RUNNING HEAD: A field-based practice model

Responding to youth sexual offending: A field-based practice model that 'closes the gap' on sexual recidivism among Indigenous and non-Indigenous males

For submission to: *Journal of Sexual Aggression*

Troy Allard¹, Sue Rayment-McHugh¹, Dimity Adams¹, Stephen Smallbone² and Nadine McKillop¹

Corresponding author:

Troy Allard
e: t.allard@griffith.edu.au
t: +61 (07) 3735 5649

School of Criminology and Criminal Justice
Griffith University
176 Messines Ridge Road
Mount Gravatt QLD 4122
AUSTRALIA

Length: 6580 words (excluding tables)

¹ Key Centre for Ethics Law Justice and Governance

² School of Criminology and Criminal Justice

Abstract

Most studies that have explored the impact of youth sexual offender treatment on recidivism have not assessed whether effectiveness varies for important subgroups. The present study evaluated the impact of treatment provided by the Griffith Youth Forensic Service (GYFS) on 104 adjudicated youth sexual offenders referred between 2006 and 2012. Sexual, violent and 'other' offending outcomes were examined, based on Australian Indigenous cultural heritage and whether the youth resided in a remote community, over an average 2.5 year follow-up timeframe. Findings indicated that GYFS treatment was equally effective for Indigenous and non-Indigenous youth for preventing sexual recidivism and, for youth residing in remote and non-remote locations, for preventing sexual, violent and 'other' recidivism. Treatment was less effective in preventing violent and 'other' recidivism for Indigenous youth. The core components of the GYFS treatment program therefore appear particularly well suited for reducing sexual recidivism by Indigenous offenders and those residing in remote communities.

Keywords: Sexual offender treatment, Youth, Effectiveness, Indigenous, Remoteness, Recidivism

Numerous studies have explored the impact of youth sexual offender treatment on recidivism using various comparison groups to determine 'what works'. Notwithstanding numerous methodological limitations, this research has generally found that treatment 'works' (Reitzel & Carbonell, 2006; Walker, McGovern, Poey & Otis, 2004). The more nuanced questions of what works, for which offenders, in what circumstances (Tilley et al., 2014) have been given much less attention. Exploring these questions is critical for the continual improvement of treatment programs and can provide guidance about potential changes that can be made to existing programs to improve practice and reduce recidivism. The present study explored whether treatment provided by the Griffith Youth Forensic Service (GYFS) to male youth convicted of serious sexual offences had a differential impact on recidivism for two subgroups: those who did and did not have an Aboriginal and Torres Strait Islander (hereinafter referred to as 'Indigenous') cultural heritage; and those residing in remote and non-remote communities.

It is important to consider whether treatment effectiveness differs for those with an Indigenous cultural heritage or for those living in remote communities. Evidence suggests that Indigenous people are more likely to have contact with the criminal justice system for committing a sexual or violent offence. For example, official statistics indicate that Australian Indigenous people aged over 10 were 6.5 times more likely to be charged by police for a sexual offence and 10.4 times more likely to be charged with a violent offence than non-Indigenous people (Allard, 2010). One possible explanation for this is that Indigenous people have a wider range of, and more, acute risks and needs than their non-Indigenous peers (Andrews, Bonta & Hoge, 1990; Bonta, 1989; Bonta, LaPrairie & Wallace-Capretta, 1997; Bonta, Lipinski & Martin, 1992; Day, 2003; Jones, Masters, Griffiths & Moulday, 2002). Specific risk factors found to be more prevalent among Indigenous

populations and which are related to offending include alcohol and substance abuse, low educational attainment, unemployment, lack of suitable accommodation (homelessness and overcrowding), as well as increased risk of violent victimisation and mental health problems (Al-Yaman, Doeland & Wallis, 2006; Berry, Harrison & Philip, 2009; Dodson & Hunter, 2006; Hunter, 2001; Payne & Dearden, 2009; Putt, Payne & Milner, 2005; Weatherburn, Snowball & Hunter, 2006, 2008; Willis & Moore, 2008). Additionally, there are a range of socio-political factors that may increase the likelihood of offending including the effects of colonisation, forced removal, intergenerational trauma, racism, poverty and dependence on government (Memmott et al., 2000; Zubrick et al., 2005).

One factor that may cause or exacerbate many of these risks and needs and contribute to higher offending rates is that many Indigenous people reside in remote communities. One-quarter (25%) of Indigenous Australians live in remote communities, compared with 2% of non-Indigenous people (Graffam & Shinkfield, 2012). A range of environmental and systemic factors may combine in remote communities to create conditions that foster more acute risks and needs. Indeed, evidence suggests that Indigenous people in remote locations are less likely than Indigenous people in non-remote locations to have completed school or be studying for tertiary qualifications, and are more likely to be unemployed, have lower incomes or be reliant on welfare, and live in overcrowded housing conditions (AIHW, 2011). Evidence also suggests that sexual abuse, family violence and community violence are particularly problematic in many remote communities in Australia and elsewhere (Al-Yaman, Doeland & Wallis, 2006; Bonta, LaPrairie & Wallace-Capretta, 1997; Dodson & Hunter, 2006; Jones et al., 2002). Unfortunately, there is often a lack of appropriate and coordinated professional services in these remote communities to adequately address these entrenched problems.

