

Relationships Between Denial, Risk, and Recidivism in Sexual Offenders

Leigh Harkins · Philip Howard · Georgia Barnett ·
Helen Wakeling · Cerys Miles

Received: 11 July 2012 / Revised: 21 September 2013 / Accepted: 28 February 2014 / Published online: 9 August 2014
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Abstract The aim of this study was to examine the relationship between denial, static risk, and sexual recidivism for offenders with different types of current sexual offense. Denial was defined as failure to accept responsibility for the current offense and was assessed using the Offender Assessment System. Static risk level (measured using a revised version of the Risk Matrix 2000) was examined as a moderator in the relationship between denial and sexual and violent recidivism. In the full sample ($N = 6,891$), lower levels of sexual recidivism were found for those who denied responsibility for their offense, independent of static risk in a Cox regression analysis. Higher levels of violent recidivism among those denying responsibility were not significant after controlling for static risk using Cox regression. For specific offender types, denial of responsibility was not significantly associated with sexual or violent recidivism. In conclusion, the presumption that denial represents increased risk, which is common in much of the decision making surrounding sex offenders, should be reconsidered. Instead, important decisions regarding sentencing, treatment, and release decisions should be based on empirically supported factors.

Keywords Denial · Risk · Offender type · Sex offenders

L. Harkins (✉)
University of Ontario Institute of Technology, 2000 Simcoe St. North,
Oshawa, ON L1H 7K4, Canada
e-mail: leigh.harkins@uoit.ca

P. Howard · H. Wakeling
Centre for Forensic and Criminological Psychology, University of
Birmingham, Birmingham, UK

P. Howard · G. Barnett · H. Wakeling · C. Miles
National Offender Management Service, Ministry of Justice, London,
UK

Introduction

A sexual offender who does not accept responsibility for his or her offense(s) will likely experience a number of negative repercussions. In particular, within the criminal justice system, denial is considered in making a variety of important decisions about the offender. Reduced sentences can be offered for those who offer guilty pleas (Committee on the Judiciary House of Representatives, 2010; Sentencing Guidelines Council, 2007), many treatment programs exclude individuals in denial (Blagden, Winder, Thorne, & Gregson, 2011; Levenson, 2011; Yates, 2009), and those in denial are less likely to be offered early release (Hood, Shute, Feilzer, & Wilcox, 2002).

For the most part, these decisions presume that denial increases risk of recidivism. However, the relationship between denial and sexual recidivism is not as straightforward as it has previously been considered. In the past, the prognosis was viewed quite negatively for those in denial, as denial was assumed to equate to higher risk of reoffending (Barbaree, 1991; Hood et al., 2002; Levenson & MacGowan, 2004; Lund, 2000; Schlank & Shaw, 1996). However, more recent evidence suggests that this pattern is more complex and that denial may have a different relationship with risk for those at different risk levels and different offense types (Harkins, Beech, & Goodwill, 2010; Nunes et al., 2007; Thornton & Knight, 2007; Yates, 2009). A clear understanding of the relationship between denial and recidivism is vital to ensuring that decision-making about sexual offenders' sentencing, management, and release are empirically-based.

For some time, it was commonly presumed that if individuals did not admit all aspects of their deviant sexual behavior, then they surely would not put any procedures in place to avoid future offending (e.g., Salter, 1988). In fact, only 6 % of treatment programs in the U.S. reported that they allow individuals into the program who are not admitting any offenses (McGrath,

Cumming, Burchard, Zeoli, & Ellerby, 2010). Indeed, those offenders who were in denial were more likely to be considered “high risk” in a study of decisions made by parole boards in the United Kingdom between 1992 and 1994 (Hood et al., 2002). This is compounded by the fact that many sex offenders in denial are excluded from treatment and therefore are not given the option of potentially reducing their risk level in this way. In spite of these commonly held positions, meta-analyses have yet to demonstrate a direct relationship between denial and sexual recidivism (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005; Kennedy & Grubin, 1992). This has led some to speculate that denial may play a more complex role in predicting sexual recidivism.

