

FACTORS ASSOCIATED WITH SEXUAL COERCION IN A REPRESENTATIVE SAMPLE
OF MEN IN AUSTRALIAN PRISONS

Paul L Simpson,^{1,6} Joanne Reekie,¹ Tony G Butler,¹ Juliet Richters,² Lorraine Yap,¹ Luke Grant,³

Alun Richards,⁴ and Basil Donovan^{1,5}

¹Kirby Institute, University of New South Wales, Sydney, Australia

²School of Public Health and Community Medicine, University of New South Wales, Sydney, Australia

³Corrective Services New South Wales, Sydney, Australia

⁴Queensland Department of Health, Brisbane, Australia

⁵Sydney Sexual Health Centre, Sydney Hospital, Sydney, Australia

⁶ To whom correspondence should be addressed at, The Kirby Institute, University of New South Wales, Wallace Wurth Building, Sydney NSW 2052; e-mail: psimpson@kirby.unsw.edu.au; telephone: +61 (02) 9385 9263, Fax: +61 (02) 9385 9001.

ABSTRACT

Very little research has focused on men or prisoners as victims of sexual violence. This study provides the first population-based analysis of factors associated with sexual coercion of men in Australian prisons, and the first to use a computer-assisted telephone interview to collect this information in a prison setting. A random sample of men in New South Wales and Queensland prisons were surveyed using computer-assisted telephone interviewing. We asked participants about sexual coercion, defined as being forced or frightened into doing something sexually that was unwanted while in prison. Associations between sexual coercion in prison and sociodemographics, sexual coercion history outside of prison, and prison-related factors were examined. Logistic regression was used to estimate adjusted odds ratios in examining factors associated with sexual coercion in prisons. Of 2626 eligible men, 2000 participated. Participants identifying as non-heterosexual and those with a history of sexual coercion outside prison were found to be most at risk. Those in prison for the first time and those who had spent more than 5 years in prison ever were also more likely to report sexual coercion. Although prison policies and improving prison officer training may help to address immediate safety and health concerns of those at risk, given the sensitivity of the issue and likely under-reporting to correctional staff, community-based organizations and prisoner peer-based groups arguably have a role too in providing both preventive and trauma-focused support.

Keywords: sexual coercion; sex survey; men; prisons; Australia.

INTRODUCTION

Sexual violence is increasingly recognized as a global health problem (Dumond, 2003; World Health Organization, 2002; Wolff & Shi, 2009; Yap et al., 2011) and encompasses attempts to obtain a sexual act or unwanted sexual advances directed against a person using coercion by any person regardless of their relationship to the victim (WHO, 2002). According to the World Health Organization, sexual health is not just the absence of disease but incorporates the ability to have pleasurable and “safe” sexual experiences free of coercion, discrimination, and violence (WHO, 2008). This definition has prompted calls to adopt a broader perspective on sexual health research to include sexual violence (Wellings & Johnson, 2013). In prison, the problem and significance of sexual violence is recognized in legislation such as the United States Prison Rape Elimination Act (PREA) which seeks to prevent sexual violence in prisons and treat the victims of sexual violence (Dumond, 2003). The PREA has brought attention and urgency for the need to better understand sexual behavior in prisons globally.

Most research on sexual violence has focused on the experience of women and has occurred in a general community context (Dumond, 2003). Very little research has focused on men as victims (Peterson, Voller, Polusny, & Murdoch, 2011; Weiss, 2010) or on prisoners (Richters, Butler, & Schneider, 2012; Wolff, Blitz, Shi, Bachman, & Siegel, 2006; Wolff & Shi, 2011). Prisoners are routinely excluded from community sexual health and behavioral surveys based on household or telephone sampling and therefore represent an underresearched population.

In prison, sexual violence can have particularly devastating mental, physical, and sexual health consequences for individuals and to the communities and loved ones to which most prisoners return to (Kalichman, Sikkema, DiFonzo, Luke, & Austin, 2002; Neal & Clements,

2010; Peterson et al., 2011; Wolff et al., 2006, 2007). Failure to prevent sexual violence and to respond to the victim's trauma violates the human rights of prisoners. It also breaches the duty of care (Neal & Clements, 2010; Wolff et al., 2007) and puts correctional services at risk of litigation from victims (Neal & Clements, 2010; O'Donnell, 2004). Evidence suggests that it may also contribute to recidivism (Cloyes, Wong, Latimer, & Abarca, 2010). Another concern relates to the normalization of sexual violence. Popular culture in Anglophone countries often represents sexual violence in prison as an expected part of prison-based punishment. In a sense, this works to normalize sexual violence in our communities (free or otherwise) as it encourages an idea that certain victims of sexual violence are responsible for being sexually coerced in the first place, akin to the "they had it coming" and "just desserts" arguments (Capers, 2011).

