Examining the Influence of Denial, Motivation, and Risk on Sexual Recidivism

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Leigh Harkins,[1] Anthony R. Beech,[1] and Alasdair M. Goodwill[1]

Abstract

This study examined the relationship between denial, motivation, static risk (Risk Matrix 2000), and sexual recidivism. Denial was measured in three ways: A Denial Index (resulting from the combination of several measures of different aspects of denial), Absolute Denial, and Denial of Risk. Motivation for treatment was also examined. Logistic regression analyses in a sample of 180 sex offenders using a fixed 10-year follow-up found that risk moderated the relationships between the Denial Index, Absolute Denial, and sexual recidivism. In particular, among high-risk offenders, denial predicted decreased sexual recidivism. An opposite pattern was observed for the low-risk offenders who were in denial, although these differences were not significant. In terms of Denial of Risk, those who were denying they presented a future risk for offending (i.e., higher on Denial of Risk) were less likely to reoffend than those who reported seeing themselves as presenting a high risk. Motivation for treatment was positively correlated with recidivism, but the effect disappeared once static risk was controlled.

Keywords

denial, motivation, static risk factors, sexual offender

Introduction

Denial and motivation are often discussed as important factors in effective treatment of sex offenders (Beech & Fisher, 2002; Garland & Dougher, 1991; Kear-Colwell &

[1]University of Birmingham, Birmingham, UK

Corresponding Author:
Leigh Harkins, Centre for Forensic and Criminological Psychology, University of Birmingham, Edgbaston, Birmingham, UK B15 2TT
Email: l.harkins@bham.ac.uk

Pollock, 1997; Miller & Rollnick, 2002; Tierney & McCabe, 2002). Sexual offenders who deny their offenses are typically considered to be unmotivated for treatment (Marshall, 1994); in many cases they are excluded from treatment (e.g., Beech, Oliver, Fisher, & Beckett, 2005). Denial of offenses is quite common among sex offenders (Barbaree, 1991; Marshall, 1994; Maruna & Mann, 2006). The breadth with which it can be conceptualized may increase the perceived occurrence of offender denial (Barbaree, 1991; Cooper, 2005). Schneider and Wright (2004) discuss denial as a multifaceted rather than dichotomous construct, with aspects falling under three headings of accountability: refutation, minimization, and depersonalization (i.e., even though the offender accepts responsibility for the offense, they are not prepared to admit they are the type of person who is vulnerable to committing sexual offenses). Barbaree (1991) distinguishes between three other forms of denial: (a) complete denial that anything occurred; (b) acknowledgement of sexual activity, but denial that it was an offense (i.e., it was consensual); and (c) acknowledgment of physical contact but denial of sexual content.

Similarly, there have been differences in conceptualizations of motivation. Motivation for treatment can be conceptualized as acceptance of accountability for offending or willingness to attend treatment (Tierney & McCabe, 2002). It has also been considered in terms of Prochaska and DiClmente's (1982) transtheoretical model of change, ranging from lack of acknowledgement of a problem through to the maintenance of the changes made in treatment (e.g., Kear-Colwell &Pollock, 1997). Denial is sometimes considered the lowest state on a continuum of motivation (e.g., Kennedy & Grubin, 1992).

Some hold the position that those offenders who deny committing their offenses represent a high risk for reoffense (Barbaree, 1991; Lund, 2000). Indeed, offenders in denial were more likely to be considered *high risk* in a study of decisions made by U.K. parole boards between 1992 and 1994 (Hood, Shute, Feilzer, & Wilcox, 2002). As a result of being seen as high risk, it is therefore considered by some that denial must be confronted if any progress is to be made in treatment (e.g., Salter, 1988).

Others have noted that denial is not necessarily problematic (e.g., Maruna & Mann, 2006). Indeed, Maruna and Mann (2006) suggest that denial is a common reaction among people confronted with having done something wrong and therefore we should not expect it to be related to an increased risk for sexual reoffense.

Indeed, a number of positive outcomes are associated with externalizing, as opposed to internalizing, responsibility for one's negative actions (Maruna & Mann, 2006).

