

YOUTH SEX OFFENDING, RECIDIVISM, AND RESTORATIVE JUSTICE

Comparing Court and Conference Cases

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Abstract. We analyse re-offending for 365 youths charged with sexual offences, whose cases were finalised in court, by conference, and by formal caution. The unadjusted rate of sexual re-offending was 9 per cent, and general re-offending, 54 per cent. Conference youth were significantly slower to re-offend than court youth, but only those with no previous offending; referral to a specialist youth sex offender programme significantly reduced the time to re-offend, but only for those with no previous offending. The enmeshment of key factors—previous offending, early admissions, offence types, and legal and therapeutic responses—sets youth along distinctive legal pathways, making it difficult to compare the independent ‘effects’ of court and conference on re-offending.

Keywords: youth sex offending, recidivism, restorative justice, legal pathways

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YOUTH SEX OFFENDING, RECIDIVISM, AND RESTORATIVE JUSTICE

Comparing Court and Conference Cases

Considerable debate surrounds the use of restorative justice in sexual assault and other types of gendered violence (Author/s 2006, 2008; Cossins 2008; Hudson 1998, 2002; McAlinden 2007, 2008). The focus is on the potential negative effects of conferences on victims, but less is known about their impact on offenders. In this paper, we analyse re-offending outcomes for 365 youths who were charged with sex offences and whose cases were finalised in court, by conference, and by formal caution. The dataset contains all youth cases, which were proceeded with by the police during a 6½ year period in South Australia (1995-2001).

Our analyses examine rates of sexual and general re-offending, whether these rates vary by site of finalisation, the impact of a specialist youth sex offending programme, and other factors. A preliminary analysis of this dataset, using a regression analysis, found that the site of disposition (court or conference) was not related to re-offending, but a youth's referral to a specialist programme was significantly associated with reduced re-offending (Author/s 2006). We explore these preliminary results in far greater depth, by including more detail on the patterns of sexual offending, ages of victims, and victim-offender relations, and by using more sophisticated statistical procedures that take into account different follow-up periods.

Our study is important in three respects. First, it is the first quantitative analysis of sex offences, restorative justice practices, and re-offending. Second, we are analysing a larger range of seriousness of youth sex offending than one normally sees in the literature, which often centres on youths in detention or treatment programmes. Third, we can investigate the influences of restorative justice and a specialist youth therapeutic programme on patterns of re-offending.

Youth Sex Offending, Recidivism, and Restorative Justice

Two bodies of research are relevant to this study: youth sex offending and recidivism, and restorative justice and recidivism. Each is constituted in a vast field of knowledge on offending, legal or programme interventions, and post-intervention offending. Analysing recidivism and comparing results of treatment and control groups face many hurdles, among them: reliance on official police and court data; varied definitions of recidivism (ranging from arrest to incarceration); different ways of measuring recidivism (i.e., prevalence of offenders or incidence of crime); different lengths of time after legal or programme intervention and when to start the clock; different research designs (e.g., field experiments, matching procedures, or other ways of identifying control groups); different participant characteristics (e.g., youth or adults); and different characteristics of programmes or interventions (see Hayes 2007; Soothill 2010). This is one reason why meta-analyses, rather than narrative reviews of the literature, have become a preferred approach to summarising findings (Bonta *et al.* 2006: 109-110), although they are not without problems (Pratt 2010). We turn first to the youth sex offending literature, which examines rates of general and sexual re-offending, continuity of youth sex offending into adulthood, factors associated with sexual re-offending, and effectiveness of specialised treatment. The concerns of this literature differ from those in the restorative justice and recidivism literature, which seeks to determine if restorative justice reduces re-offending to a greater degree than conventional criminal justice (court) responses. With some exceptions (e.g., Shapland *et al.* 2008; Sherman and Strang 2007), relatively little attention is paid to types of offences and re-offending.