Estimates of the incidence of sexual violence are inconsistent, varying considerably due to different definitions, methodologies, and conceptual understandings. These obstacles are further complicated in the prison context and contribute to confusion and debate in estimating the frequency of sexual violence in prison. Previous research suggests that prevalence rates of sexual violence in a prison population may be as high as 41 % or as low as 1 % (Gaes & Goldberg, 2004). Two large epidemiological-based surveys on sexual violence in U.S. prisons found in recent years that 4 % of prisoners reported incidents of sexual victimization (Beck, Berzofsky, Caspar, & Krebs, 2013; Wolff et al., 2007). In a prior study, we reported that 2.6 % of a representative sample of 2018 men in New South Wales (NSW) and Queensland prisons had been "forced or frightened into doing something sexually that [they] did not want" and 6.9% had been sexually threatened in prison (Richters et al. 2012).

Studies on associated factors primarily come from the U.S. and typically lack methodological rigor in terms of poor response rates and use of non-random sampling. This

could explain the variation in characteristics of those who report sexual coercion in prison, including: younger age (Chonco, 1989; Felson, Cundiff, & Painter-Davis, 2012; Heilpern, 1998; Morash, Jeong, & Northcutt-Bohmert, 2012; Steels & Goulding, 2009; Wolff et al., 2007), small physical stature (Chonco, 1989; Jennes, Maxson, Matsuda, & Sumner, 2007; Man & Cronan, 2001; Morash et al., 2012; Tewksbury, 1989), being racially “White” (Chonco, 1989; Hensley, Koscheski, & Tewksbury, 2005; Struckman-Johnson & Struckman-Johnson, 2006; Tewksbury, 1989), prior sexual victimization (Morash et al., 2012; Wolff et al., 2007), having a mental illness (Cloyes et al., 2010; Wolff et al., 2007), having committed a sexual offence (Kuo, Cuvelier, & Huang, 2014; Man & Cronan, 2001; Struckman-Johnson, Struckman-Johnson, Rucker, Bumby, & Donaldson, 1996), being new to prison (Hensley et al., 2005; Hensley, Tewksbury, & Castle, 2003; Morash et al., 2012;), being perceived as weak or fearful (Bowker, 1980; Chonco, 1989), having feminine characteristics (Chonco, 1989; Man & Cronan, 2001), and identifying as gay or bisexual or a transgender woman (Beck et al., 2013; Hensley et al., 2003, 2005; Jenness et al., 2007; Sexton, Jenness, & Sumner, 2009; Steels & Goulding, 2009; Struckman-Johnson et al., 1996; Struckman-Johnson & Struckman-Johnson, 2006). Furthermore, some of these findings have not been confirmed. For example, White inmates in the U.S. have been found to be significantly less likely than their Black counterparts to experience sexual violence (Jenness et al., 2007; Wolff et al., 2007), and others have found victims were typically heterosexual identifying (Hensley et al., 2003, 2005).

One large population-based study utilizing multivariate analysis reported that male prisoners who reported a mental illness and prior sexual victimization were most at risk of sexual violence (Wolff et al., 2007). Due to cultural, institutional, and historical differences between countries, U.S. findings may not be generalizable to other contexts. No epidemiological studies

exist on sexual violence in Australian prisons. However, one Western Australian qualitative study identified young men, gay men, and first time prisoners were most at risk in prisons (Steels & Goulding, 2009). A NSW study on prisoners aged 18 and 25 years also reported that younger and gay men, as well as “smaller sized” men, were at greater risk (Heilpern, 1998).