Despite the need for evidence assessing how effective treatment programs are for reducing recidivism among important subgroups who receive treatment, few studies have explored if there is variation based on Indigenous cultural heritage and no studies have explored whether there is variation based on whether or not the client resided in a remote location. Rather, studies generally report recidivism outcomes for all participants who received treatment and who were included in the study. Findings indicate that about 7% of youth sexually reoffend and 43% commit any offence within five years of completing treatment (Caldwell, 2010; Reitzel & Carbonell, 2006). Others have reported that 5% of treated youth sexual offenders committed a further sexual offence within an average of six years after treatment completion, with a further 19% reoffending violently and 21% non-violently (Worling & Curwen, 2000). Carpentier and Proulx (2011) found higher levels of reoffending by their treated youth, with 10% sexually reoffending, 29% violently reoffending and 45% committing any offence within eight years.

Research directly comparing Indigenous and non-Indigenous youth sexual offenders show that Indigenous youth are more likely to reoffend after receiving treatment than are non-Indigenous youth. Rojas and Gretton (2007) examined the recidivism outcomes for youth who were ordered by court or probation officers in Canada to complete a sexual offender treatment program. Findings indicated that a higher proportion of these Canadian Aboriginal youths reoffended after completing treatment during the ten year follow-up period. Specifically, treated Aboriginal youth were more likely than treated non-Aboriginal youth to offend sexually (20.6% v 8.6%), violently (51% v 24.1%), and non-violently (68.6% v 40.5%). The odds ratios indicated that treated Aboriginal youth were 2.8 times more likely to commit a sexual offence, 3.3 times more likely to commit a violent offence, and 3.2 times more likely to commit a non-violent offence.

Australian research also confirms that Indigenous sexual offenders are more likely to reoffend than non-Indigenous sexual offenders after receiving treatment. Allan, Allan, Marshall and Kraszlan (2003) examined reconviction rates in a sample of youths after they completed a sexual offender treatment program operating in Western Australia. Treated Indigenous youth were found to be three times more likely to sexually reoffend than treated non-Indigenous youth (15.8% compared with 5%). Broadhurst and Maller (1992) used failure rate analysis to examine reincarceration rates amongst 560 adult sexual offenders in Western Australia, including 189 Aboriginal men. Overall probability rates for Aboriginal reincarceration for violent offences, including sexual offences, were .62 for Aboriginal sexual offenders compared with .21 for non-Aboriginal offenders. In a more recent study, Smallbone and Rallings (2013) used police arrest records to examine recidivism rates for Australian Indigenous and non-Indigenous adult sexual offenders. Arrest rates for sexual offences amongst Indigenous offenders were found to be more than twice that of their non-Indigenous peers. Indigenous offenders were significantly more likely to be arrested for violent (including sexual) offences (37% vs. 5.9%, $p < .001$), non-sexual violent offences (28.4% vs. 1.9%, $p < .001$), and for any offence (58.2% vs. 21.6%, $p < .001$).

These findings paint a bleak picture about the effectiveness of sexual offender treatment programs for reducing sexual, violent and non-violent offending by Indigenous people. In the absence of evidence about the critical elements of an effective treatment program, literature has emerged that describes clinical practice wisdom by industry practitioners and stakeholders. Typically this practice wisdom advocates the recognition of intergenerational trauma and cautions against ethnocentrism. For example, Funston (2013) summarises collective recommendations from a national two-day forum, including promoting cultural safety, through the integration of Aboriginal and Torres Strait Islander

worldviews into service provision, along with the development of collaborative service models involving whole families and communities. Others also recommend drawing on core Indigenous cultural values and principles, focused on re-establishing traditional responsibilities and priorities (Hovane, 2012; Jones et al., 2002; Willis & Moore, 2008). However, to date there is no empirical research testing whether these factors increase the effectiveness of sexual offender treatment programs for reducing recidivism by Indigenous people.

Clearly there is a need for theoretically-informed, evidence-based clinical practice models with demonstrated effectiveness, to serve as exemplars to reduce sexual offending by Indigenous youth. Given the acute risks and needs of many Indigenous offenders, particularly those in remote communities, such research should aim to improve practice and have the realistic aim of closing the gap on reoffending outcomes. As such, the aim of this article is to begin to address this gap by exploring whether treatment provided by Griffith Youth Forensic Service (GYFS) to youth who have been adjudicated for serious sexual offences has had a differential impact on recidivism based on the Indigenous cultural heritage of the youth and whether or not they resided in a remote community. After outlining the clinical practice model, an overview of the characteristics of the participants and approach that was used in the study to assess offending will be provided. The analytical strategy that was adopted will then be highlighted and recidivism outcomes for sexual, violent, and non-sexual and non-violent ('other') offending over a 2.5 year follow-up timeframe will be presented.

Method

Treatment model

GYFS provides specialised clinical forensic assessment and treatment services for adjudicated youth who have committed serious sexual offences. It is a state-wide service operating in Queensland, Australia – an area of some 1,727,000 square kilometres (about the size of Alaska). GYFS model is informed by an explicit theoretical model (see: Smallbone, Marshall, & Wortley, 2008) and a broad empirical base that integrates individual, ecological and situational levels of explanation, thereby promoting an understanding of each youth's sexual offending within the context of their development, natural ecosystem and the immediate offence environment (for recent reiterations, see: Smallbone & Cale, in press). Especially since 2006, GYFS clinical model has incorporated three core components (see: Smallbone et al., 2008; Smallbone & Rayment-McHugh, 2013; Smallbone, Rayment-McHugh, Crissman & Shumack, 2008; Smallbone, Rayment-McHugh & Smith, 2013; Smallbone, Crissman & Rayment-McHugh, 2009).