Youth sex offending, recidivism, and specialisation

Up until the 1980s, youth sex offending was viewed as a harmless form of male sexual 'experimentation' (Martin and Kline Pruett 1998: 283),¹ but this changed from the early 1990s, first

¹ With a few exceptions (Zimring, Piquero, and Jennings 2007; Zimring *et al.* 2009), all studies assume or focus on male sex offending and recidivism.

in the United States, and then in the United Kingdom and Canada, when youths were swept up within the adult criminal justice policy net of sex offender registration and notification (SORN) requirements. Despite a lack of evidence, legislators believed that youth sex offenders posed a serious predatory risk to the community (Brownlie 2003; Miner 2007; Zimring 2004). Such beliefs assume that youths arrested and convicted of sexual offences are a special 'type' of offenders, and that there is continuity from youth to adult sex offending. Today, most argue that these assumptions are wrong (Letourneau and Miner 2005). Instead, youth sex offending is part of a general pattern of antisocial behaviour, subsequent offending is more likely to be non-sexual than sexual, and there is no link between youth and adult sex offending (see, e.g., Caldwell 2007; Nisbet, Wilson, and Smallbone 2004; Rasmussen 1999; Zimring 2004; Zimring *et al.* 2007, 2009).² The youth sex offending literature has moved past the first phase ('boys will be boys') and has begun to move past the second phase (a 'special class of delinquent' or 'adult sex offender in the making') into a third phase, which challenges both.

Estimating recidivism and assessing specialisation

Many factors affect estimates of recidivism. Among them are precise records of all events of interest, especially the first; different recidivism measures (subsequent arrest, charge, conviction, or imprisonment); origin of the sample (community or institutionalised); censoring of data due to calculations based on a fixed cut-off date for following cases and the related problem of different lengths of follow-up time; and different types and severity of offences. We might expect to see a higher rate of recidivism if arrest is the measure, rather than conviction; and it has been shown that higher recidivism rates are more often found in institutional than community samples of youth, and in studies with longer follow-up periods.

² A meta-analysis by Seto and Lalumière (2010) of 59 studies takes this view a step further. They examined behavioural, psychological, personality, and other socio-metric factors associated with the 'general delinquency' and 'special' explanations of youth sex offenders. They found that youth sex and non-sex offenders were no different along most factors assessed, but there were some factors associated with the 'special' offending explanation that differentiated the groups (e.g., having 'atypical sexual interests' and a history of sexual abuse). Thus, they concluded that the general delinquency explanation for youth sex offenders needs some modification to include these elements.

We assembled the findings from three meta-analyses and four reviews of the literature on youth sex offending: Caldwell (2002), Fortune and Lambie (2006), McCann and Lussier (2008), Parks and Bard (2006), Reitzel and Carbonell (2006), Rombouts (2005), and Worling and Långström (2006). (Due to the journal's space limitations, the summary table is available from the authors.) Here are the key points.

The average rate of sexual recidivism ranges from 7 to 14 per cent. Where it is possible to compare, recidivism rates are higher when re-conviction is the measure (9 to 14 per cent), rather than re-arrest (7 to 10 per cent).³ By comparison, the average rate for all types of re-offending, both sexual and non-sexual, ranges from 32 to 53 per cent. For two studies that compute it, the rate of non-sexual re-offending ranges from 25 to 39 percent. For factors associated with sexual re-offending, there is no consistent relationship for victims' ages. For victim sex, victim-offender relationships, and type of offence, Caldwell (2002) and McCann and Lussier (2008) found that youths who offended against male victims were more likely to re-offend sexually than those who offended against female victims. Caldwell (2002), McCann and Lussier (2008), Rombouts (2005), and Worling and Långström (2006) found that youths who committed 'hands off' and exhibitionism offences (typically against strangers) were more likely to sexually re-offend. McCann and Lussier (2008) and Rombouts (2005) reported that prior general offending was associated with sexual re-offending, but Worling and Långström (2006) concluded the opposite, saying that a history of non-sexual offending was not related to sexual re-offending.