The interaction between denial and risk has been highlighted as an important consideration (Lund, 2000). This has indeed been found in several studies although the pattern of results has varied. Nunes et al. (2007), using the “Extreme Minimization or Denial of Sexual Offense” item from the Sexual Violence Risk:20 (Boer, Hart, Kropp, & Webster, 1997), found that risk moderated the relationship between absolute denial and risk for sexual recidivism. 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 latter finding was non-significant). A similar pattern emerged in a study which conceptualized denial in two different ways (i.e., in terms of absolute denial and a Denial Index representing a number of different types of denial) (Harkins et al., 2010). Langton et al. (2008) found an opposite pattern of results, in which a dichotomous denial/minimization classification (i.e., no denial or minimizations vs. some minimization to full denial) was used. They found static risk moderated the relationship between minimizations at post-treatment and sexual recidivism, with those high risk offenders who had higher numbers of minimizations reoffending at an increased rate compared to those who scored lower on this measure. The role of static risk is well established in predicting sexual recidivism (e.g., Hanson, Morton, & Harris, 2003); therefore, it is clearly important to take static risk into consideration when examining the relationship between denial and risk of recidivism although the exact role risk plays in this relationship remains to be seen.

It also appears that denial plays different roles depending on the type of sexual offending examined. This was the case with Nunes et al. (2007), who found that denial was associated with increased recidivism for incest offenders, but not 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. From these findings, it would seem that denial may have a different function for different offender types; in some cases, it seems to act in a protective manner (i.e., reducing risk in spite of other relevant risk factors) and in others as a risk factor.

Study Purpose

The purpose of this study was to examine the relationship between denial, static risk, and sexual recidivism among different offender types. This is important as it may indicate that denial should not be considered in the same manner for everyone. Furthermore, given the critical decisions that can be made on the basis of an offender’s denial, it is important that evidence is accumulated to support results found in previous samples (e.g., Harkins et al., 2010; Nunes et al., 2007; Thornton & Knight, 2007) and using different measures of denial. This includes ratings of denial based on single items on existing measures as decisions may be made about the offender based on these. In this study, denial was measured using a dichotomous item from the Offender Assessment System (OASys) “Does the offender accept responsibility for the current offense(s?).” The potential moderating role of static risk level was also 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 sexual recidivism in previous meta-analyses (Hanson & Bussière, 1998; Hanson & Morton-Bourgon, 2005), it was expected that the relationship between denial and sexual recidivism would be moderated by static risk. This relationship was examined for offenders who have contact adult and child victims (related and unrelated) and for those with non-contact sexual offenses. It was expected that similar patterns to those reported by Nunes et al. (2007) and Thornton and Knight (2007) would be observed. Specifically, it was expected that denial would be associated with increased recidivism among incest offenders and those with adult victims, but not extrafamilial offenders or those with child victims in general (Nunes et al., 2007; Thornton & Knight, 2007). The role of denial for noncontact sex offenders has not been examined; therefore, no hypotheses were put forward about this relationship.

Previous research (e.g., Beech, Fisher, & Beckett, 1999; Harkins et al., 2010) has used denial in a multi-factorial manner. However, in this case, denial is measured by a single variable to determine the role of the particular facets of denial assessed by this item, as it is available for virtually all convicted adult sex offenders in England and Wales, irrespective of whether they have been through treatment. Thus, the results of this could have practical implications for how the information gained from this item could potentially be used, in addition to providing useful information overall about the relationship between denial and reoffending.

Method

Participants

The total sample consisted of 6,891 adult male sexual offenders who had been assessed in England and Wales using the Offender

Assessment System (OASys) within 3 months of discharge from custody or the start of a community sentence by March 2008. All offenders within the prison or probation service who have received either a custodial sentence of at least 1 year or a community sentence involving supervision or treatment were assessed using OASys. Offenders with a current sexual offense(s) were selected on the basis of offence codes. OASys data allows identification of offenses with sexual elements or motivation which have been charged under nonsexual statutes, but such offenses were excluded to allow comparison with existing research. Those who were 18 or older at the time of the study (and thus would have an OASys completed), but whose current offense was committed while aged under 16 were also excluded, in accordance with Risk Matrix 2000 scoring guidelines (described in detail in the Measures section). While this means that the sample used in this study may not be entirely representative of the national convicted sexual offender population, it is likely that the vast majority of offenders convicted of a sexual offense would meet these criteria and therefore would have been assessed. This also means that the sample is not preselected on the basis of risk as nearly all sexual offenders should be assessed using OASys. The majority of assessments took place in 2006 and 2007. OASys had been implemented nationwide by 2005, so any bias by geographical location would have been limited. The sample is therefore likely to be what Hanson, Helmus, and Thornton (2010) termed a “routine” correctional sample, rather than a preselected high-risk sample.