Given the importance placed on denial and motivation in the context of treatment, a number of studies have examined the role these factors play in reducing sexual recidivism, which is generally the intended outcome of sexual offender treatment. Meta-analyses have not found denial to be related to sexual recidivism (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005; Kennedy & Grubin, 1992). Hanson and Bussière (1998) and Kennedy and Grubin (1992) found no clear link between complete denial and recidivism. Lund (2000), however, noted several limitations of the denial studies included in the Hanson and Bussière (1998)

meta-analysis, such as lack of a consistent definition of denial, variation in or lack of treatment access for deniers, low base rates, and small sample sizes. He concluded that the Hanson and Bussière meta-analysis did not actually clarify the role of denial in predicting sexual recidivism. In a more recent meta-analysis, Hanson and Morton-Bourgon (2005) found that neither denial nor motivation for treatment was related to sexual recidivism.

Some have suggested that perhaps the reason a clear link has not been observed between denial or motivation and risk is because the role of moderator variables have been neglected (Langton et al., 2008; Nunes et al., 2007). Nunes et al. (2007) found that risk moderated the relationship between absolute denial and sexual recidivism risk, but psychopathy did not. Specifically, they found that denial was associated with increased sexual recidivism among low-risk offenders but with decreased recidivism among the high-risk offenders (although this was nonsignificant for the high-risk group).

Langton et al. (2008) examined the relationship between denial and minimization at posttreatment and sexual recidivism. They found that a dichotomous denial/minimization classification (i.e., no denial or minimizations vs. some minimization to full denial) did not predict sexual recidivism. However, static risk moderated the relationship between minimizations posttreatment and sexual recidivism, with those high-risk offenders who had higher numbers of minimizations reoffending at a faster rate than those who scored lower on this measure. Given that Langton et al.'s (2008) findings were in the opposite direction to those of Nunes et al. (2007), further research on the interaction of risk, denial, and motivation is justified.

Study Purpose

The purpose of this study was to examine the relationship between denial, motivation, static risk, and sexual recidivism. Denial was measured in three ways: A Denial Index (resulting from the combination of several measures used to indicate different aspects of denial), Absolute Denial, and Denial of Risk. Motivation was also examined for its ability to predict sexual recidivism. The potential moderating role of static risk level was examined. A moderator variable changes the strength or direction of a relation between an independent and dependent variable (Baron & Kenny, 1986). Given that a direct link has not been observed between denial and motivation with sexual recidivism in previous meta-analyses (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005), it was expected that the relationship between denial, motivation, and sexual recidivism is moderated by static risk.

Method

Settings

The total sample was drawn from three separate sources delivering group-based cognitive–behavioral treatment. The first sample comprised 100 men who had

undertaken treatment on the English and Welsh Prison Service's Core Sex Offender Treatment Programme (SOTP; Mann, 1999) in the mid to late 1990s (Beech, Fisher, & Beckett, 1999). The groups ranged in length from 74 to 160 hours. The second sample contained men who had undertaken community treatment in the early 1990s (Beckett, Beech, Fisher, & Fordham.1994). These 67 participants in the second sample completed a community Probation Service program (47.5-60 hours) or a residential specialist treatment program (60-1,000 treatment hours). Therefore, treatment in this second sample ranged widely in the number of treatment hours. The participants in the third sample were men who had undertaken community treatment in the late 1990s in the United Kingdom, West Midlands (Allam, 2000). A total of 155 men had completed the treatment program at the West Midlands Probation Service Sexual Offender Unit between January 1, 1995, and January 1, 1997. Treatment consisted of 50 hours of assessment and 150 hours of treatment. Just more than half (51%) of these offenders were attending the program as part of a probation order, 43% were on license following release from prison, 4% had been referred from child protection case conferences, and 2% attended the treatment program while they awaited trial. Risk Matrix 2000 data have not been reported previously for any of these samples.

Participants

The three combined samples consisted of 322 adult male sexual offenders who had completed a treatment program in the United Kingdom. Information on treatment completion was only available for a subset of the sample ($n = 154$). Among these, the dropout rate was 2% ($n = 3$). Participants ($n = 14$) who had refused treatment were removed from the total sample, and several other participants who were included in the original sample but did not actually begin treatment ($n = 6$) were removed. Three offenders were removed because they had not been released prior to the end of the follow-up period. Demographic, criminal history, and/or recidivism data were not available for an additional 49 participants; therefore, these men were also excluded from the sample. This left a sample of 250 participants. Of these 250, 180 participants were followed for at least 10 years and completed the measures for the Denial Index, 178 completed the measures for Absolute Denial and Denial of Risk, and 180 completed the measure for Motivation. The offenses committed were as follows: 82% had committed offenses against child victims, 10% had committed offenses against adult victims, 5% had committed offenses against both adult and child victims, and 3% had committed noncontact sexual offenses, such as indecent exposure. The participants' mean age at index offense was 35.1 ($SD = 10.8$) and their mean age at release was 41.8 ($SD = 12.1$). Forty-three percent had been convicted of previous sexual offenses, 20% had been convicted of previous nonsexual violent offenses, and 56% had been convicted of nonsexual nonviolent offenses. Just less than half (47%) of the sample committed offenses again male victims, 44% committed offenses against female victims, and 9% of the sample had committed offenses against both male and female victims.