The Sexual Health and Attitudes of Australian Prisoners (SHAAP) study represents a large probability sample of men and women prisoners and has been used to inform and advocate sexual health policy in Australian prisons and abroad (Harawa, Leibowitz, & Farrell, 2013; Pizer & Schoettes, 2013). It is the first prison population-based survey to use a computer-assisted telephone interviewing (CATI) in the prison setting to minimize sensitivity and under-reporting issues in collecting sexual violence data. We used the SHAAP survey data to examine characteristics of prisoners and other factors associated with sexual coercion among men in Australian prisons.

METHODS

Participants and Procedure

All male prisoners aged 18 years or over who completed the SHAAP survey and responded to the questions on sexual coercion were included in the analysis. The SHAAP study was designed to investigate the sexual health, knowledge, attitudes, and behavior of prisoners in NSW and Queensland. Full details of the study methodology can be found elsewhere (Butler et al., 2010; Richters et al., 2008). Briefly, a random sample was drawn from a list of all current inmates. A number of prisoners in remote settings, such as work camps, were not included due to logistical difficulties in providing telephone access and post-survey support. Prisoners were excluded if they did not speak sufficient English to comprehend the survey, were profoundly intellectually disabled, too mentally ill to be interviewed, deemed to be at risk from other prisoners if they

were moved to the interview area, were unavailable due to being transferred, in court or hospital, or could not be released from work duties, or had previously completed the survey at another prison.

Randomly selected prisoners were invited to participate by a study recruiter and given a full verbal explanation of the survey in a private setting away from custodial authorities. Those wishing to participate provided written informed consent. The interview was conducted by trained interviewers located in central Sydney via CATI. Prisoner interviews were conducted in a private room so that the inmate would have privacy. Prisoners received \$AU10 for participating in the survey to cover lost time at work. The telephone interviews were conducted between September 2007 and June 2008.

The questionnaire was based on that used for the Australian Study of Health and Relationships (Smith, Rissel, Richters, Grulich, & de Visser 2003), with minor adaptations to allow for the lower literacy of this population and additional sections included to cover in-prison experiences. In this study, experience of sexual coercion in prison was obtained with the question "In prison, have you ever been forced or frightened into doing something sexually that you did not want to do?" This question has previously been used in the U.S. and Australia on non-prison populations (de Visser, Smith, Rissel, Richters, & Grulich, 2003; Laumann, Gagnon, Michael, & Michaels, 1994) and we regard it as a reproducible measure of experience of sexual coercion. We also asked about threats of sexual coercion in prison with the question "Have you ever been threatened with sexual assault while in prison?" A response of "yes" to these two questions was scored as 1 and a "no" response was scored as 2.

Of 2626 eligible and available prisoners, 20 % refused and 3 % gave incomplete or unusable responses, giving a final response rate of 77 %. A further 18 participants were omitted

due to incomplete data, leaving 2000 male participants included in this analysis, of whom 1105 (55 %) were in NSW prisons.

Statistical Analysis

Logistic regression was used to investigate associations between characteristics of prisoners, prison-related factors, and sexual coercion or the threat of sexual coercion in prison. Fifteen prisoner characteristics were investigated and included: age, Indigenous status, country of birth, language spoken at home, relationship status, sexual identity, gender of sexual partners, highest level of education, body mass index (BMI), occupation prior to entering prison, and whether participants has ever taken illicit drugs (inside and outside prison), injected drugs (inside and outside prison), participated in sex work, or been forced or frightened into unwanted sexual activity outside prison. Six prison-related factors investigated included: state prison located, first time in prison, length of current sentence served, total time in prison during their life time, history of juvenile detention, and offence type (refer to Table 1 for category values). Some prisoner characteristics and prison-related factors were further categorized to maintain statistical power. For example, sexual identity categories “heterosexual,” “gay,” “bisexual,” “queer,” and “other” were categorized as “heterosexual” or “non-heterosexual.” Stepwise logistic regression was conducted with a significance of $p < .10$ for entry into the model and $p < .05$ for retention in the model. Due to the U.S. and Australian literature consistently citing younger age as a risk factor, age was also retained in the model. Analyses were performed using SAS 9.2.