The average age of participants was 42.2 years ($SD = 14.6$) and they had an average of 4.6 ($SD = 6.4$) criminal convictions or cautions. In terms of risk, 28.8 % ($n = 1,983$) of the sample was low risk on Risk Matrix 2000/sexual (RM2000/s), 39.0 % ($n = 2,686$) medium, 23.4 % ($n = 1,613$) high risk, and 8.8 % ($n = 609$) were very high risk. On the Risk Matrix 2000/violent (RM2000/v), 48.7 % ($n = 3,353$) were low risk, 34.0 % ($n = 2,359$) were medium risk, 12.5 % ($n = 864$) were high, and 4.6 % ($n = 315$) were very high risk. These risk classifications were *modified* RM2000/s scores since not all items from the static risk assessment tool were available to score for the sample (see below).

In terms of the index offenses, 22.6 % ($n = 1,555$) were convicted for a contact offense with adult victims, 13.7 % ($n = 941$) for a contact offense against an intrafamilial child victim, 19.4 % ($n = 1,337$) for a contact offense with an extrafamilial child victim, 18.2 % ($n = 1,252$) for a contact offense against a child where the victim’s familial status was unknown, 16.5 % ($n = 1,139$) for noncontact offenses relating to indecent images of children, and 9.7 % ($n = 667$) for those with any other type of noncontact offense.

Measures

Offender Assessment System (OASys)

The OASys is a structured clinical risk/needs assessment and management tool. It is used throughout National Offender

Management Service (NOMS) within the Ministry of Justice (MOJ) in the UK with offenders aged 18 years and over who were convicted awaiting sentence, serving custodial sentences of at least 12 months or serving probation sentences involving supervision. It consists of four main components: an analysis of offending-related factors, a risk of serious harm analysis, a summary sheet, and a sentence plan. The offending related factors includes 13 sections which cover criminal history, analysis of current offenses, assessment of 10 dynamic risk factors, and suitability to undertake sentence-related activities (e.g., offending behavior programs).

Denial was assessed using the item “Does the offender accept responsibility for the current offense(s)?” in the OASys. The guidelines for scoring this item indicate that a person is not considered to accept responsibility if they excuse their offense or shift blame to others, insist on minimizing the seriousness of the offense or their involvement in it, claim the offense was out of character for them or if they partially or completely deny committing the offense(s). Thus, this item covers a number of facets that might be considered “denial.”

The concordance between this item and the practitioner’s rating of “denial” at their reception interview was examined. The OASys denial measure predicted the practitioner’s rating of denial well, as offenders who accepted responsibility according to the OASys measure almost always (7 of 8 cases) were determined to be accepting responsibility by practitioners. Similarly, offenders who were deniers according to OASys were seldom (7 of 55 cases) determined to accept responsibility by practitioners. However, practitioners’ rating of acceptance of responsibility was not as strong a proxy for accepting on the OASys measure: 7 of the 19 accepters also accepted on OASys while 7 denied on OASys and 5 did not have an OASys denial rating. As the OASys is routinely used to make decisions about offenders in the criminal justice system in the UK, we felt it was an acceptable proxy for denial in this study, as no other measure of denial was available for such a large sample.

Risk Matrix 2000 (RM2000) (Thornton et al., 2003)

The RM2000 was developed to assess risk for recidivism. It is widely used throughout the UK with the Prison, Probation and Police Services in England and Wales having adopted the scale nationally. It has been examined for its utility by researchers using American (Knight & Thornton, 2007), Danish (Bengtson, 2008), and Canadian samples (Kingston, Yates, Firestone, Babchishin, & Bradford, 2007; Looman & Abracen, 2010). The RM2000/s scale predicts sexual recidivism and the RM2000/v scale predicts nonsexual violent recidivism. A scoring manual (Thornton, 2007) details all items and the methods by which they are combined into risk categories. Calculating a RM2000/s 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 were summed