Measures

A number of measures were combined to create a Denial Index. This includes a number of psychometric measures previously used by Beech et al. (1999) to assess overall denial of sexual interests and behaviors. Specifically, they assess admittance to fantasizing, manipulation, and coercion (Multiphasic Sex Inventory [MSI]: Sex Deviance Admittance), openness versus dishonesty about deviant sexual thoughts and behaviors (MSI: Lie), level of sexual obsessions (MSI: Sexual Obsessions), general admittance and openness of sex drives and interests (MSI: Social and Sexual Desirability), and level of denial of victim harm, planning, future risk, and overall denial (Sex Offense Attitudes Questionnaire [SOAQ]). The Denial Index has a moderate level of internal consistency, Cronbach's $\alpha = .64$.

In addition to the total SOAQ (comprising the five subscales mentioned above), which was included in the Denial Index, two subscales (Denial and Perception of Risk) of the SOAQ were examined independently as measures of Absolute Denial (i.e., the individual denies committing a sexual offense) and Denial of Risk (i.e., the individual denies that he presents a future risk).

Each of these measures will be discussed in more detail.

Multiphasic Sex Inventory: Sex Deviance Admittance Scale. This scale is part of the total 300-item MSI, which was specifically designed for use with sexual offenders (Nichols & Molinder, 1984). The Sex Deviance Admittance Scale assesses the style, magnitude, and duration of sexually deviant behavior. It has the following subtests: fantasy, cruising/grooming, sexual assault, aggravated assault, victim's gender (gender type), and incest type. Low scores are typical of untreated sexual offenders and therefore indicate less admittance of sexually deviant behavior. As recommended by the authors of the measure, a score below 50 was used as an indication of an aspect of *denial* for this scale (Nichols & Molinder, 1984). The coefficients of stability for the individual Sex Deviance Admittance Scales ranged from .91 to .92 (Nichols & Molinder, 1984). Kalichman, Henderson, Shealy, and Dwyer (1992) reported an internal consistency of .90.

MSI: Lie Scale. This scale measures the degree of openness versus dishonesty about an offender's deviant sexual thoughts and behaviors. Those who completed treatment were found to score lower on this scale (i.e., admit more deviance) than untreated sexual offenders (Nichols & Molinder, 1984). As recommended by the authors of the MSI, a score of more than 3 was used as an indication of *denial* for this scale (Nichols & Molinder, 1984). The coefficient of stability for the Lie scale was .89. Simkins, Ward, Bowman, and Rinck (1989) report a test–retest reliability of .70.

MSI: Sexual Obsessions Scale. This scale measures an individual's level of obsession with sex and their tendency to exaggerate the problem. As recommended by the authors of the measure, a score of 0 to 1 is taken as denial of any interest in sex (Nichols & Molinder, 1984). Nichols and Molinder (1984) reported the internal consistency of this scale (Kuder–Richardson coefficient) as .65. Simkins et al. (1989) found a higher internal consistency of this scale ($r = .80$). Nichols and Molinder (1984) report the test–retest reliability to be .70. Kalichman et al. (1992) reported the internal consistency to be .86.

MSI: Social Sexual Desirability Scale. This scale identifies those individuals who are trying to distort their responses on the MSI. As recommended by the authors of the measures, those with a low score (<27) are attempting to present themselves as not interested in sex (Nichols & Molinder, 1984). The Kuder–Richardson internal consistency correlation for this scale was reported as .71. Kalichman et al. (1992) also reported the internal consistency with an alpha coefficient of .87. The test–retest reliability reported is .64 (Nichols & Molinder, 1984). Simkins et al. (1989) found the 3-month stability of this scale to be .84.