First, it is *field-based*, with clinicians travelling to wherever the young person and his family reside, including regional and remote locations. This aims to facilitate improved understanding of contextual factors, to improve the ecological validity of assessments and treatment, to improve the client's sense of comfort and support thereby improving engagement, and to facilitate equitable access to the service across the state. It also facilitates engagement with the community, enabling clinicians to connect with key stakeholders and service providers, and to obtain supervision regarding cultural considerations that may impact on treatment from local community members. This in turn increases the cultural awareness of the clinician and therefore the cultural appropriateness of assessments and treatment.

Second, it provides *individualised multisystemic assessment and treatment intervention* and prioritises high risk – high needs cases. GYFS clinicians undertake individualised, comprehensive assessments that integrate offence, offender and systemic assessment elements, and examine casual factors based on the model's theoretical and empirical base. For Indigenous youth, assessments also include information about their specific cultural heritage including their local language, cultural protocols, local culture lore, cultural values, beliefs and practices with respect to relationships, gender and sexuality, kinship relationships, and specific community and environmental considerations. A multisystemic case formulation is then developed to explain the offending behaviour, which in turn informs the development of an individualised treatment and risk management plan. All aspects of treatment are individualised and clinicians use evidence-based therapeutic interventions and where applicable tailor them to youth's specific cultural requirements. Third, *collaborative partnerships* are formed from within the youth's natural social ecology to ensure service continuity and enhance the cultural and ecological validity of treatment. This involves identification of a few key stakeholders who can directly contribute to the treatment plan through collaborative treatment services thereby promoting positive lasting outcomes.

Participants

Between January 2006 and November 2012, 219 adjudicated sexual offenders were referred to GYFS. Full assessments regarding suitability for treatment were undertaken for 164 offenders, with those who had higher levels of risks and needs and who resided in remote communities given precedence over those who had lower risk and needs and who resided in non-remote locations. Of these, 138 were assessed as suitable for and commenced

treatment and 112 had completed treatment by November 2012. Given the importance of offending outcomes after the completion of treatment for this study, several offenders were excluded because offending data were not available ($n=6$) or because they were female ($n=2$). Females were excluded because there were too few cases to examine separately, and because we were not confident that their circumstances were sufficiently similar to simply include them with their male counterparts. Bivariate analyses indicated that offenders who were excluded did not differ from those who were included in the study based on the age when they commenced treatment ($t(110)=-.93, p=.36$), whether they had Indigenous cultural heritage ($\chi^2(1, n=112)=.03, p=.87$), or whether they resided in a remote community ($\chi^2(1, n=112)=.1.04, p=.31$). After excluding these offenders, there were 104 participants in the study.

All participants were male and their average age was 16.01 years old ($SD=1.45$) when they commenced treatment. One-third (34.6%) were Indigenous Australians, and 11.5% resided in remote communities as classified on the Accessibility and Remoteness Index of Australia (ARIA, Commonwealth Department of Health and Aged Care, 2001). This index classifies locations based on the distance needed to travel to centres to access goods and services regarded as normal in metropolitan areas, with remote locations having very restricted access. Participants who resided in remote locations tended to be Indigenous (91.7%), while those residing in non-remote locations tended to be non-Indigenous (72.8%, $\chi^2(1, n=104)=.19.51, p<.001$). Indigenous participants ($M=16.58, SD=1.23$) were about one year older than non-Indigenous participants ($M=15.71, SD=1.47; t(102)=-3.06, p<.01$). Likewise, participants from remote communities ($M=17.17, SD=1.4$) were about one year older than participants from non-remote communities ($M=15.86, SD=1.39; t(102)=-3.07, p<.01$) at the commencement of treatment.

The duration of treatment for participants ranged widely from 77 to 1001 days ($M=435.8$ days, $SD=251.98$ days), reflecting the highly individualised approach to GYFS assessment and treatment. On average each participant received 18.82 hours ($SD=17.36$ hours) of individual therapy and 6.34 hours ($SD=8.59$) of family therapy. Therapists also devoted an average of 19.17 hours ($SD=22.43$) consulting with community members and other professionals to assist with the treatment and supervision of participants. There was no difference in the duration of treatment based on whether the participant had an Indigenous cultural heritage ($t(57.91)=-.61$, $p=.54$) or resided in a remote community ($t(12.46)=-1.83$, $p=.09$). Indigenous participants ($M=14.67$, $SD=11.74$) spent a similar number of hours participating in individual therapy as non-Indigenous participants ($M=21.00$, $SD=19.42$; $t(102)=1.79$, $p=.08$), and also spent a similar length of time in family therapy ($M=6.52$, $SD=8.88$; $M=6.25$, $SD=8.5$; $t(102)=-.15$, $p=.88$). Likewise, remote participants ($M=15.00$, $SD=14.87$) spent similar lengths of time participating in individual therapy as non-remote participants ($M=19.32$, $SD=17.66$; $t(102)=-.81$, $p=.42$), and they spent similar lengths of time in family therapy ($M=11.25$, $SD=12$; $M=5.7$, $SD=7.91$; $t(12.28)=-1.56$, $p=.15$). However, clinicians spent significantly more time consulting with community members and other professionals regarding Indigenous participants' treatment ($M=29.8$, $SD=31.56$; $M=13.55$, $SD=12.65$; $t(41.05)=-2.97$, $p<.01$) and remote participants' treatment ($M=51.08$, $SD=42.13$; $M=15.01$, $SD=14.24$; $t(11.33)=-2.94$, $p<.05$).