and the individual was 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, risk is raised by two levels. The RM2000/s construction dataset consisted of 647 male prisoners at risk for at least 2 years and a second sample was comprised of 429 male prisoners discharged from prison in 1979 and followed-up for 16 years. The Area Under the Curve (AUC) statistic for RM2000/s was .75 for Sample 1 and .77 for the second sample, which can be interpreted as a good level of predictive accuracy (Douglas, Epstein, & Poythress, 2008). The RM2000/v consists of three items: age, number of sentencing occasions for a violent offense, and whether or not the offender has ever been convicted of a burglary. The item scores were summed and then translated into one of the four risk categories described above. For the purpose of this study, a modified RM2000/s risk category was generated based on 5 of the 7 items, since unfortunately information on two of the items (stranger victim and never having had a stable live in relationship) was not available.

Procedure

Analyses were conducted to determine the role of denial and static risk (measured using modified scores of the RM2000/s and RM2000/v) in predicting recidivism outcomes for different offender types. This was examined using a sample of 6,891 sexual offenders followed for a mean of 46.3 ($SD = 14.1$) months.

Proven reoffending data (i.e., cautions and convictions for offenses committed after the date of community sentence or discharge from custody) were obtained from the Ministry of Justice Police National Computer (MoJPNC) database on 3 December 2010. A caution is an alternative to prosecution issued for minor offenses. Both cautions and convictions were included because official convictions are known to under-represent actual rates of reoffending (Abel et al., 1987; Ahlmeyer, Heil, McKee, & English, 2000); therefore, this represents a more comprehensive source of outcome data. Reoffending was traced between the date of community sentence or discharge from custody until 3 June 2010, allowing 6 months for convictions to occur and PNC data entry. Some follow-ups were censored due to imprisonment for other offenses or recall to custody for breaches of release conditions.

Modified RM2000/s risk categories were computed retrospectively by the researchers using information gathered on the OASys assessments and PNC data. The age item was computed using the age of the offender at the start of the follow-up period. The sexual appearances and criminal appearances items were scored using the criminal history information held on the PNC. Formal cautions were included in scoring these items, as suggested in the RM2000/s scoring guide. When combined, the scores on these three items produced an initial risk category. Whether or not the offender had ever been convicted of offending

against a male was scored using PNC data, which uses offense codes that, in the majority of cases, indicate the gender of the victim of the current and previous offenses. The noncontact offense item was scored on the basis of OASys offense codes for current and previous sexual offenses, which indicate whether or not the sexual offense involved physical contact with the victim(s). We were unable to score the single item and the stranger item. In line with other similar studies (e.g., Langton, Barbaree, Hansen, Harkins, & Peacock, 2007), RM2000 risk level was still calculated for those in the sample for whom these were the only two missing items. As this was likely to result in consistent underscoring of the OASys sample, those who were scored as having one or both of the two aggravating factors that could be scored (the male or the noncontact item) were raised a risk category. This was justified in this case as it was for research purposes and overestimates risk.

Barnett, Wakeling, and Howard (2010) tested the effect of this modified scoring procedure using a further sample of offenders for whom complete scoring was also possible. They found that the modified procedure scored correctly in 79 % of cases, scored one category too high in 16 % of cases, and one category too low in 5 % of cases. The modified procedure delivered an AUC for 2-year sexual reoffending of 0.69 compared with 0.71 with the same cases using the complete procedure.

Results

Demographic and risk-related characteristics for deniers and those who accepted responsibility are shown in Table 1. Deniers were both older, $t(6,889) = 6.2, p < .001$, and had more criminal convictions or cautions, $t(6,889) = 9.9, p < .001$, than those who accepted responsibility for their current sexual offense. The difference across risk categories on the RM2000/s, $\chi^2(3, 6,891) = 9.9, p = .019$ and the RM2000/v were both significant, $\chi^2(3, 6,891) = 42.9, p < .001$.