MSI: Treatment Attitudes. This scale provides an indication of an individual's attitude regarding their openness for treatment. As noted by the MSI authors, a low score (<2) suggests that the individual is not interested in treatment, and a higher score (>7) suggests that the individual is openly admitting to his problematic sexual behavior and is seeking help (Nichols & Molinder, 1984). To report high and low motivation scores, the sample was dichotomized such that <4 was considered low motivation and a score >3 was considered high motivation. Simkins et al. (1989) report the 3-month test–retest reliability of this scale to be .79.

Sex Offense Attitudes Questionnaire (Proctor, 1994). The 30-item measure comprises five subscales: cognitive distortions, denial, victim empathy, perception of risk, and planning. As previously used by Beech et al. (1999), a score above 87 was used as an overall indication of denial. The total SOAQ is included in the Denial Index.

Denial Index. The measures of denial (i.e., MSI Sex Deviance Admittance, MSI Lie Scale, MSI Sexual Obsessions Scale, MSI Social Sexual Desirability, and total SOAQ) were analyzed to create the Denial Index based on the number of measures that indicated the individual was in denial. For instance, if three of the five denial measures indicated the person was in denial, the person would have a Denial Index score of 3. This score ranged from 0 to 5.

SOAQ subscales. Two of the SOAQ subscales were analyzed separately: the Denial Scale and the Perception of Risk. The Denial scale of the SOAQ was used as a measure of absolute denial. This scale measures the extent to which an offender believes he has done nothing wrong and has been unjustly convicted (e.g., "I have never committed a sexual offense in my life"). There are 4 items on this scale, with scores from each item ranging from 1 to 5 and the overall score ranging from 4 to 20. A score greater than 15 was originally going to be used as an indication of absolute denial, because this indicated that the individual was scoring more than 3 on each item. However, there were only 8 participants who were classified as high denial and there were no medium or high-risk individuals who fell into the high denial group using this categorization. Therefore, this measure was instead dichotomized at the median score of 12.

The *Perception of Risk* scale from the SOAQ was used to examine the perception the offender has of himself in terms of his risk, dangerousness, and seriousness (e.g., "I am certain I will never commit further sexual offenses"). This scale was used as a measure of Denial of Risk (i.e., denial that the offender presents a risk for future offending). This scale consists of 9 items ranging from a score of 9 to 45. A score greater than 35 was used as an indication of denial of risk because this indicated that the individual was scoring more than 3 on at least some of the items.

Risk Matrix 2000 (RM 2000; Thornton et al., 2003). The RM 2000 was developed to assess risk for sexual recidivism. It is widely used throughout the United Kingdom. The prison, probation, and police services in England and Wales have adopted the scale nationally. Calculating an RM 2000 score consists of two steps. The first step involves three static items: age at commencement of risk, number of sexual appearances, and total criminal appearances. The points are calculated, and the individual is placed in the low, medium, high, or very high-risk category. The second step contains four aggravating factors: male victim, stranger victim, noncontact sexual offenses, and lack of a long-term intimate relationship. If two aggravating factors are present the risk category is raised one level, and if all four are present, the risk category is raised by two levels. RM 2000 construction dataset consisted of 647 male prisoners at risk in for at least 2 years, and Sample 2 consisted of 429 male prisoners discharged from prison in 1979 and followed-up for 16 years. The area under the curve (AUC) statistic for RM 2000 was .75 for Sample 1 and .77 for Sample 2, indicating a good level of predictive accuracy.

Procedure

Analyses were conducted to determine the role of denial, measured by the Denial Index (comprising MSI Sex Deviance Admittance, MSI Lie, MSI Sexual Obsessions, MSI Social Sexual Desirability, and the total SOAQ), Absolute Denial (measured by SOAQ Denial), Denial of Risk (measured by SOAQ Perception of Risk), Motivation for treatment (measured using MSI Treatment Attitudes), and static risk (measured using Risk Matrix 2000) in predicting sexual recidivism outcomes. This was examined using a sample of 180 sexual offenders followed (with time returned to custody for nonsexual reoffenses subtracted) for at least 10 years (mean 10.3 years) after release. The RM 2000 was scored from a database amalgamated by the first author from three separate existing databases for each data set described above. The measures were scored with the scorer (first author) blind to the knowledge of recidivism outcome.

Reconviction Data

Official reconviction data were collected for the Home Office Offenders Index (OI) and Police National Computer (PNC) in the United Kingdom. Reconviction data were collected in June 2006 from the OI, February 2006 for the first set of data from the PNC, and June 2006 for a second set of data for the PNC that was resubmitted because the first data set could not be matched initially due to input errors.