Offending

Information about the offending histories of all participants was obtained from the Queensland Police Service. The procedure used to obtain this information ensured the privacy of participants and involved the researchers compiling a list of department

identification numbers and forwarding them to the Department of Justice and Attorney General for re-identification (names, date of birth and gender). This information was then forwarded to the Queensland Police Service who searched through records that resulted in charges against participants. Unfortunately, the offending histories of six offenders for which information was requested could not be provided either because GYFS did not have the identification number, the Department of Justice and Attorney General could not re-identify the person based on the identification number, or because the Queensland Police Service could not locate any offences using the identification number.

The offending data variables included identification number, date/s of offences (start and finish), as well as 16 offence types and descriptions based on the Australian and New Zealand Standard Offence Classification (see: ABS, 2011). The 16 offence types were used to classify offences into three broad categories: sexual offence, violent offence, and non-sexual and non-violent (“other”) offence. *Sexual offences* included all offences that were of a sexual nature, such as sexual assault, rape, attempted rape, child pornography offences, wilful exposure, bestiality, indecent exposure and prostitution related offences. *Violent offences* included all offences where there was actual or threatened violence against the person with an element of intent, such as assault, abduction, robbery, extortion, going armed to cause fear, break and enter dwelling with violence or threats and homicide. *Other offences* included all remaining offences such as dangerous driving, theft, fraud, drug offences, property damage, break and enter and public order offences.

Three types of offences were excluded. Traffic and vehicle regulatory offences were excluded because these represent offences against the Traffic Act rather than Criminal Code (Allard et al., 2014). Community based order breach offences were excluded because they represent failure to comply with court imposed conditions rather than offending.

Miscellaneous offences were excluded because insufficient information was provided to classify these offences.

After classifying the offences into the three broad offence categories, the number of offences within each category was aggregated for each participant based on whether the offences occurred before the commencement or after the completion of treatment. The offence date that was used was either the only date specified, or the start date of the offence when both a start and finish date were specified. Treatment commencement and completion dates were obtained from the GYFS clinical database, and all but two participants only received one treatment episode. The second treatment commencement and completion dates were used for both of these participants because they had committed offences which pre-dated the initial treatment commencement date or because they had not completed the first treatment episode. After aggregating the offence based dataset, the dataset contained the number of sexual, violent and other offences committed by participants before the commencement and completion of treatment. These were converted into binary variables (No/Yes) and the number of days between the completion of treatment and the date that the police data were extracted (November 2012) was then calculated to assess follow-up time.

Prior to receiving treatment, all participants had committed a sexual offence ($M=2.25$, $SD=1.78$, range = 1 to 10), with 94.2% having committed a contact sexual offence (i.e., rape, sexual assault, indecent treatment of a child) and 9.6% having committed a non-contact offence (i.e., indecent/wilful exposure, child pornography). Two out of every five participants (39.4%) had also committed a violent offence ($M=1.06$, $SD=2.1$, range = 0 to 12) and almost three-quarters (72.1%) had committed an 'other' offence ($M=10.88$, $SD=19.18$, range = 0 to 104). On average, participants committed a total of 14.18 ($SD=20.05$, range = 1

to 106) offences before treatment commenced. Examination of differences in the proportion of participants who committed specific types of offences and the average number of offences committed prior to treatment indicated that Indigenous and remote participants had more extensive and more serious offending histories (Table 1).

Table 1: Offending history prior to treatment based on Indigenous cultural heritage and remoteness

	Indigenous Cultural Heritage				Residential location			
	Indigenous		Non-Indigenous		Remote Community		Non-Remote Community	
	N	%	N	%	N	%	N	%
Committed a violent offence	22	61.1	19	27.9 ¹	8	66.7	33	35.9 ¹
Committed an 'other' offence	33	91.7	42	61.8 ¹	12	100	63	68.5 ¹
	M	SD	M	SD	M	SD	M	SD
Number of sexual offences	1.92	1.27	2.43	1.99	1.83	.84	2.3	1.87
Number of violent offences	1.89	2.62	.62	1.63 ²	2.42	3.42	.88	1.82
Number of 'other' offences	21.22	24.64	5.4	12.67 ²	40.58	29.34	7	13.45 ²
Total offences	25.03	25.74	8.44	13.23 ²	44.83	31.44	10.18	44.83 ²

¹ χ^2 indicated significant difference in proportions, $p < .05$

² t -test indicated significant difference in means, $p < .05$

Overall, the length of time between the treatment completion date and date of extraction ranged from five to 2045 days and averaged 2.5 years ($M=920.31$ days, $SD=564.2$ days). There was no statistically significant difference in the length of follow-up time after treatment completion based on Indigenous cultural heritage or remoteness. The follow-up time for Indigenous participants was 2.4 years ($M=879.17$ days, $SD=512.99$ days) and for non-Indigenous participants was 2.6 years ($M=942.09$ days, $SD=592.04$ days). The follow-up

time for participants residing in remote communities was 2.2 years ($M=817.17$ days, $SD=410.34$ days) and was 2.6 years for those residing in non-remote communities ($M=933.76$ days, $SD=581.69$ days).