RESULTS

The median age of the sample was 31.9 years (25.5–40.2 IQR) with 96 (5 %) identifying as non-heterosexual (i.e., gay, bisexual, queer or other), 436 (22 %) Indigenous, 347 (17 %) were not born in Australia, and for 187 (9 %) English was not the primary language used at home. Most

had obtained an education level up to, and including, year 10 secondary school (73 %) with only 155 (8 %) having obtained a college or university education. BMI measures indicate 995 (50 %) were “normal” weight, 780 (39 %) “overweight/obese,” and 58 (3 %) “underweight.” For 794 (40 %) participants, this was their first time in prison. Most participants had spent a total time in prison of 1 to 5 years (37 %) or more than 5 years (36 %), followed by less than 1 year (27 %). A total of 268 (13 %) reported having been sexually coerced outside of prison.

Threatened with Sexual Coercion in Prison

Overall, 136 (7 %) men reported they had been threatened with sexual coercion in prison. The final model was significant, Likelihood Ratio χ^2 (15) = 145.96, $p < .0001$. Men who identified as non-heterosexual were more than twice as likely to have been threatened (adjusted odds ratio [aOR] 2.38, 95 % CI 1.31–4.30, $p = .004$) after adjustment of all prisoner and prison-related variables (refer to Table 2). In addition, prisoners who reported having been sexually coerced outside of prison were four times as likely to have been threatened with sexual coercion in prison (aOR 4.12, 95 % CI 2.71–6.26, $p < .0001$) after adjusting for other factors. Prisoners who were non-Indigenous (aOR 1.98, 95 % CI 1.17–3.34, $p = .01$), born in Australia (aOR 4.57, 95 % CI 1.85–11.3, $p = .001$), in a Queensland prison (aOR 1.68, 95 % CI 1.14–2.47, $p = .008$), first time prison entrants (aOR 1.63, 95 % CI 1.04–2.57, $p = .03$), had spent more than 5 years in prison (aOR 3.25, 95 % CI 1.69–6.24, $p = .0004$), and who had a history of sex work (aOR 1.70, 95 % CI 0.99–2.89, $p = .05$) were also more likely to have been threatened with sexual coercion.

Experienced Sexual Coercion in Prison

Fifty three (2.3 %) male prisoners reported having been sexual coerced in prison (Table 3). Overall, the final model was significant, Likelihood Ratio χ^2 (8) = 112.84, $p < .0001$. Non-heterosexual men were significantly more likely to have experienced sexual coercion in prison

than heterosexual men (aOR 7.28, 95 % CI 3.71–14.29, $p < .0001$), after adjusting for other factors (Table 3). Further, those who had been sexually coerced outside of prison were more likely to have experienced sexual coercion in prison (aOR 7.94, 95 % CI 4.34–14.52, $p < .0001$) after adjusting for other factors. Prisoners who had spent more than 5 years in prison were more likely to report having been sexually coerced than prisoners who had spent less than 1 year in prison (aOR 4.25, 95 % CI 1.07–11.51, $p = .004$). However, first time prison entrants were also more likely to have been sexually coerced (aOR, 2.10, 95 % CI 1.07–4.15, $p = .03$).

DISCUSSION

The findings from our large sample covering 14 % of the male prisoner population in Australia (Australian Bureau of Statistics, 2007) showed that men who identify as non-heterosexual were over seven times more likely to report having experienced sexual coercion in prison, and more than twice as likely to report having experienced a threat of sexual coercion, compared with their heterosexual counterparts. This finding supports previous U.S.-based research (Beck et al., 2013; Hensley et al., 2003, 2005; Jenness et al., 2007; Struckman-Johnson & Struckman-Johnson, 2006; Struckman-Johnson et al., 1996), and the two Australian studies (Heilpern, 1998; Steels & Goulding, 2009). The findings show that those who reported unwanted sexual activity outside of prison were four times as likely to report being threatened with sexual coercion and over eight times as likely to report experiences of sexually coercion in prison, compared to those who had not reported unwanted sexual activity outside prison. This finding supports previous studies that have shown prior sexual victimization to be a risk factor (Morash et al., 2012; Wolff et al., 2007), including one large U.S. population-based study that utilized multivariate analysis (Wolff et al., 2007).

While younger age has been reported as a risk factor in U.S. and Australian-based research (Chonco, 1989; Felson et al., 2012; Heilpern, 1998; Morash et al., 2012; Steels & Goulding, 2009; Wolff et al., 2007), we found no statistical association in this study. It should be noted that age considered in our analysis referred to age when surveyed and not age of sexual coercion event. Richters et al. (2012), in reporting on SHAAP survey findings elsewhere, reported that 42% of men were under 20 years of age when they were first coerced in prison. Further, incidence of sexual coercion in prison was estimated to be one assault per 61 prison-years and one assault per 16.5 prison-years for those who had been to prison less than one year (Richters et al., 2012). Supporting the latter finding, those who had spent less than one year in prison were three times as likely to report threats of sexual coercion. Taken together, these findings suggest a higher risk of sexual coercion for younger men, but likely for new prisoners only.