Results

The overall recidivism rate for the sample of 180 was 15% over 10.3 years. The mean score for RM 2000 was 1.9, indicating an overall medium risk level for the sample. The means and standard deviations for the measures as well as their intercorrelations are presented in Table 1. Significant correlations were found between the Denial Index and the other measures of denial (i.e., Absolute Denial and Denial of Risk), but they

Table 1. Means for Measures Used and Correlations Between Measures

	Denial Index	MSI Sex Deviance	MSI Lie Scale[a]	MSI Sexual Obsessions[a,b]	MSI Social Sexual Desirability[a,b]	SOAQ Total[a]	**Absolute Denial (SOAQ Denial)**	**Denial of Risk (SOAQ Perception of Risk)**	**Motivation (MSI Treatment Attitudes)**	**RM 2000**	**Sexual Recidivism**
Mean (SD)	2.81 (1.51)	48.05 (19.43)	7.39 (4.01)	13.27 (3.65)	13.27 (3.65)	90.73 (21.57)	6.38 (3.37)	32.85 (8.22)	3.08 (2.07)	1.92 (.91)	
Denial Index	1	n/a[c]	n/a[c]	n/a[c]	n/a[c]	n/a[c]	.32**	.67**	−.68**	−.14	−.19**
MSI Sex Deviance Admittance		1	.49**	.09	.15*	.48**	.22**	.38**	−.43**	.13	−.11
MSI Lie Scale			1	.50**	.25**	.64**	.29**	.68**	−.59**	−.23**	−.27**
MSI Sexual Obsessions				1	.21**	.35**	.08	.53**	−.51**	−.36**	−.26**
MSI Social Sexual Desirability					1	.15*	.11	.12	−.15*	−.12	−.03
SOAQ Total						1	n/a[b]	n/a[b]	−.66**	−.18*	−.11
Absolute Denial (SOAQ Denial)							1	.29**	−.26**	−.11	0.03
Denial of Risk (SOAQ Perception of Risk)								1	−.68**	−.34**	−.25**
Motivation (MSI Treatment Attitudes)									1	.20**	.19**
RM 2000										1	.24**
Sexual Recidivism											1

Note: MSI = Multiphasic Sex Inventory. Words in bold represent measures that will be examined in future analyses. Numbers in parentheses are standard deviations. Correlations are based on either 178 or 180 participants.

a. Subscales that comprise the Denial Index.

b. Measures have been rescaled so that for all scores a higher number represents a higher level of denial.

c. Correlations are not included between total measures and their subscales.

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

Table 2. Comparison of Sexual Recidivism Rates of Sexual Offenders Who Are Low in Denial (Measured in Three Different Ways) and Motivation Compared to Those Who Are High on These Measures

	Low Denial or High Motivation		High Denial or Low Motivation			95% Confidence Interval	
Variable	*N*	%	*N*	%	Odds Ratio	Lower	Upper
Denial Index (<3, 3+)	74	24.3	106	8.5	0.29	0.12	0.69
Absolute Denial (<13, 13+)	165	15.2	13	15.4	1.02	0.21	4.87
Denial of Risk (<36, 36+)	98	21.4	80	7.5	0.30	0.11	0.78
High Motivation for treatment (4+, <4)	73	23.3	106	9.4	0.34	0.34	0.79

were not so high as to suggest they were all measuring the same thing. The measures that were included in the Denial Index were significantly correlated with one another, but not too highly as to suggest that any of them was included unnecessarily. As would be expected, motivation was negatively correlated with all the measures of denial. The Denial Index, MSI Lie scales, MSI (denial of) Sexual Obsessions, and Denial of Risk are negatively correlated with sexual recidivism. Absolute Denial was not significantly correlated with recidivism. RM 2000 and motivation for treatment were positively correlated with sexual recidivism.

Table 2 provides the sexual recidivism rates for those who scored low and high on the Denial Index, Absolute Denial, and Denial of Risk and Motivation. The odds ratios (ORs) were calculated to measure the effect size of the differences. If the 95% confidence interval for OR does not include one, the OR values are statistically significant ($p < .05$). As can be seen in Table 2, the odds of sexually reoffending were significantly lower for those who were high in denial on the Denial Index than for those who were low on the Denial Index. In terms of Absolute Denial, those who denied their offenses did not differ significantly from those who admitted their offenses in terms of odds of sexual recidivism. The odds of sexually reoffending were significantly lower for those who denied future risk (i.e., Denial of Risk) than for those who admitted future risk. In terms of Motivation, those high in motivation were at significantly higher risk of sexually reoffending than those who were low in motivation.