Sexual Reoffending

The 2-year proven sexual reoffending rate (i.e., for the subset followed for at least 2 years, $n = 6,471$) was 3.2 %. We examined this subset for some analyses to allow for comparisons between groups with a common follow-up period whereas some of the other analyses (e.g., Cox regression) allow for variable follow-up period and thus utilize the whole sample ($n = 6,891$). Proven sexual reoffending rates for different offender types were examined. For contact offenders with adult victims, it was 2.6 %; for those with a contact offense against an intrafamilial child victim, it was 1.1 %; for contact offenders with an extrafamilial child victim, it was 3.6 %. For those with a contact offense against a child and whose relationship to the child victim was unknown, the 2-year proven sexual reoffending rate was 2.2 %. For those with noncontact offenses relating to indecent images of children, the 2-year proven sexual reoffending rate was 2.7 % and for those

Table 1 Demographic and risk-related characteristics of deniers and those who accept responsibility

Variable	Accepts responsibility (<i>n</i> = 4,320)		Denies responsibility (<i>n</i> = 2,571)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age***	41.4	14.5	43.3	14.8
No. of criminal convictions or cautions***	4.0	5.6	5.7	7.5
	<i>N</i>	%	<i>N</i>	%
Modified risk matrix/s category*				
Low	1,291	29.9	692	26.9
Medium	1,630	37.7	1,056	41.1
High	1,021	23.6	592	23.0
Very high	378	8.8	231	9.0
Risk matrix/v category***				
Low	2,178	50.4	1,175	45.7
Medium	1,500	34.7	859	33.4
High	476	11.0	388	15.1
Very high	166	3.8	149	5.8

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

with any other type of noncontact offense the rate was 10.1 %. The difference in recidivism rates across offense types was significant, $\chi^2(5, 6,471) = 113.6, p < .001$.

Two-year proven sexual offending rates ($n = 6,471$) for those who accepted responsibility and those who denied responsibility are shown for each offender type in Table 2. For the entire sample, there was a moderate but non-significant difference in 2-year proven sexual reoffending rates between those who accepted responsibility (3.5 %) and those who denied responsibility (2.7 %), $\chi^2(5, 6,471) = 3.15, p = .076$. The proportion of proven sexual reoffenders was higher in the “accepted responsibility” category than in the “deniers” category (odds ratio = 0.76, CI 0.57–1.03),

but this difference was not significant. The recidivism rates for those who denied and accepted responsibility for each of the six offender types are also shown in Table 2. There were no significant differences between 2-year rates of proven sexual reoffending between those who accepted responsibility and those who denied responsibility for any of these offender types.

Sequential Cox regression analyses were constructed to test the association between denial of responsibility and time at risk until first sexual reoffense and examining the moderating role of static risk. This analysis allowed us to examine the full sample ($n = 6,891$) because it allowed for varying time at risk. As can be seen in Table 3, denial of responsibility predicted sexual recidivism independent of static risk measured by the modified RM2000/s, with those who denied responsibility being associated with decreased sexual recidivism. The interaction between static risk and denial did not significantly improve prediction of sexual recidivism. However, denial of responsibility did not predict sexual recidivism for the specific offender types on its own or independent of static risk. We were unable to run the Cox regression with the noncontact indecent images of children sample as there was only one reoffender who denied responsibility in this group.

Nonsexual Violent Reoffending

The 2-year proven violent reoffending rate (i.e., for the subset followed for at least 2 years, $n = 6,471$) was 2.4 %. The proven violent reoffending rates for each of the six offender types were examined. For all contact offenders with adult victims, it was 4.5 %; for those with a contact offense against an intrafamilial child victim, it was 0.8 %; for contact offenders with an extrafamilial child victim, it was 2.5 %. For those with a contact offense against a child and whose relationship to the child victim was unknown, the 2-year proven violent reoffending rate was 2.3 %. For those with noncontact offenses relating to indecent images of

Table 2 Comparison of 2-year sexual recidivism rates of sexual offenders who accept and who deny responsibility

Offense and victim type	Accepts responsibility		Denies responsibility		Risk ratio	95 % CI	
	<i>n</i>	% reoffenders (<i>n</i>)	<i>n</i>	% reoffenders (<i>n</i>)		Lower	Upper
Contact offense							
Adult	797	3.0 (24)	616	2.1 (13)	0.69	0.35	1.38
Intrafamilial child	484	1.2 (6)	428	0.9 (4)	0.75	0.21	2.68
Extra-familial child	725	4.0 (29)	509	3.0 (15)	0.73	0.39	1.37
Unknown family status child	730	1.6 (12)	442	3.2 (15)	1.96	0.90	4.27
Noncontact							
Indecent images of children ^a *	920	3.2 (29)	200	0.5 (1)	0.15	0.02	1.13
Other	534	9.7 (52)	184	9.8 (18)	0.95	0.54	1.70
Total	4,092	3.5 (145)	2,379	2.7 (65)	0.76	0.57	1.03