Effectiveness of specialised treatment

Since the mid 1990s, with heightened concerns of the potential risks posed to the community by youthful offenders, sexual offender treatment/therapeutic programmes have proliferated. Reitzel and Carbonell's (2006) meta-analysis of nine studies found a lower sexual re-offending rate for the

³ Although this seems counter-intuitive, Caldwell (2002) has suggested it may occur because re-conviction is more often used as a measure in samples of institutionalised youth, who may not only have a higher likelihood of re-offending, but are more likely to be prosecuted and convicted.

treated group (7 per cent) than for the untreated group (19 per cent). However, they warned that the studies reviewed contain methodological flaws; for example, they may not specify the numbers of youth who refused to attend treatment or dropped out, and they may not indicate the selection criteria for referral to treatment. This latter point is important: as Furby, Weinrott, and Blackshaw (1989) suggest, youths may be referred to treatment because they are amenable to it; as a consequence, they are less likely to re-offend. Letourneau and Bourdin's (2008) and Miner's (2010) reviews of the literature found little support for the dominant treatment modality of cognitive-behavioural group treatment (CBT). More promising, they believe, is multisystemic therapy (MST), an individualised approach that addresses many influences in a youth's life (e.g., behavioural problems, family and peer relations, and school performance), which can be modified to deal with the dynamics of youth sex offending (e.g., youth and parental denial of offending, safety for victims, atypical sexual interests) (see Letourneau *et al.* 2009; Seto and LaLumière 2010: 42).

Restorative justice, conferencing, and recidivism

Varied practices and legal contexts are associated with restorative justice. Our research focuses on youth justice conferences as diversion from court; thus, we briefly describe the process and the aspects specific to the site of our analysis, South Australia. Conferences are meetings between offenders, victims, and their supporters and other relevant participants; they are set in motion by police or court referral after an offender has admitted to an offence. Emphasis is placed on an open exchange of information by those in the room about why the offence came about and its impact. Guided by a facilitator, with a police officer present, the group discusses and agrees on an outcome. In South Australia, as elsewhere for youth diversionary conferences, if the youth participates and completes the agreement, there is no conviction recorded. In South Australia, the Mary Street Adolescent Sexual Abuse Prevention Programme (hereafter 'Mary Street') plays an important role in these cases. Youth come into Mary Street in a variety of ways: by self-referral with no police

involvement or at the suggestion of the police, and by referral by a family conference team coordinator or by a youth court magistrate. For cases with Mary Street involvement, the counsellor will also attend the conference. The length of time a youth participates in Mary Street is typically 12 months.

The Mary Street model differs from other models of community-based treatment (CBT, MST, and many others). It is based on Alan Jenkins' (1990, 2009) synthesis of selected theories of Foucault and Deleuze on abusive behaviour in the context of power relations, and it is influenced by Narrative Therapy practices. It takes an 'invitational approach' to assist youths to develop ethical strivings and a sense of accountability for their actions, but in the broader context of family and community relationships. Emphasis is also placed on maintaining the ethical practices of therapists and avoiding a reproduction of violence in the therapeutic relationship.⁴

For conferencing and re-offending, Braithwaite (1995) has given these reasons for why conferences should have greater crime reduction potential compared to court processes. He argues that 'all social processes of expressing disapproval that have the intention or effect of involving remorse' in an offender are a 'more effective deterrent to crime than formal punishment' (p. 191). Such processes, which must be reintegrative not stigmatizing, accomplish 'moral education' about what is right and wrong, and set in motion both self and social disapproval.

