the main categories of risk factors

Category	Type of Recidivism			
	Sexual	Violent non-sexual	Violent	Any
Sexual Deviancy	.30 ±.08	-.05 ±.17	.19 ±.08	.04 ±.08
Antisocial Orientation	.23 ±.04	.51 ±.07	.54 ±.05	.52 ±.04
Sexual Attitudes	.16 ±.12	.17 ±.22	.14 ±.11	.24 ±.10
Intimacy Deficits	.15 ±.11	.12 ±.21	.12 ±.12	.10 ±.10
Adverse Childhood Environment	.09 ±.08	-.02 ±.17	.14 ±.08	.11 ±.07
General Psychological Problems	.02 ±.10	.21 ±.14	.00 ±.10	-.04 ±.11
Clinical Presentation	-.02 ±.09	.16 ±.20	.09 ±.09	.12 ±.08

Antisocial orientation (antisocial personality, antisocial traits, history of rule violation) was the major predictor of violent non-sexual recidivism ($d = .51$), violent (including sexual) recidivism ($d = .54$) and any recidivism ($d = .52$). Although other categories were sometimes significantly related to non-sexual recidivism, the effects were much smaller than those observed for category of antisocial orientation; the next largest effect was $d = .24$ for the association of sexual attitudes and any recidivism. Sexual deviancy was unrelated to violent non-sexual recidivism ($d = -.05$) and general (any) recidivism ($d = .04$).

Predictors of sexual recidivism

As can be seen in Table 2 (at the back), the measures of deviant sexual interests were all significantly associated with sexual recidivism: any deviant sexual interest ($d = .31$), sexual interest in children ($d = .33$), and paraphilic interests ($d = .21$). Sexual preoccupations (paraphilic or non-paraphilic) were also significantly related to sexual recidivism ($d = .39$), as were high (feminine) scores on the Masculinity-Femininity scale of the Minnesota Multiphasic Personality Inventory (MMPI) ($d = .42$).

Mixed results were found for phallometric assessment measures, which involve the direct monitoring of penile response when presented with various forms of erotic stimuli (Launay, 1999). Sexual interest in children was a significant predictor of sexual recidivism ($d = .33$) as was the general category of any deviant sexual interest ($d = .24$). Phallometric assessments of sexual interest in rape/violence was not significantly related to sexual recidivism, nor was the narrow category of sexual interest in boys, although the later finding was based on only 306 offenders from three studies.

Sexual recidivism was significantly predicted by almost all the indicators of antisocial orientation (antisocial personality, antisocial traits and history of rule violation). Specifically, sexual recidivism was predicted by the Hare Psychopathy Checklist (PCL-R, Hare et al., 1990, $d = .29$, 13 studies), the MMPI Psychopathic deviate scale ($d = .43$, 4 studies) and by other measures of antisocial personality (e.g., psychiatric diagnoses, responses to questionnaires, $d = .21$, 12 studies). The general category of

“any personality disorder” was also significantly related to sexual recidivism. The findings for “any personality disorder” showed more variability than would be expected by chance ($Q = 45.32$, $p < .001$), with one large study ($n = 1,214$; Långström, Sjöstedt & Grann, in press) finding an atypically strong relationship ($d = 1.24$). When this outlier was removed, the average d was .36, and the amount of variability was no more than would be expected by chance ($Q = 8.85$, $p > .05$). Any personality disorder was grouped with measures of antisocial personality because antisocial personality was by far the most common personality disorder diagnosed among sexual offenders.

Most of the antisocial traits were related to sexual recidivism, although, as expected, the predictive accuracy of the individual traits tended to be smaller than the predictive accuracy of the general category (antisocial personality). Offenders with general self-regulation problems were more likely than offenders with stable lifestyles to sexually recidivate ($d = .37$). Included among general self-regulation problems were measures of lifestyle instability, impulsivity, as well as Factor 2 from the PCL-R (Hare et al., 1990). Other antisocial traits that were significantly correlated with sexual recidivism included employment instability ($d = .22$), any substance abuse ($d = .12$), intoxicated during offence ($d = .11$), and hostility ($d = .17$).

All of the indices of rule violation were significantly related to sexual recidivism. The strongest single indicators of sexual recidivism were a) non-compliance with supervision ($d = .62$), and b) violation of conditional release ($d = .50$). Readers should be cautioned, however, that these effects were based on a limited number of studies and that extreme values tend to regress towards the mean (i.e., the biggest values tend to become smaller when additional data is collected).

Indicators of adverse childhood environment had very weak relationships with sexual recidivism. Notably, being sexually abused as a child was not significantly related to sexual recidivism, with a d of .09, 95% confidence interval of -.01 to .18, based on 5,711 offenders from 17 different samples. Having been separated from biological parents was associated with increased sexual recidivism, but the effect was small ($d = .16$, 95% confidence interval of .05 to .28, based on 4,145 offenders from 13 studies).

Some measures of intimacy deficits predicted sexual recidivism, whereas others did not. There was no evidence that sexual recidivism was predicted by social skills deficits ($d = -.07$) or loneliness ($d = .03$). In contrast, sexual recidivism was predicted by emotional identification with children (having children as friends, child oriented lifestyle, $d = .42$) and conflicts with intimate partners ($d = .36$).

The general category of “Attitudes tolerant of sexual crime” was significantly related to sexual recidivism, although the effect was small ($d = .22$, 95% confidence interval of .05 to .38). The effects were not significant for child molester attitudes, low sex knowledge, or other deviant sexual attitudes (e.g., prudish attitudes toward masturbation).

None of the indicators of general psychological problems were significantly related to sexual recidivism, except in one study (Långström et al., in press). In all the other studies, sexual recidivism was unrelated to severe psychological dysfunction (psychosis) or internalizing disorders such as anxiety, and depression. On average, low self-esteem was unrelated to sexual recidivism ($d = .04$) and the amount of variability was no more than would be expected by chance ($Q = 10.12$, $p > .25$).

The degree of force used in the sexual offences was significantly related to the probability of sexual recidivism, although the size of the effects was tiny ($d = .09$, 95% confidence interval of .02 to .16, based on 7,221 offenders from 25 studies) and the median effect was zero. On average, the difference in recidivism rates between those who did or did not use weapons or physically injure their victims