Caution is warranted in comparing the present study with previous studies that have identified (younger) age as a risk factor for sexual violence. Such studies have methodological limitations or differences to our study. One previous U.S.-based study found younger age to be a risk factor for sexual coercion of prisoners committed by staff as opposed to other prisoners (Wolff et al., 2007). Other studies have examined “official” reports of sexual coercion and thus under-reporting is likely (Chonco, 1989; Felson et al., 2012). This was supported by our finding, reported elsewhere (Richters et al., 2012), that only 30% who had experienced sexual coercion reported it to a staff member. Finally, most studies identifying age as a risk factor did not use probability-based sampling or multivariate analysis to account for prospective mediating factors (Chonco, 1989; Heilpern, 1998; Steels & Goulding, 2009;). Indeed, one study using probability-based sampling and bivariate logistic regression did not identify age to be a risk factor, and reported that older prisoners (36–45 years old), rather than younger prisoners (either 18–25 year

olds or 26–35 year olds), more frequently reported sexual coercion in prison (Jenness et al., 2007). However, as the analysis used was bivariate regression, other factors were not accounted for.

Body Mass Index was not found to be associated with sexual coercion or threats of sexual coercion in prison. However, this index is likely to be a crude measure for examining the relationship between physical size and risk of sexual coercion and caution is warranted in interpreting this finding. First time prison entrants were found to be twice as likely to report sexual coercion and to a lesser degree threats of sexual coercion, supporting previous research (Hensley et al., 2003, 2005). The vulnerability of being in prison for the first time likely stems from not being experienced with inmate culture and/or a lack of social networks in prison that may act as a protective factor (Man & Cronan, 2001). Prisoners who had spent more than five years in prison were over four times as likely to report sexual coercion and over three times as likely to report threats of sexual coercion compared to those who had spent less than one year in prison. Prisoners with histories of sex work, identified as non-Indigenous, Australian born, and in Queensland rather than NSW prisons were more likely to report being threatened with sexual coercion. The finding that racial and cultural/ethnicity measures such as Indigenous identity, Australian born, and primary language spoken at home were not associated with reports of actual sexual coercion suggests that Australian prison culture, in this regard, is likely to be different from the U.S. prison culture, although the role of race in predicting sexual violence in U.S. prisons has not been confirmed in more recent studies (Jenness et al., 2007; Wolff et al., 2007).

Limitations of our study include possible underreporting of sexual coercion, which is well documented in the literature (Austin, Fabelo, Gunter, & McGinnis, 2006; Struckman-Johnson & Struckman-Johnson, 2006; Struckman-Johnson et al., 1996) Additionally, there may have been

differential underreporting with heterosexual men being less likely to admit to having been coerced (i.e., more ashamed), thus overestimating the risk of coercion among non-heterosexual men. We aimed to mitigate underreporting through the use of computer-assisted telephone interviewing and judge that the CATI was successful in this regard. Of the 53 participants who reported being sexually coerced in prison, 25 had not previously reported the incident, and only 30 % had reported the incident to a prison staff member (Richters et al., 2012). The privacy of speaking on the telephone is likely to have assisted disclosure (Smith et al., 2003). As reported elsewhere, 84 % of all SHAAP participants reported they answered all questions honestly (14 % said they answered most questions honestly) (Richters et al., 2010). The fact that interviewers did not conduct the telephone interviews at the prison and were not affiliated with correctional authorities arguably facilitated disclosure among participants.

Older men who have been in prison longer (or in and out of prison over a long period) may be reporting on sexual coercion in earlier times when the prevalence rates of sexual coercion in prison may have been different from the time that SHAAP data collection took place. In a study drawing on population-based surveys conducted in NSW, a steady decrease in male prisoner sexual coercion between 1996 and 2009 was reported (Yap et al., 2011). Also, the study excluded potentially vulnerable groups such as those with a profound mental illness (Cloyes et al., 2010; Wolff et al., 2007). Notwithstanding these limitations, the high adjusted odds ratios exhibited in findings concerning non-heterosexual identified prisoners and those with a history of sexual coercion outside of prison provide strong indication that such men are most at risk in Australian prisons.