Reviewing the research on restorative justice and recidivism, Bonta *et al.* (2006) conducted a meta-analysis of 39 studies. Most were of 'low-risk, male, Caucasian youth' (p. 114). Risk was defined as a low or high likelihood of re-offending, which is indicated by a person's level of 'criminogenic needs' (e.g., substance abuse, anti-social attitudes, family factors, among others). Different types of reputedly restorative justice practices were analysed, including victim-offender mediation, community service, family group conferences, and community forums. Overall, Bonta

⁴ Jenkins (2010, personal communication) provided this summary of the ideas behind Mary Street, which is also called 'Invitational Family and Community Practice'.

et al. found an average effect size of .07.⁵ Those who participated in restorative justice practices were, on average, seven percentage points less likely to re-offend than those in the control groups. Effect sizes were higher with low-risk offenders (effect size .08) compared to high-risk offenders (-.01). Bonta *et al.* concluded that low-risk offenders are easier to reintegrate, but high-risk offenders require ‘appropriate treatment programming’, along with restorative justice, for potential reductions in re-offending (p. 116).

Several points must be made about this literature. First, average effect sizes mask considerable variation, which arises from participant characteristics, types of interventions, offences, practice contexts, degree of staff training, whether there are additional treatment programmes that are available to the right people, among many others. Second, self-selection bias may inflate the ‘treatment’ effect, but Latimer, Dowden, and Muise (2005: 139) have suggested that this is ‘an inherent problem’ because ‘it is not possible to truly randomly assign participants to treatment and control conditions’. Forcing an offender to participate in a restorative justice process goes against the idea of voluntary participation, and more generally, the tenets of restorative justice itself. Others have noted this problem, suggesting that those who wish to participate in restorative justice are more motivated than other offenders (see, e.g., McCold 2008).

Third, we know little about how offence types may relate to restorative justice in youth cases, but the Re-Integrative Shaming Experiments (RISE) project in Canberra, which randomly assigned eligible cases to court and police-led conference, sheds some light on the matter. Reductions in re-offending were found for the violent crime cases (assaults, fighting, possession of weapon) assigned to conference compared to court, but not for the other offence types studied (drink driving, shoplifting, and other property offences). Fourth, it is unrealistic to think that an ‘intervention’ of 60 to 90 minutes would translate into major changes in offenders’ behaviours. Further, Robinson and Shapland (2008: 352) have proposed that we should not view restorative

⁵ Effect size is calculated as a phi coefficient, which is the correlation coefficient derived from dichotomous data. Latimer *et al.*’s (2005) meta-analysis of 32 recidivism studies reached the same conclusion as Bonta *et al.* (2006): an average effect size of .07.

justice as an “intervention”—something which is “done to” offenders’. Rather, it should be viewed as an opportunity to ‘facilitate ... or consolidate a decision [by an offender] to desist’. Finally, sample sizes need to be large to achieve statistical significant effects. Shapland *et al.* (2008: 9) have estimated that the size of experimental and control groups in the Justice Research Consortium (JRC) studies needed to be 390 in each group for a 10 percent difference in re-conviction to be statistically significant at the .05 level. At the same time, large sample sizes may be associated with a ‘mass production’ of restorative justice activities, which may reduce their recidivism potential (McCold 2008: 103).

In sum, there is a degree of indeterminacy and circularity in assessing the relatively greater crime reduction effects of restorative justice compared to regular court processes. The randomised field experiment or control trial (RCT) is often proposed as the most efficacious means of determining the effect of interventions in a variety of medical and social settings, but it may also compromise restorative justice ideals of voluntariness of participants. Furthermore, it requires both a large number of cases *and* ideal practice elements that often cannot be achieved together. Indeed, even if large numbers of cases could be allocated in a RCT, post-hoc statistical controls of the well-known effects of criminal history would be desirable since randomisation alone may not (arguably) assure proportional distribution of this and other potential key attributes. Other methods of comparison run into problems of selection bias: those youth who admit offences to authorities, and especially, those who admit early in the legal process (and thus may be referred by a police officer to a conference),⁶ may differ from those who do not, in ways that are theoretically predictive of compliance to legal authority and reductions in re-offending. The latter point is germane to this study.

⁶ Court officials can also refer cases to a conference upon admission to an offence, but police referral is far more typical in this jurisdiction.