Denial as a Predictor

Sequential logistic regression analyses were constructed to test the association between denial (measured by the Denial Index, Absolute Denial, and Denial of Risk) and sexual recidivism with static risk as a moderator.

Table 3. Logistic Regression Analysis Using Denial Index and the Interaction Between Denial Index and Static Risk to Predict Sexual Recidivism (n = 180)

					95% CI for e^B	
	B	*SE B*	Wald	Odds Ratio	Lower	Upper
Block 1						
Denial Index	–0.36	0.14	6.50*	0.69	0.52	0.92
Block 2						
Denial Index	–0.32	0.15	4.58*	0.72	0.54	0.97
Static Risk	0.59	0.22	7.45**	1.81	1.18	2.77
Block 3						
Denial Index	0.38	0.37	1.06	1.46	0.71	3.02
Static Risk	1.28	0.42	9.10**	2.63	1.49	4.65
Static Risk × Denial Index	–0.35	0.18	3.96*	0.70	0.50	0.99

Note: SE = standard error; CI = confidence interval. The Denial Index variable was a continuous variable ranging from 0 to 5. $\chi^2(1) = 6.82$ at Block 1, $p = .009$; $\Delta\chi^2(1) = 7.57$ at Block 2, $p = .006$; for the final equation $\chi^2(1) = 4.29$, $p = .038$.
*$p < .05$. **$p < .001$.

As can be seen in Table 3, the logistic regression analyses found that increased denial on the Denial Index was significantly related to reduced sexual reconviction on its own in Block 1, and independent of static risk in Block 2. In the third block, the interaction between the Denial Index and risk added significantly to the prediction of sexual recidivism. To display the interaction, the sample was dichotomized. In the low-risk group (RM 2000 low or medium), 13% (7/53) of those low in denial (Denial Index 0-2) sexually recidivated compared with 9% (8/89) of those high in denial (Denial Index 3-5). In the high-risk group (RM 2000 High or Very High category), 52% (11/21) of those low in denial sexually recidivated compared with 5.9% (1/17) of those high in denial.

As can be seen in Table 4, Absolute Denial did not make a significant contribution to the prediction of sexual reconviction on its own in Block 1, or independent of static risk in Block 2. In the third block, the interaction between the Absolute Denial and risk added significantly to the prediction of sexual recidivism. The SOAQ was dichotomized according to the median score on the SOAQ Denial scale. In the low-risk group (RM 2000 low or medium), 10.1% (13/129) of the admitters (SOAQ Denial scale 4-12) sexually recidivated compared with 16.7% (2/12) of the deniers (SOAQ Denial scale 13-20). In the high-risk group (RM 2000 high or very high category), 33% (12/36) of the admitters sexually recidivated compared with 0% (0/1) of the deniers.

As can be seen in Table 5, logistic regression analyses found that increased denial on Denial of Risk was significantly associated with lower sexual recidivism on its own in Block 1, and independent of static risk in Block 2. The model was not

Table 4. Logistic Regression Analysis Using Absolute Denial and the Interaction Between Absolute Denial and Static Risk to Predict Sexual Recidivism (n = 178)

					95% CI for e^B	
	B	*SE B*	Wald	Odds Ratio	Lower	Upper
Block 1						
Absolute Denial	0.02	0.06	0.12	1.02	0.91	1.15
Block 2						
Absolute Denial	0.05	0.06	0.66	1.05	0.93	1.19
Static Risk	0.71	0.22	10.11**	2.02	1.31	3.13
Block 3						
Absolute Denial	0.33	0.14	5.49*	1.39	1.06	1.84
Static Risk	1.60	0.48	10.93**	4.95	1.92	12.78
Static Risk × Absolute Denial	−0.15	0.07	4.27*	0.86	0.73	0.99

Note: SE = standard error; CI = confidence interval. Absolute Denial is measured by the SOAQ Denial scale. $\chi^2(1) = .12$ at Block 1, n.s.; $\Delta\chi^2(1) = 10.24$ at Block 2, $p = .001$; for the final equation $\chi^2(1) = 4.43$, $p = .035$.
*$p < .05$. **$p < .001$.