Analytic Strategy

The analytic strategy involved two stages. First, bivariate chi-square analyses were conducted to determine whether Indigenous cultural heritage (Indigenous vs non-Indigenous) and remoteness (remote vs non-remote) were related to sexual, violent, and 'other' offending status (Yes/No). Offending status took into account any offending that occurred between the completion of treatment and the date when the offending data were extracted. A power analysis was conducted to determine the sample size needed assuming a power level of .80, alpha level of 0.05 and a moderate effect size of .30 between the groups. Given prior findings indicating large group differences between Indigenous and non-Indigenous peoples on offending outcomes, a moderate effect size was considered appropriate for this power analysis. Based on these criteria, it was determined that a sample size of 88 was required to reach the specified power level, which was attained given the current sample size of 104.

Second, follow-up time was taken into account and the independent contribution of Indigenous cultural heritage and remoteness were explored using three logistic regression analyses. The independent variables in the analyses were Indigenous cultural heritage and remoteness while the dependent variables were sexual, violent and other offending status (No/Yes). One covariate was included in the analyses: the number of days between treatment completion and when the recidivism data were extracted (follow-up time). This covariate was included on conceptual grounds as the literature consistently finds a positive

relationship between the length of follow-up time and likelihood of reoffending (e.g., Worling, Litteljohn & Bookalam, 2010). Statistical analyses also indicated that those who committed a sexual, violent, or 'other' offence had a longer follow-up time than those that did not commit a sexual, violent, or 'other' offence after treatment ($t(7.15)=-9.08, p<.001$; $t(102)=-2.07, p<.05$; $t(78.46)=-2.67, p<.01$). Other possible covariates were not included because they could mask the impact of Indigenous cultural heritage and remoteness on treatment effectiveness.

Results

Bivariate analyses indicated that there were no differences in the proportion of youth who sexually reoffended after completing treatment based on Indigenous cultural heritage or remoteness (Table 2). Few participants sexually reoffended during the 2.5 year follow-up timeframe and GYFS treatment appears to be quite effective for Indigenous and remote participants. Only one (out of 36) Indigenous and zero (out of 12) remote participants sexually reoffended after completing treatment. However, Indigenous participants were 2.1 times more likely to violently offend and 1.7 times more likely to commit an 'other' offence than non-Indigenous participants after treatment completion. Additionally, remote participants were almost twice as likely as non-remote participants to have committed an 'other' offence after completing treatment. Therefore, while follow-up time was not controlled for, these findings suggest that GYFS treatment was equally effective for Indigenous and non-Indigenous participants and for remote and non-remote participants in reducing sexual recidivism, which is the primary focus of the program. However, Indigenous and remote participants were more likely to have committed a violent or 'other' offence after completing treatment than non-Indigenous and non-remote participants.

Table 2: Proportions reoffending after treatment completion based on Indigenous cultural heritage and remoteness

	Indigenous Cultural Heritage				Residential location			
	Indigenous		Non-Indigenous		Remote Community		Non-Remote Community	
	N	%	N	%	N	%	N	%
Sexually reoffended	1	2.8	2	2.9	0	0	3	3.3
Violently reoffended	12	33.3	11	16.2 ¹	3	25	20	21.7
Committed an 'other' offence	29	80.6	32	47.1 ¹	12	100	49	53.3 ¹

¹ χ^2 indicated significant difference in proportions, $p < .05$

The first logistic regression model assessing the impact of Indigenous cultural heritage and residential location on sexual recidivism status and which took follow-up time into account was not statistically significant ($\chi^2(3, n=104)=5.97, p=.11$). Thus, neither Indigenous cultural heritage nor remoteness were able to distinguish between participants who did and did not sexually reoffend after completing treatment. This suggests that GYFS treatment is equally effective for Indigenous and non-Indigenous participants and for remote and non-remote participants.

The second and third logistic regression models exploring the impact of Indigenous cultural heritage and remoteness on violent ($\chi^2(3, n=104)=9.19, p<.05$) and 'other' ($\chi^2(3, n=104)=28.86, p<.001$) recidivism status were statistically significant, indicating that the variables in the models did distinguish between those who did and did not commit a violent or 'other' offence after treatment completion. The proportion of variance explained by the predictors was between 8.5% and 13% for violent offending status (81.7% of cases correctly

classified), and 24.2% and 32.6% for 'other' offending status (68.3% of cases correctly classified).

As indicated in Table 3, Indigenous cultural heritage made a unique statistically significant contribution to both the second and third models. The odds ratios indicate that Indigenous participants were 3.31 times more likely than non-Indigenous participants to offend violently and 3.53 times more likely to have committed an 'other' offence after completing treatment, controlling for all other factors in the models. Remoteness did not make a unique statistically significant contribution to either model. That is, whether or not an individual resided in a remote community was not related to whether or not they committed a violent or 'other' offence.