Sexual Assault Archival Study (SAAS)

The Sexual Assault Archival Study (SAAS) is part of a programme of research that examines the appropriateness of restorative justice in sexual and gendered violence cases. Two SAAS datasets contain all youth sex offences, which were finalised⁷ by police formal caution, family conference, or in the Youth Court from 1 January 1995 to 1 July 2001 in South Australia (for detail, see Author/s 2006; Author/s 2007). There are a total of 385 cases (226 or 59 per cent finalised in court, 118 or 31 per cent by conference, and 41 or 10 per cent by formal caution) involving 365 unique youth.

The *cases dataset* ($n=385$ cases) contains variables about the youth and the victim(s); the type, circumstances, and elements of the SAAS offence; and the legal journey of the case and its disposition, which were coded from the Police Apprehension Report (AP), the Family Conference file, and the Youth Court Certificate of Record. The *criminal histories dataset* ($n=365$ unique youth) was created from data provided by the South Australia Justice Data Warehouse. Each youth's criminal history was available from the start of the collection of these data (1994) to the date of the requested extraction (28 November 2001).⁸ The criminal history dataset includes juvenile offending before the SAAS case, and both juvenile and adult offending post-SAAS; it contains all alleged sexual and non-sexual offences that were dealt with formally by the criminal justice system, i.e., all charges, as well as breaches of previous dispositions and child protection hearings.⁹ Variables include the date of finalisation, an offence category, and the outcome of the case (i.e., formal caution, conference; or case convicted or dismissed/withdrawn in court).

Our analysis of re-offending is based on 365 unique YPs in the criminal histories dataset.

Most young persons (YPs) appear once in the cases dataset, but 17 appear two or more times. For

⁷ Finalised means that the case is closed, having been disposed by formal caution, conference or in court by a range of possible outcomes: dismissed, withdrawn, proved through a guilty plea or a guilty finding at trial, and found not guilty at trial.

⁸ The criminal history for youths whose cases were finalised early during the research period (i.e., in 1995) may be incomplete because any finalisations before 1994 were not in the Justice Data Warehouse archives.

⁹ Family Care Meetings (FCMs) were an indication of problems in the youth's home; thus, they were incorporated into the 'has personal problems' measure.

these youth, we coded their first SAAS offence as the index offence and their next case(s) as re-offending. All charged offences were coded, i.e., both those proved and not proved. Indictable and summary offences were counted; however, breaches of bail or parole were not counted (although the underlying offence was), nor were matters such as public transport offences and unpaid traffic fines. Four types of offence categories were identified: all re-offending, sexual re-offending, violent non-sexual re-offending, and non-violent non-sexual re-offending. We coded the number of days from the finalisation date of the SAAS index offence to the first finalisation date for any new offence. If the YP had no post-SAAS charges, we recorded the number of days from the SAAS index offence to the cut-off date. The length of follow-up time ranged from 154 to 2,520 days (about 6 to 84 months; mean of 47 months). Several analyses are presented here: one is of all 365 YPs, including those whose cases were finalised as not proved in court;¹⁰ a second, of the outcomes of 211 proved court and conference cases; and a third of 339 cases to assess the impact of offence type on re-offending.

Research Questions

The research questions are:

- Q1: What is the overall rate of sexual and general re-offending?
- Q2: Do rates of re-offending vary by site of finalisation (court, conference, and caution)?
- Q3: What is the impact of referral to the Mary Street programme on re-offending?
- Q4: What other factors affect re-offending?

To address these questions we applied a parametric form of survival analysis by fitting the Weibull ‘mixture model’ to the follow-up times. For Q1, we expect that rates of sexual re-offending will be within the range reported in the literature (7 to 14 per cent) and that rates of general re-offending will be higher than rates of sexual re-offending. For Q2, we expect that youth whose case was finalised by conference are less likely to re-offend or take longer to do so than those whose case

¹⁰ Admission to the offence is required for a formal caution or conference to proceed. However, seven conferences did not go ahead, and no further action was taken.

was finalised in court. This is based on Bonta *et al.* (2006); Braithwaite (1995); Sherman, Strang, and Woods (2000); and Sherman and Strang (2007), although ours is the first study to assess the re-offending of youth conferenced for a sexual offence. For Q3, we expect that youth who were referred to the Mary Street programme will be less likely to re-offend or will take longer to do so. For Q4, we assess factors associated with sexual and general re-offending, including the victim's age, sex, and relationship to the offender; the type of sexual offence; pre-SAAS criminal history, among other factors.