Our study presents some important implications for future research and policy and service responses. Further research is required on the sexual and mental health impacts of sexual

violence in prison in order to target and improve on interventions and services. Research is also needed on other sexuality and gender minority prisoners, including lesbian and bisexual women and transgender people who are likely to have unique experiences within the prison setting. Research is also required to address the paucity of research on sexual re-victimization within the prison setting (Stathopoulos, 2014).

Another potentially important next step in future studies concerns differentiating sex offenses on the basis of sub-types (e.g., offences against minors and against adults). Studies on prison sexual violence, including our study, tend to use broad categories such as “sex offences” or “sexual assault offences” (e.g., Kuo, Cuvelier, & Huang, 2014; Man & Cronan, 2001; Struckman-Johnson et al., 1996). Despite a request for more detail about the category ‘sexual offence’ from the NSW Department of Corrective Services, we were unable to distinguish clearly between men who are in prison for different types of sexual offences. This may (or may not) have contributed to the lack of statistically significant association found in the present study between ‘offence type’ and sexual coercion outcomes.

In terms of policy and services, responses should be carefully considered and should not rely exclusively on measures that single out those at risk while overlooking the potential institutional and social factors that may contribute to the problem. Although measures such as providing single cells to prisoners, increasing surveillance, and improving prison officer training may help to address immediate safety and health concerns of those at risk, given the sensitivity of the issue and under-reporting to correctional staff, community-based organizations and prisoner peer-based groups arguably have a role too in providing both preventative and trauma-focused support.

Ethics

Ethics approval was provided by the Justice Health NSW Human Research Ethics Committee (GEN5/05) and ratified by the University of NSW Human Research Ethics Committee (HREC 06045). The NSW Department of Corrective Services Ethics Committee (Ref. 05/0882) recommended approval of the study, which was approved by the Commissioner of Corrective Services as required by the Crimes (Administration of Sentences) Act for all research conducted with inmates. The Queensland Corrective Services Research Committee also approved the study.

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Tables

Table 1: Participant and prison-related characteristics

		<i>N^a</i>	<i>%</i>
Age group	18-24	457	22.9
	25-34	772	38.6
	35-44	448	22.4
	45+	323	16.2
Indigenous	Yes	436	21.8
	No	1467	73.4
Born in Australia	No	347	17.4
	Yes	1653	82.7
Language spoken at home	English	1747	87.4
	Other	187	9.4
Sexual Identity	Heterosexual	1904	95.2
	Homosexual	26	1.3
	Bisexual	61	3.1
	Not sure/something else	9	0.5
Relationship status	Single	1484	74.2
	Married	176	8.8
	Divorced/separated/widowed	340	17.0
Education	Primary/no schooling	182	9.1
	Some secondary school	315	15.8
	School certificate/year 10	947	47.4
	Higher secondary/ HSC ^b	252	12.6
	Technical trade	140	7.0

	College/university	155	7.8
Occupation	Elementary clerical/Labourer	999	50.0
	Tradesperson/Clerical/Intermediate	626	31.3
	Manager/Professional	241	12.1
State	NSW	1105	55.3
	Qld	895	44.8
BMI ^c	Underweight	58	2.9
	Normal	995	49.8
	Overweight/obese	780	39.0
First time in prison	No	1216	60.8
	Yes	784	39.2
Time served of current sentence	< 6 months	710	35.5
	6 months- 1 year	384	19.2
	1-2 years	303	15.2
	> 2 years	603	30.2
Total time in prison	<1 year	532	26.6
	1-5 years	746	37.3
	>5 years	718	35.9
Type of offence	Violent	824	41.2
	Sexual	245	12.3
	Non-violent	873	43.7
Ever been in juvenile detention	No	1343	67.2
	Yes	657	32.9
Ever taken drugs	No	407	20.4
	Yes	1591	79.6

Ever injected drugs	No	1075	53.8
	Yes	922	46.1
Taken drugs in prison	No	1446	72.3
	Yes	549	27.5
Injected drugs in prison	No	1755	87.8
	Yes	240	12.0
Ever been paid for sex	No	1829	91.5
	Yes	171	8.6
Ever been sexually coerced outside of prison	No	1728	86.6
	Yes	268	13.4