CI confidence interval

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

^a Fisher’s exact test

Table 3 Cox regression analysis using denial of responsibility and static risk to predict sexual recidivism for the whole sample ($N = 6,891$)

	<i>B</i>	<i>SE B</i>	Wald	Hazard ratio	95 % CI for e^B	
					Lower	Upper
Block 1						
Static risk***	0.70	0.06	146.7	2.02	1.80	2.27
Block 2						
Static risk***	0.70	0.06	147.0	2.02	1.80	2.27
Denial of responsibility**	-0.32	0.12	6.9	0.73	0.57	0.92
Block 3						
Static risk**	0.63	0.07	84.7			
Denial of responsibility*	-0.97	0.38	6.58			
Static risk × denial of responsibility	0.24	0.13	3.40			

$\chi^2(1) = 146.8$ at Block 1, $p < .001$, $\Delta\chi^2(1) = 7.2$ at Block 2, $p = .007$ for the final equation $\Delta\chi^2(1) = 3.14$, $p = .076$. *SE* standard error. *CI* confidence interval
* $p < .05$, ** $p < .01$, *** $p < .001$

Table 4 Comparison of 2-year violent recidivism rates of sexual offenders who accept and who deny responsibility

Offense and victim type	Accepts responsibility		Denies responsibility		Risk ratio	95 % CI	
	<i>n</i>	% reoffenders (<i>n</i>)	<i>n</i>	% reoffenders (<i>n</i>)		Lower	Upper
Contact offense							
Adult	797	2.6 (37)	616	1.8 (26)	0.91	0.54	1.51
Intrafamilial child	484	0.8 (4)	428	0.7 (3)	0.85	0.19	3.81
Extra-familial child	725	2.8 (20)	509	2.2 (11)	0.78	0.37	1.64
Unknown family status child	730	2.6 (19)	442	1.8 (8)	0.69	0.30	1.59
Noncontact							
Indecent images of children	920	0.1 (1)	200	1.0 (2)	9.23	0.83	102.3
Other	534	3.0 (13)	184	5.4 (10)	1.89	0.81	4.40
Total	4,092	2.3 (94)	2,379	2.5 (60)	1.10	0.79	1.53

CI confidence interval

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

children, the 2-year proven violent reoffending rate was 0.3 %, while for those with any other type of noncontact offense the rate was 3.7 %. The difference in recidivism rates across offense types was significant, $\chi^2(5, 6,471) = 65.0$, $p < .001$.

For the entire sample, there was no significant difference in 2-year proven violent reoffending rates between those who accepted responsibility (2.3 %) and those who denied responsibility (2.5 %) (“ $p > .05$ in each of six significance tests with $\chi^2(1, 6,471)$). Across the entire sample, proven violent reoffenders were not significantly more likely to be in the “denial” category than in the “accepted responsibility” category (odds ratio = 1.10, CI 0.79–1.53). The violent recidivism rates for those who denied and accepted responsibility for each of the six offender types are shown in Table 4. There were no significant differences between 2-year rates of proven violent reoffending between those who accepted responsibility and those who denied responsibility for any of these offender types.

Sequential Cox regression analyses were constructed to test the association between denial of responsibility and violent recidivism controlling for static risk. As can be seen in Table 5, denial of responsibility did not predict violent recidivism independent of static risk measured by the RM2000/v nor was there a significant interaction between static risk and denial. Similarly, denial of responsibility did not predict violent recidivism for the specific offender types on its own or independent of static risk.