Description of the Cases and Re-Offending

Of the 365 unique youth, 57 per cent of cases were finalised in court, 32 per cent by conference, and 11 per cent by formal caution. Of 209 court cases, 49 per cent were proved of at least one sexual offence. The most serious charged offences were rape or attempted rape (26 per cent), unlawful sexual intercourse with a victim under 12 (10 per cent), unlawful sexual intercourse with a victim aged 12 to 16¹¹ and incest (8 per cent), indecent assault (42 per cent), and indecent behaviour and other 'hands off' offences (14 per cent). Of 211 proved court and conference cases,¹² 46 per cent were referred to Mary Street. However, a significantly higher proportion of conference (53 per cent) than court (38 per cent) youth were so referred.

Of the 365 youth, nearly all (97 per cent) were male, although most victims were female (76 per cent).¹³ A small number of youth (11 per cent) were 18 or older when their case was finalised, but under 18 when the offence was charged; 69 per cent were 14 to 17; and 20 per cent, under 14. Compared to the mean for South Australia, the youths lived in areas of relatively greater

¹¹ To prove a charge of rape, a victim's lack of consent must be demonstrated. For unlawful sexual intercourse (USI) with a victim under 12 means that an offender has had sexual intercourse with a child under 12; in these cases, consent is not probative. USI, 12 to 16 years, means (legally) that an offender has had consensual sexual intercourse with a victim, who was older than 12 but under the legal age of consent (17 years in South Australia). Ten cases involved consensual intercourse between underage participants.

¹² Cautions typically do not include any undertakings by the youth.

¹³ These demographics and subsequent percentages on re-offending differ slightly from data presented in previous papers (e.g., Author/s 2006) because those percentages were based on the cases dataset ($n=385$), while these are of the criminal histories dataset of unique YPs ($n=365$).

disadvantage; 9 per cent were Aboriginal; and for 26 per cent of cases, the files indicated one or more personal problems, including substance addiction, learning or mental health problems, victimisation, and family conflict or instability. In 14 cases, there was no direct human victim;¹⁴ most (80 per cent) had one victim, but some had multiple victims (16 per cent).¹⁵ Of the 351 cases with victims, most were under 18, and nearly half, under 12. Younger victims were far more likely subject to intra-familial sexual offending (47 per cent) than those 12 and over (4 per cent).¹⁶ Most knew the offender, either as a family member, a friend, a neighbour, or an acquaintance; 15 per cent of cases involved strangers and were mainly exhibitionism offences.

We defined offending as a charged offence. The date of finalisation of the first or signal SAAS sexual offence is the temporal/date marker for counting pre- and post-SAAS offending. Table 1 shows the volume/frequency and type of pre- and post-SAAS offending by site of finalisation. Over one-third (38 per cent) of youth had pre-SAAS case offending (a prior criminal record), which in four cases included a prior sexual offence. In general, court youth had a more serious criminal history, as measured by prevalence of previous offending, number of offences, and types of offences. Of those with pre-SAAS offending, court youth had been charged with an average of 8.8 offences, compared to 2.7 for conference and 1.9 for caution youth; and the composition of their charged offences had a higher share of sexual and violent offences.