^a Populations do not necessarily add to total due to missing values

^b The Higher School Certificate (HSC) is the highest award in secondary education in Australia. Students must complete Years 11 and 12 to be awarded the HSC

^c BMI cut-off points (WHO, 1995): “underweight” (< 18.50); “normal” (18.50–24.99); and “overweight/obese” (≥ 25.00)

Table 2: Factors associated with being threatened with sexual coercion in men's prisons

		Univariate			Multivariate		
		OR	95 % CI	<i>p</i> -value	Adjusted OR	95 % CI	<i>p</i> -value
Sexual Identity	Heterosexual	1.00			1.00		
	Non-heterosexual	4.67	2.80 7.79	<.0001	2.38	1.31 4.30	.004
Age group	18–24	1.00			1.00		
	25–34	1.84	1.08 3.13	.02	1.04	0.57 1.92	ns
	35–44	2.20	1.25 3.87	.006	1.19	0.61 2.30	ns
	45+	1.60	0.85 3.03	ns	0.74	0.35 1.58	ns
Indigenous	Yes	1.00			1.00		
	No	1.63	1.01 2.64	.04	1.98	1.17 3.34	.01
Born in Australia	No	1.00			1.00		
	Yes	3.56	1.72 7.34	.0006	4.57	1.85 11.32	.001
Language spoken at home	English	1.00			1.00		
	Other	0.36	0.14 0.88	.02	0.47	0.16 1.42	ns
	Unknown	1.30	0.55 3.06	ns	2.71	0.95 7.71	.06

Relationship status	Single	1.00			
	Married	0.75	0.37	1.50	ns
	Divorced/separated/widowed	1.19	0.77	1.86	ns
Education	Primary/no schooling	1.00			
	some secondary school	1.58	0.77	3.24	ns
	School certificate/year 10	1.01	0.52	1.97	ns
	higher secondary/ HSC ^a	0.85	0.37	1.93	ns
	technical trade	1.33	0.56	3.15	ns
	College	1.15	0.35	3.77	ns
Occupation	University or higher	1.79	0.73	4.37	ns
	Elementary clerical/labourer	1.00			
	Tradesperson/Clerical	1.09	0.73	1.62	ns
	Manager/Professional	1.30	0.77	2.19	ns
BMI ^b	Unknown	0.79	0.36	1.77	ns
	Underweight	0.84	0.30	2.36	ns
	Normal	1.00			
	Overweight/obese	0.66	0.45	0.97	.03

	Missing	0.57	0.27	1.20	ns				
State prison located	NSW	1.00				1.00			
	Qld	1.57	1.10	2.22	.01	1.68	1.14	2.47	.008
First time in prison	No	1.00				1.00			
	Yes	0.87	0.60	1.24	ns	1.63	1.04	2.57	.03
Time served of current sentence	< 6 months	1.00							
	6 months- 1 year	1.59	0.93	2.72	.09				
	1-2 years	1.88	1.09	3.27	.02				
	> 2 years	2.20	1.40	3.46	.0007				
Total time in prison	<1 year	1.00				1.00			
	1-5 years	1.33	0.75	2.35	ns	1.27	0.68	2.40	ns
	>5 years	3.48	2.09	5.81	<.0001	3.25	1.69	6.24	.0004
Ever been in Juvenile detention	No	1.00							
	Yes	1.42	1.00	2.03	.05				
Type of offence	Violent	1.00							
	Sexual	1.67	1.03	2.70	.03				
	Non-violent	0.77	0.51	1.14	ns				

	Unknown	1.27	0.49	3.30	ns				
Ever taken drugs	No	1.00							
	Yes	1.31	0.99	1.73	.05				
Ever injected drugs	No	1.00							
	Yes	1.33	1.07	1.64	.009				
Taken drugs in prison	No	1.00				1.00			
	Yes	1.84	1.28	2.63	.0009	1.44	0.95	2.19	.08
Injected drugs in prison	No	1.00							
	Yes	1.74	1.10	2.75	.01				
Ever been paid for sex	No	1.00				1.00			
	Yes	2.80	1.77	4.44	<.0001	1.70	0.99	2.89	.05
Ever been sexually coerced outside of prison	No	1.00				1.00			
	Yes	4.60	3.16	6.70	<.0001	4.12	2.71	6.26	<.0001