Discussion

This study examined the relationship between denial, risk, and sexual recidivism among different types of sexual offenders. In the full sample, denial of responsibility for their offense predicted lower levels of sexual recidivism, independent of risk level. There were no significant differences observed between denial groups

Table 5 Cox regression analysis using denial of responsibility and static risk to predict violent recidivism for contact offenders with adult victims ($N = 6,891$)

	<i>B</i>	<i>SE B</i>	Wald	Hazard ratio	95 % CI for e^B	
					Lower	Upper
Block 1						
Static risk***	1.11	0.05	483.7	3.04	2.75	3.35
Block 2						
Static risk***	1.11	0.05	475.0	3.02	2.74	3.34
Denial of responsibility	0.09	0.10	0.79	1.10	0.89	1.35
Block 3						
Static risk***	1.13	0.07	282.9			
Denial of responsibility	0.22	0.29	0.58			
Static risk × denial of responsibility	−0.05	0.10	0.23			

$\chi^2(1) = 457.1$ at Block 1, $p < .001$, $\Delta\chi^2(1) = 0.8$ at Block 2, for the final equation $\Delta\chi^2(1) = 0.2$. *SE* standard error, *CI* confidence interval

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

for any of the specific offender types either. In terms of violent recidivism, there were no differences observed between those who denied responsibility and those who accepted responsibility, and denial of responsibility did not predict violent recidivism independent of static risk in the regression analysis. Again, the relationship between denial of responsibility and (violent) recidivism was not observed for specific offender types.

These findings were consistent with previous findings to an extent in that they do not indicate that the denial is related to increased risk of recidivism. Harkins et al. (2010) found that among high risk sexual offenders, denial was associated with reduced sexual recidivism. Nunes et al. (2007) found a similar relationship between denial and decreased recidivism with extrafamilial offenders, but not those with related victims. Thornton and Knight (2007) also found that denial was associated with reduced recidivism for those with child victims. It was expected that similar patterns of results would be observed for the different offender types examined here. However, the above effect was only observed when examined for the entire sample. It is possible this was due to the low base rate of offending when the sample was divided into specific offender types. For example, in the Nunes et al. sample, the 10-year sexual recidivism rate for one sample was 14.9 % compared to the overall 2-year sexual recidivism rate of 5.8 % for this study. Although these results are varied, what is clear is that denial is not consistently related to increased risk. It is possible that, with a longer follow-up and higher base rate of offending, similar patterns to those found previously may be detected.

It is also possible that in this sample, denial played a role in reducing recidivism. It has been suggested that denial is quite a natural reaction to being confronted with a behavior that one is not proud of (Maruna & Mann, 2006) and is an understandable

way that some offenders cope with the high stakes situation of being a convicted sex offender (Blagden et al., 2011). Perhaps those in this sample who were not accepting full responsibility were doing so because to accept such responsibility would mean accepting the view of themselves as a sexual offender. To avoid this self-view, they therefore intended to make efforts to desist sexual offending. Cognitive dissonance would also suggest that individuals might change their behaviors to ease the discomfort they feel in relation to doing something shameful (even if it is something they may have experienced as positive at the time). It is also possible that individuals who denied their sexual offenses then proceeded to change their behavior to be consistent with their denial, to avoid losing the support of their loved ones. Consistent with these interpretations, research has found that offenders provided a number of reasons for their denial, including threats to self-esteem and fear of negative consequences (Blagden et al., 2011; Lord & Willmot, 2004).

There is another possible interpretation that may not (and possibly should not) be considered by practitioners as they understandably do not want to collude with their clients; some offenders who deny their offense may not have committed it. The recent history of DNA testing and the Innocence Project (www.innocenceproject.org) in the U.S. would indicate that some people deny their offenses because they did not commit it. Most of this research has been conducted on sexual assault cases (Garrett, 2011) so the possibility of innocence should at least be acknowledged here.

In contrast to the finding for sexual recidivism, those who accepted responsibility for their offense did not have significantly lower levels of violent recidivism than those who denied responsibility. The RM2000/v was a much stronger predictor of violent recidivism than denial was in these cases. This is consistent with Lund's (2000) suggestion that denial may only be predictive in the absence of much stronger risk factors.

One factor that could possibly account for the different relationships between denial and type of recidivism is psychopathy. Previous studies have found psychopathy to be more predictive of violent reoffending than sexual reoffending (e.g., Olver & Wong, 2006). Psychopathy has previously been demonstrated to have a relationship with denial and recidivism (Thornton & Knight, 2007). It is possible that psychopathy may account for the levels of violent recidivism, but not sexual recidivism among those who do not accept responsibility. Thornton and Knight found that, once psychopathy was controlled, there was no longer a significant relationship between denial and sexual recidivism for those with adult victims. However, Nunes et al. (2007) examined the moderating role of psychopathy and did not find it to play a significant role. It could be that in this study, psychopathy may be accounting for some of the relationship between denial and violent recidivism. Unfortunately, psychopathy scores were not available to be examined.