Table 3: Impact of predictors on the likelihood of violent and non-sexual and non-violent offending after treatment completion

Model and predictor ¹	B	S.E.	Wald	Df	Sig	Odds Ratio	95% C.I for	
							Odds Ratio	
							Lower	Upper
<i>Likelihood of violent offending post-treatment</i>								
Indigenous cultural heritage	1.19	.54	4.77	1	.03	3.31	1.13	9.69
Remoteness	-.38	.79	.23	1	.63	.68	.14	3.25
Follow-up time	.00	.00	4.61	1	.03	1.00	1.00	1.00
Constant	-2.68	.63	17.88	1	.00	.06		
<i>Likelihood of 'other' offending post-treatment</i>								
Indigenous cultural heritage	1.26	.53	5.47	1	.01	3.53	1.22	10.13
Remoteness	20.49	11235.49	.00	1	.99	793767953.82	.00	.
Follow-up time	.00	.00	8.93	1	.00	1.00	1.00	1.00
Constant	-1.33	.47	7.78	1	.00	.26		

¹Shaded equals significant

Discussion

The present study was conducted to explore whether GYFS treatment for adjudicated youth sexual offenders had a differential impact on recidivism for two subgroups: those with and without Indigenous cultural heritage and those residing in remote and non-remote communities. Findings indicated that neither Indigenous cultural heritage nor remoteness helped to distinguish between those who did and did not sexually reoffend after receiving treatment. This was achieved with the groups receiving treatment for similar durations and spending similar lengths of time in individual and family therapy.

Therefore, the GYFS treatment model may be viewed as ‘closing the gap’ on sexual recidivism outcomes for Indigenous and non-Indigenous adolescents and for remote and non-remote youth. This finding is very encouraging given the more acute risks and needs of Indigenous people, particularly for those living in remote communities (Jones et al., 2002). This finding is in contrast to previous findings from Canada and Western Australia, where Indigenous youth were 2.8 and 3 times more likely to be charged with a sexual offence after receiving treatment than non-Indigenous youth (Allan et al., 2003; Rojas & Gretton, 2007). It is also inconsistent with the findings from studies conducted with adults, where Indigenous sexual offenders were found to be 3 and 6.3 times more likely to have been arrested or re-incarcerated for a further sexual offence (Broadhurst & Maller, 1992; Smallbone & Rallings, 2013).

GYFS treatment model therefore appears to be an effective tertiary prevention approach that is well suited for Indigenous offenders and remote contexts. While it is difficult to know what accounted for prior findings indicating that treatment was far less effective for Indigenous than non-Indigenous sexual offenders because programs have not been adequately described, we speculate that there are three ‘active ingredients’ in the GYFS model. The *field-based nature* of the service ensures more equitable access to treatment, and with the formation of *collaborative partnerships*, may enhance assessments, the provision of treatment and the responsivity of the client and their family. The longer periods of time spent consulting with community members and other professionals for Indigenous and remote clients therefore appears to be a fruitful approach for reducing recidivism. Additionally, *the individualised multisystemic assessment and treatment approach* that integrates individual, ecological and situational explanations enables the wide ranging causes of sexual offending to be assessed and targeted in treatment. Program

administrators, managers and practitioners who are interested in reducing recidivism by Indigenous offenders and those residing in remote communities that do not currently incorporate these 'active ingredients' into their programs should consider their transferability. The incorporation of these 'active ingredients' into existing programs that do not have them may help others to 'close the gap' on sexual recidivism outcomes and would also facilitate further evaluations to be conducted to determine their impact on recidivism for other Indigenous and remote populations.

GYFS treatment did not appear to be as effective for 'closing the gap' on violent and 'other' recidivism by Indigenous and non-Indigenous participants. Indigenous participants were found to be 3.31 times more likely than non-Indigenous participants to have committed a violent offence after treatment, and were 3.53 times more likely to have committed an 'other' offence. These findings are consistent with previous research which reported that treated Indigenous Canadian youth sexual offenders were 3.3 times more likely to commit a violent offence and 3.2 times more likely to commit a non-violent offence after receiving treatment (Rojas & Gretton, 2007). The inability of GYFS treatment to produce similar outcomes for violent and 'other' offences may reflect the fact that Indigenous and remote clients were more likely to have committed these offence types prior to treatment. This finding may also reflect the fact that sexual recidivism was the primary focus of the multisystemic assessment and treatment approach, rather than other offence types. Broadening the focus of specialised sexual offender treatment programs to incorporate other offending behaviours may improve this outcome, particularly in cases where violent offences were committed prior to treatment commencement. However, the impact of this on sexual recidivism outcomes is unclear and would need to be considered.

Despite the importance of this study, the findings should be read in light of four main limitations that relate to the offending data. First, the study assessed recidivism based on whether participants had been 'charged' by police. While this measure of recidivism is more sensitive and will result in a larger number of offences being detected than other official measures that have been used in previous recidivism studies (i.e., convictions and reincarceration), offences that do not come to the attention of police or are not attributed to an offender are not included. Second, the study assessed charges within the Queensland jurisdiction. While an attempt was made to identify youth who had moved jurisdiction through discussions with clinicians, there is always the possibility of attrition from the sample by participants moving jurisdiction. Third, the study did not have access to the data necessary to determine whether participants had been in detention or incarcerated and therefore could not control for exposure time or time-at-risk. However, detention is used infrequently in Queensland in the sentencing of youth and those who are detained generally serve short periods of less than six months (Stewart et al., 2004). Fourth, recidivism could only be assessed for an average 2.5 years follow-up timeframe. While many adolescent offenders who go on to reoffend do so within 12 months, longer follow-up times result in higher levels of reoffending (Stewart, Allard, Gray & Ogilvie, 2007). It is important, however, to note that long follow-up periods may result in only marginal increases in recidivism for youth sexual offenders (see e.g., Worling, et al., 2010).