^a The Higher School Certificate (HSC) is the highest award in secondary education in Australia. Students must complete Years 11 and 12 to be awarded the HSC

^b BMI cut-off points (World Health Organization, 1995): “underweight” (< 18.50); “normal” (18.50–24.99); and “overweight/obese” (≥ 25.00)

Table 3: Factors associated with sexual coercion in men's prisons

		Univariate				Multivariate			
		OR	95 % CI	<i>p</i> -value	Adjusted OR	95 % CI	<i>p</i> -value		
Sexual identity	Heterosexual	1.00			1.00				
	Non-heterosexual	13.57	7.40	24.88	<.0001	7.28	3.71	14.29	<.0001
Age group	18–24	1.00			1.00				
	25–34	2.00	0.80	5.01	ns	1.15	0.42	3.16	ns
	35–44	2.96	1.16	7.59	.02	1.26	0.44	3.64	ns
	45+	2.40	0.86	6.67	.09	0.81	0.26	2.55	ns
Indigenous	Yes	1.00							
	No	1.02	0.53	1.95	ns				
Born in Australia	No	1.00							
	Yes	2.05	0.81	5.18	ns				
Language spoken at home	English	1.00							
	Other	1.04	0.41	2.65	ns				
Relationship status	Single	1.00							
	Married	0.91	0.32	2.58	ns				

	Divorced/separated/widowed	1.43	0.74	2.77	ns	
Education	Primary/no schooling	1.00				
	Some secondary school	1.16	0.43	3.15	ns	
	School certificate/year 10	0.60	0.24	1.53	ns	
	Higher secondary/ HSC ^a	0.47	0.13	1.70	ns	
	Technical trade	1.78	0.60	5.25	ns	
	College	0.52	0.06	4.37	ns	
	University or higher	0.94	0.23	3.83	ns	
Occupation	Elementary clerical/labourer	1.00				
	Tradesperson/Clerical	1.53	0.81	2.89	ns	
	Manager/Professional	2.12	0.98	4.59	.05	
BMI ^b	Underweight	1.28	0.30	5.52	ns	
	Normal	1.00				
	Overweight/obese	1.06	0.52	1.70		
	Missing	0.65	0.23	1.88		
State prison located	NSW	1.00				
	Qld	1.20	0.69	2.06	ns	
First time in prison	No	1.00				1.00

	Yes	1.10	0.63	1.92	ns	2.10	1.07	4.15	.03
Time served of current sentence	< 6 months	1.00							
	6 months - 1 year	2.30	0.94	5.59	.06				
	1-2 years	1.84	0.68	4.99	ns				
	> 2 years	3.51	1.63	7.55	.001				
Total time in prison	<1 year	1.00				1.00			
	1-5 years	1.33	0.53	3.36	ns	1.45	0.55	3.92	ns
	>5 years	3.61	1.59	8.23	.002	4.25	1.07	11.51	.004
Ever been in Juvenile detention	No	1.00							
	Yes	1.59	0.91	2.75	.10				
Type of offence	Violent	1.00							
	Sexual	3.13	1.57	6.23	.001				
	Non-violent	0.94	0.49	1.83	0.86				
	Unknown	0.79	0.10	5.99	ns				
Ever taken drugs	No	1.00							
	Yes	0.70	0.38	1.30	ns				
Ever injected drugs	No	1.00							
	Yes	0.94	0.57	1.53	ns				

Taken drugs in prison	No	1.00							
	Yes	1.49	0.84	2.63	ns				
Injected drugs in prison	No	1.00							
	Yes	1.52	0.73	3.14	ns				
Ever been paid for sex	No	1.00							
	Yes	2.58	1.27	5.23	.008				
Ever been sexually coerced outside of prison	No	1.00						1.00	
	Yes	1.02	6.25	19.43	<.0001	7.94	4.34	14.52	.0001

^a The Higher School Certificate (HSC) is the highest award in secondary education in Australia. Students must complete Years 11 and 12 to be awarded the HSC

^b BMI cut-off points (World Health Organization, 1995): “underweight” (< 18.50); “normal” (18.50–24.99); and “overweight/obese” (≥ 25.00)