These results have several implications for practice. In terms of sentencing, these results suggest that just because someone

enters a guilty plea, they are not less likely to reoffend. In terms of treatment, given that denial is not associated with greater risk, requiring offenders to admit responsibility may not be necessary. However, we acknowledge that it is more difficult to engage someone in treatment if they deny they require that treatment. One option could be that denial status could be a factor in prioritizing treatment rather than refusing treatment outright. Denial (in the form in which we measured it) may well have a neutral effect on risk but a negative effect on the ability to benefit from some treatment programs, so making deniers a lower priority for treatment might be sensible when resources are limited. This would also reduce the possible disruption to program delivery caused by the presence of several deniers in some program groups. However, in one treatment program in which deniers were treated alongside admitters, both those in denial and the facilitators agreed that deniers can benefit from attending treatment programs (Watson, Harkins, & Palmer, 2014).

Limitations and Directions for Future Research

Several limitations of this study must be discussed. Perhaps the greatest limitation of the study was the relatively short length of follow-up. As the participants were only followed for an average of 3.8 years after release, the base rate of reoffending was quite low. Therefore, it is plausible that different patterns may emerge for different offender types as the base rate of sexual offending increases. Although we felt justified in examining the results after this length of follow-up as previous studies examining recidivism after this length of time have found significant results (e.g., Friendship, Mann, & Beech, 2003), it is more common for follow-up periods of more than 5 years to be examined (e.g., Beech, Friendship, Erikson, & Hanson, 2002). Therefore, re-examining the sample after more time has elapsed since participants' release, would be useful.

Another limitation is that denial was only measured in one way (Lund, 2000). Denial has been defined in a number of different ways and different patterns of results have been observed depending on the definition used (e.g., Harkins et al., 2010). In this study, the denial variable included elements of non-acceptance of responsibility in addition to absolute denial and we can assume the participants held a range of different positions on this continuum. It would have been useful if this variable could have been examined on a three-point scale including absolute denial, some denial/does not accept full responsibility, and accepts full responsibility. However, in this case, we were reliant on using the variable as it has been collected and denial has been measured by a single item in previous studies as well (Nunes et al., 2007; Thornton & Knight, 2007). Future research examining how the various approaches to measuring denial (e.g., using a multi-factorial approach, using absolute or categorical denial, and denial of responsibility from the OASys) compare to one another is important.

The timing of measurement is also an important consideration (Lund, 2000). In this study, denial was measured prior to any treatment the participant may have attended in the community though some offenders will have been treated prior to discharge from custody. As a result, we cannot be sure that something other than denial, occurring in the interval between assessment of denial and recidivism, was not accounting for the results obtained here. However, it is still interesting to observe a relationship between denial of responsibility at the time of assessment and future sexual reoffending and therefore it is important to consider why denial measured in this way appears to predict lower levels of recidivism.

Finally, it is important to note that we used a modified version of RM2000/s which may have had an impact on the findings. Perhaps if the full version had been used, static risk may have been found to be a more important moderating factor in the relationship between denial and sexual recidivism.

Conclusions

As research in the area of denial increases, it is apparent that the relationship between denial and recidivism is not as clear as once believed. Evidence is certainly beginning to accumulate that denial does not necessarily relate to an increased risk of sexual recidivism. In fact, in this and several other recent studies (Harkins et al., 2010; Nunes et al., 2007; Thornton & Knight, 2007), denial acts in a risk-reducing capacity for some when predicting sexual recidivism. It is expected that a number of different variables play a role in accounting for these differences and that more research is needed before firm conclusions can be drawn about the relationship between denial and sexual recidivism. This research highlights the importance of ensuring that denial is not used in decision-making about sex offenders in a manner that presumes denial equates with increased risk. Instead, reliance on other factors such as sexual deviance and psychopathy, which have demonstrated relationships with increased recidivism (e.g., Hanson & Morton-Bourgon, 2005; Leistico, Salekin, DeCoster, & Rogers, 2008; Mann, Hanson, & Thornton, 2010), would be more appropriate factors to consider.

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