Table 5. Logistic Regression Analysis Using Denial of Risk and the Interaction Between Denial of Risk and Static Risk to Predict Sexual Recidivism (n = 178)

					95% CI for e^B	
	B	*SE B*	Wald	Odds Ratio	Lower	Upper
Block 1						
Denial of Risk	−0.08	0.03	10.03**	0.92	0.87	0.97
Block 2						
Denial of Risk	−0.06	0.03	5.03*	0.94	0.89	0.99
Static Risk	0.47	0.23	4.12*	1.60	1.02	2.51
Block 3						
Denial of Risk	0.00	0.07	0.00	1.00	0.88	1.15
Static Risk	1.32	0.84	2.48	3.73	0.72	19.27
Static Risk × Denial of Risk	−0.03	0.03	1.13	0.97	0.91	1.03

Note: SE = standard error; CI = confidence interval. Denial of Risk was measured by the SOAQ Perception of Risk scale. $\chi^2(1) = 10.66$ at Block 1, $p = .001$; D$\chi^2(1) = 4.19$ at Block 2, $p = .041$; for the final equation $\chi^2(1) = .1.14$, n.s.
*$p < .05$. **$p < .001$.

significantly improved by the entry of the interaction term in Block 3 demonstrating no support for the use of static risk as a moderating variable between Denial of Risk and sexual recidivism.

Table 6. Logistic Regression Analysis Using Motivation and the Interaction Between Motivation and Static Risk to Predict Sexual Recidivism (n = 180)

					95% CI for e^B	
	B	*SE B*	Wald	Odds Ratio	Lower	Upper
Block 1						
Motivation	0.26	0.10	6.46*	1.30	1.06	1.58
Block 2						
Motivation	0.20	0.11	3.61	1.22	0.99	1.51
Static Risk	0.57	0.22	6.57*	1.76	1.14	2.72
Block 3						
Motivation	0.11	0.26	0.17	1.11	0.67	1.84
Static Risk	0.38	0.50	0.57	1.46	0.54	3.92
Static Risk × Motivation	0.04	0.10	0.17	1.04	0.85	1.28

Note: SE = standard error; CI = confidence interval. Motivation was measured by the MSI Treatment Attitudes scale. $\chi^2(1) = 6.67$ at Block 1, $p = .01$; $\Delta\chi^2(1) = 6.67$ at Block 2, $p = .01$; for the final equation $\chi^2(1) = .17$, n.s.
*$p < .05$. **$p < .001$.

Motivation as a Predictor

Motivation was examined for its relationship to sexual recidivism (Table 6). Logistic regression analyses found that increased motivation was significantly associated with increased recidivism in Block 1. However, Motivation did not significantly predict sexual recidivism in Block 2 or 3. There was no support for the moderating role of static risk between motivation and sexual recidivism.

Discussion

This study examined the relationship between denial, motivation, risk, and sexual recidivism. For two of the three measures, high levels of denial were associated with decreased recidivism. The effect of denial, however, was not consistent across risk levels. There was relatively little difference in the recidivism rates of the low-risk offenders who admitted or denied, and the direction of the effect varied across the measures used. For the high-risk offenders, however, denial was consistently associated with decreased recidivism. The study also found that high motivation for treatment was associated with increased recidivism rates, but this effect disappeared when controlling for static risk (Risk Matrix 2000).

The finding that offenders reporting low levels of denial were at increased risk to sexually reoffend is contrary to the belief that denial is a serious problem for sexual offenders (Barbaree, 1991; Lund, 2000; Schneider & Wright, 2001). These results are similar, however, to those reported by Hood et al. (2002), who found that among those considered high risk, denial was not associated with higher levels of

recidivism. Also, Nunes et al. (2007) found a similar pattern of results as those reported here for the high-risk offenders, although this was not significant in their sample. One explanation for the current finding might be that those high-risk offenders who are not denying their deviant and nondeviant sexual interests also do not feel there is anything wrong with committing sexual crimes. They may be reoffending at a higher rate because they are open and honest about their deviance and their desire to continue offending.

Conversely, high levels may have protective effect for several reasons. Lord and Willmot (2004) found that offenders reported that they denied their offenses because of lack of insight/motivation, threats to self-esteem and image, and fear of negative and extrinsic consequences. It could be speculated that this translates into a reduced likelihood of reoffending because of cognitive dissonance (Gosling, Denizeau, & Oberlé, 2006) such that the offenders who deny may experience shame and guilt that is incompatible with the positive aspects of sexual deviance. To ease this discomfort between the competing thoughts/feelings, the individuals change their behaviors to be more consistent with someone who would not commit such offenses. Is it also possible that the association is based on extrinsic motivation, namely, that offenders in denial may not want to lose the support of their family and friends who accept them as someone who would not commit sexual offenses, and successfully maintaining these prosocial influences may have a protective influence. Also, in rare cases, those who are denying committing an offense may not have actually committed it (Hood et al., 2002; Roberts & Baim, 1999).