Additional research is needed that assesses the impact of treatment programs for these and other subgroups of youth sexual offenders. Exploring treatment effectiveness on this basis will facilitate the development of an evidence base about 'what works, for which offenders, in which circumstances' to reduce offending by specific offender sub-populations and thus contribute to the ongoing improvement of existing programs. The development

and evolution of this body of knowledge is particularly important given that Indigenous people, and especially those who reside in remote communities, tend to have more acute risks and needs and worse offending outcomes. These groups have historically been poorly served by offender rehabilitation services, which instead have tended to be, and continue to be, centralised in major urban areas. The development of this body of knowledge is also important to reduce the over-reliance by many clinicians clinical practice wisdom rather than evidence to inform treatment.

In sum, this study explored whether GYFS treatment had a differential impact on recidivism based on Indigenous cultural heritage and whether the participant resided in a remote community. Findings indicated that GYFS treatment was equally effective for reducing sexual reoffending by Indigenous and non-Indigenous youth and for reducing sexual, violent and 'other' reoffending by youth residing in remote and non-remote locations. These findings are significant given that other treatment programs have not been able to demonstrate similar outcomes. Indeed it is rare in Australia to find evidence for programs that 'close the gap' in social outcomes between Indigenous and non-Indigenous people, including offenders. The present findings provide support for the three main components of the GYFS treatment model: that it is field-based; provides individualised multisystemic assessment and treatment intervention; and involves the formation of local collaborative partnerships.

Acknowledgements

This research was supported by funding from the Australian Research Council (DP110102126). The authors also thank and acknowledge the funding provided by the Queensland Department of Justice and Attorney General (DJAG) for the Griffith Youth Forensic Service (GYFS) clinical treatment program, as well as the Queensland Police Service (QPS) and DJAG for their in-kind support of this research. The views expressed are the responsibility of the authors and are not necessarily those of the ARC, DJAG, or QPS.

References

- ABS. (2011). *Australian and New Zealand Standard Offence Classification (ANZSOC) Australia* (3rd ed.). Canberra: ABS.
- AIHW (Australian Institute of Health and Welfare). (2011). *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander People*. Canberra: AIHW.
- Al-Yaman, F., Doeland, M., & Wallis, M. (2006). *Family Violence among Aboriginal and Torres Strait Islander Peoples*. Canberra: AIHW.
- Allan, A., Allan, M.M., Marshall, P., & Kraszlan, K. (2003). Recidivism among male juvenile sexual offenders in Western Australia. *Psychiatry, Psychology and Law*, 10,2, 359-378.
- Allard, T. (2010). *Understanding and Preventing Indigenous Offending*. Indigenous Justice Clearinghouse, National Justice CEOs Group.
- Allard, T., Stewart, A., Smith, C., Dennison, S., Chrzanowski, C., & Thompson, C. (2014). The monetary cost of offender trajectories: Findings from Queensland (Australia). *Australian and New Zealand Journal of Criminology*, 47, 81-101.
- Andrews, D.A., Bonta, J., & Hoge, R.D (1990). Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behaviour*, 17, 19-52.
- Berry, J., Harrison, J., & Philip, R. (2009). Hospital admissions of Indigenous and non-Indigenous Australians due to interpersonal violence, July 1999 to June 2004. *Australian and New Zealand Journal of Public Health*, 33, 215-222.
- Bonta, J. (1989). Devalued people: The status of the metis in the justice system. *Canadian Journal of Native Studies*, 9, 121-150.

- Bonta, J., LaPrairie, C., & Wallace-Capretta, S. (1997). Risk prediction and re-offending: Aboriginal and non-aboriginal offenders. *Canadian Journal of Criminology*, 39, 127-144.
- Bonta, J., Lipinski, S., & Martin, M. (1992). Native inmates: Institutional response, risk, and needs. *Canadian Journal of Criminology*, 31, 49-62.
- Broadhurst, R.G., & Maller, R.A. (1992). The recidivism of sex offenders in the Western Australian prison population. *British Journal of Criminology*, 32, 154-80.
- Caldwell, M.F. (2010). Study characteristics and recidivism base-rates in juvenile sex offender recidivism. *International Journal of Offender Therapy and Comparative Criminology*, 54, 197-212.
- Carpentier, J., & Proulx, J. (2011). Correlates of recidivism among adolescents who have sexually offended. *Sexual Abuse: A Journal of Research and Treatment*, 23, 434-455.
- Commonwealth Department of Health and Aged Care. (2001). *Measuring Remoteness: Accessibility/remoteness Index of Australia (Revised Edition)*. Canberra: Commonwealth Department of Health and Aged Care.
- Day, A. (2003). Reducing the risk of re-offending in Australian Indigenous offenders: What works for whom? *Journal of Offender Rehabilitation*, 37, 1-15.
- Dodson, M., & Hunter, B. (2006). Selected crime and justice issues for Indigenous families. *Family Matters*, 75, 34-41.
- Funston, L. (2013). Aboriginal and Torres Strait Islander Worldviews and Cultural Safety Transforming Sexual Assault Service Provision for Children and Young People. *International Journal of Environmental Research and Public Health*, 10, 3818-3833.

Graffam, J., & Shinkfield, A. (2012). *Strategies to Enhance Employment of Indigenous Ex-offenders after Release from Correctional Institutions*. Closing the Gap

Clearinghouse: Australian Government.

Hovane, V. (2012). Cultural insights provide guidance on Aboriginal child sexual abuse. *InPsych: The Bulletin of the Australian Psychological Society Limited*, October, 30-31.

Hunter, B. H. (2001). *Factors Underlying Indigenous Arrests Rates*. Sydney: New South Wales Bureau of Crime Statistics and Research.