Maruna and Mann (2006) hold the position that denial of unacceptable behavior is a natural reaction and those who maintain external accounts for their behavior are less likely to accept the self-view that they are criminals. They also note that perhaps the excuses people offer could be useful in a therapeutic sense as they provide an indication of the individual's criminogenic needs.

A similar pattern to that reported by Nunes et al. (2007) emerged here for Absolute Denial. Specifically, the low-risk deniers had a higher sexual recidivism rate than the low-risk admitters on this measure of denial. It has been postulated that denial may indeed be a risk factor for recidivism, but that it only influences recidivism when other risk factors are absent, as is the case with low-risk offenders (Lund, 2000).

Looking at offenders' perception of the level of risk they pose (Denial of Risk), those who were denying they presented a future risk for offending (i.e., higher on Denial of Risk) were less likely to reoffend than those who report seeing themselves as presenting a high risk. It may be that those who acknowledge they present a higher level of risk are doing so because they do not feel able to or do not intend to desist sexual offending. However, those who score high on Denial of Risk (i.e., see themselves as low risk for future offending) may have lower rates of recidivism because they appropriately see themselves as presenting a low-(but still slightly elevated) risk level and therefore intend to take appropriate steps to manage their risk and avoid reoffending. It may also be that they are so strongly invested in their desire to avoid reoffending that they deny presenting any risk and proceed to make the changes

necessary to avoid reoffending. These results appear inconsistent with the finding of Hanson and Harris (2000) who found that changes on the "Sees self as no risk" variable were associated with sexual recidivism. It is possible that because the Hanson and Harris (2000) variable also incorporates a lack of taking precautions to avoid high-risk situations, that it is not measuring exactly the same variable as that examined here.

Motivation was not found to be related to sexual recidivism independent of risk in this study. This suggests that in spite of the emphasis placed on increasing motivation for treatment and the potential difficulties in working with unmotivated clients, motivation does not appear to be predictive of sexual reoffense when other risk factors are taken into consideration. It is possible that if defined differently, motivation may show a stronger relationship with sexual recidivism as difficulties in defining motivation have been highlighted (e.g., Draycott, 2007; Tierney & McCabe, 2002).

Limitations and Directions for Future Research

There are several limitations to this study. As mentioned previously, and consistent with issues highlighted by Lund (2000), differences in how denial and motivation are measured could account for different results. We attempted to address this to an extent with denial by considering three different types of denial. It is acknowledged though that other means of measuring denial may have yielded yet another set of findings. Future research might benefit from a qualitative component for examining aspects of denial and motivation to allow for a better understanding of the individual's beliefs.

Another limitation was that it focused on a combined sample of sexual offenders. It is possible that breaking this heterogeneous group down into different offender types may have yielded different results. This was the case with Nunes et al. (2007) who found that denial was associated with increased recidivism for incest offenders, but denial was not associated with increased recidivism for those with unrelated victims. Thornton and Knight (2007) found that denial was associated with decreased recidivism among those with child victims, but increased recidivism among those with adult victims. The sample in this study consisted of mainly offenders with child victims (82%); therefore, it is possible that a different pattern of results, similar to that of Thornton and Knight (2007), would be observed if there were enough rapists in our sample to examine them separately. Unfortunately, there were so few individuals who were high risk and high in Absolute Denial that we did not want to risk limiting the sample size any further by removing the participants with adult victims. Small sample size was another limitation of previous studies highlighted by Lund (2000).

Conclusions

A great deal of effort is expended on attempting to overcome denial and increase motivation in offenders prior to treatment. Although it is obviously difficult to work with clients in denial or who lack motivation for treatment, this study did not find denial to have the expected relationship to sexual recidivism, the ultimate outcome of

interest in most treatment programs. Indeed, the results of this study suggest that it is the high-risk offenders who are not expressing high levels of denial who are more likely to reoffend. These findings highlight the need for research evidence to verify whether factors routinely addressed in treatment actually function as many treatment providers presume.

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