Jones, R., Masters, M., Griffiths, A., & Moulday, N. (2002). Culturally relevant assessment for Indigenous offenders: A literature Review. *Australian Psychologist*, 37, 187-197.

Memmot, P., Stacy, R., Chambers, C., & Keys, C. (2000). *Violence in Indigenous Communities. Full Report*. Canberra: Attorney-General's Department.

Payne, J., & Dearden, J. (2009). *Alcohol and homicide in Australia*. Trends and Issues in Crime and Criminal Justice, no. 372. Canberra: Australian Institute of Criminology.

Putt, J., Payne, J., & Milner, L. (2005). *Indigenous Male Offending and Substance Abuse*. Trends and Issues in Crime and Criminal Justice, no. 293. Canberra: Australian Institute of Criminology.

Reitzel, L.R., & Carbonell, J.L. (2006). The effectiveness of sexual offender treatment for juveniles as measured by recidivism: A meta-analysis. *Sexual Abuse: A Journal of Research and Treatment*, 18, 401-421.

Rojas, E.Y., & Gretton, H.M. (2007). Background, offence characteristics and criminal outcomes for Aboriginal youth who sexually offend: A closer look at Aboriginal youth intervention needs. *Sex Abuse*, 19, 257-283.

Smallbone, S., & Cale, J. (in-press). An integrated life course developmental theory of sexual offending. In A. Blockland & P. Lussier (Eds.). *Sex offenders: A criminal careers approach*. New York: Wiley.

Smallbone, S., & Rallings, M. (2013). Short-Term Predictive Validity of the Static-99 and Static-99-R for Indigenous and Nonindigenous Australian Sexual Offenders. *Sexual Abuse*, 25, 302-316.

Smallbone, S., Marshall, W.L., & Wortley, R. (2008). *Preventing child sexual abuse: Evidence, policy and practice*. Cullompton, Devon: Willan Publishing.

Smallbone, S., & Rayment-McHugh, S. (2013). Preventing youth sexual violence and abuse: Problems and solutions in the Australian context. *Australian Psychologist*, 48, 3-13

Smallbone, S., Rayment-McHugh, S., Crissman, B., & Shumack, D. (2008). Treatment with youth who have committed sexual offences: Extending the reach of systemic interventions through collaborative partnerships. *Clinical Psychologist*, 12, 109-116.

Smallbone, S., Rayment-McHugh, S., & Smith, D. (2013). Youth sexual offending: Context, good-enough lives and engaging with the wider prevention agenda. *International Journal of Behavioural Consultation and Therapy*, 8, 54-60.

Smallbone, S., Crissman, B., & Rayment-McHugh, S. (2009). Improving therapeutic engagement with adolescent sexual offenders. *Behavioral Sciences and the Law*, 27, 862-877.

Steering Committee for the Review of Government Service Provision. (2011). *Overcoming Indigenous Disadvantage: Key Indicators 2011*. Canberra: Steering Committee for the Review of Government Service Provision.

- Stewart, A., Allard, T., Gray, B., & Ogilvie, J. (2007). *Understand Initiation of Offending and Recidivism Across the Juvenile and Adult Justice System*. Report for Department of Communities.
- Stewart, A., Spencer, N., O'Connor, I., Palk, G., Livingston, M., & Allard, T. (2004). *Juvenile Justice Simulation Model: A Report on the Australian Research Council Strategic Partnerships with Industry Research and Training Grant No: C00106983*.
- Tilley, N., Rayment-McHugh, S., Smallbone, S., Wardell, M., Smith, D., Allard, T., Wortley, R., Findlater, D., Stewart, A., & Homel, R. (2014). On being realistic about reducing the prevalence and impacts of youth sexual violence and abuse in two Australian Indigenous communities. *Learning Communities: International Journal of Learning in Social Contexts*, 14, 6-27.
- Walker, D.F., McGovern, S.K., Poey, E.L., & Otis, K.E. (2004). Treatment effectiveness for male adolescent sexual offenders: A meta-analysis and review. *Journal of Child Sexual Abuse*, 13, 281-293.
- Weatherburn, D., Snowball, L., & Hunter, B. H. (2006). *The Economic and Social Factors Underpinning Indigenous Contact with the Justice System: Results from the 2002 NATSISS Survey*. Crime and Justice Bulletin, no. 104. New South Wales: Bureau of Crime Statistics and Research.
- Weatherburn, D., Snowball, L., & Hunter, B. (2008). Predictors of Indigenous Arrest: An Exploratory Study. *Australian and New Zealand Journal of Criminology*, 41, 307-322.
- Willis, M., & Moore, J. (2008). *Reintegration of Indigenous Prisoners*. Canberra: Australian Institute of Criminology.

Worling, J.R., & Curwen, T. (2000). Adolescent sexual offender recidivism: Success of specialised treatment and implications for risk predictions. *Child Abuse and Neglect*, 24, 965-982.

Worling, J.R., Littlejohn, A., & Bookalam, D. (2010). 20-Year prospective follow-up study of specialized treatment for adolescents who offended sexually. *Behavioural Sciences and the Law*, 28, 46-57.

Zubrick, S.R., Lawrence, D.M., Silburn, S.R., Blair, E., & Milroy, H. (2004). *The Western Australian Aboriginal Child Health Survey: The Health of Aboriginal Children and Young People*. Perth: Telethon Institute for Child Health Research.