In the 6 to 84 months follow-up period to the cut-off date of 28 November 2001, 54 per cent of youth were charged with further offences: 9 per cent with a sexual offence; 17 per cent, a violent offence; and 28 per cent, a property or drug offence. Youth dealt with in court were more likely to have new charged offences (63 per cent) than those referred to conference (49 per cent) or caution (27 per cent). Of the group with new charges post-SAAS (whom we term recidivists or re-offenders), court youth had a significantly higher level of recidivism for all types of offences: they

¹⁴ These were cases of general exhibitionism that did not target anyone specifically or mooning to police officers and two had non-human animal victims.

¹⁵ For the multiple victim cases, we selected as 'primary victim' the victim of the most serious incident.

¹⁶ Intra-familial cases include victims who were biological, step, or foster siblings, relatives, and cases where the youth was baby-sitting victims.

received on average 13.7 new charges, compared to 6.1 for conference and 6.8 for caution youth. The bottom part of Table 1 shows the re-offending by the cut-off date for proved SAAS court youth, along with conference and caution youth. Of 103 unique court youth whose cases were proved, 68 per cent were charged with another offence.

Estimating General and Sexual Re-Offending

Table 2 summarises the differences between sub-groups without adjusting for variations in follow-up time. It shows that the proportion of youth with prior offending who re-offended (79 per cent) is nearly twice that of those with no prior offending (38 per cent); however, the proportion of those who sexually re-offended is about the same for both groups (8 to 9 per cent). Other key variables that are likely to be associated with re-offending are listed in Table 2, and all are significantly related to a youth's prior offending. Youth with previous offending are more likely to come from disadvantaged areas, have personal problems, and identify as Aboriginal. They are less likely to have admitted to their SAAS signal offence, more likely to have their case finalised in court, and less likely to have their case proved. Their victims are less likely to be young (i.e., under 12 years), their offences are less likely to be intra-familial, and they are less likely to be referred to Mary Street.

For sexual re-offending, 32 youth (all male) were charged with 51 sexual offences during the follow-up period. About two-thirds ($n=22$) were charged with a single sexual offence, six with two, and four with three or more offences. Over 80 per cent ($n=26$) were also charged with new non-sexual offences. None of the four youths who had a (prior) sexual offence pre-SAAS had a new sexual charge post-SAAS. No differences are evident in the volume or type of prior offending for youths with or without sexual re-offending. For two-thirds of YPs, the new sexual charge was of similar seriousness as the SAAS signal offence. However, 37 per cent were charged with a more serious offence (rape, attempted rape, or USI with a child under 12) than the SAAS offence.

Survival analysis: Weibull mixture model

Accurate estimates of re-offending must adjust for the different length of follow-up time (which in our sample ranged from 6 to 84 months) and for the fact that those who have not re-offended at the cut-off data may do so. An alternative approach is to standardise the follow-up period to a fixed time length, say two or three years, but this would have substantially reduced the sample size and would not account for those who may re-offend after the cut-off date. We chose to conduct a survival analysis, which takes into account censored follow-up times and the likelihood of long-term success or the presence of immunes. The cumulative distribution of failure times (time to re-offend) is described by the Kaplan-Meier estimator, and the Weibull model is then fitted,¹⁷ where P represents the probability of ultimate failure, λ ($\lambda > 0$) is inversely proportional to the median time to re-offend, and α ($\alpha > 0$) is the shape parameter of the Weibull. This model is a mixture of the distribution of the failure or survival times for those who re-offend and for the non-recidivists or ‘immunes’ (see Broadhurst and Loh 2003; and for detailed statistical methods, see Maller 1993; and Maller and Zhou 1996). With youth offenders the likelihood of long-term success may be high as some may ‘mature out’ of offending; thus, including a distribution for immunes enables the analysis to improve on ‘ordinary’ survival analysis. Covariates or explanatory variables, such as prior offending or referral to Mary Street, are introduced by expressing parameters P , λ , and α as functions of them to test for differences in survival rates, immune proportions, or both between groups (see Maller 1993). Fitting the model gives a value of $-2 \log L$, where L is the likelihood evaluated at the fitted parameters, and then the likelihood-ratio test is used to find the adequate model. It is worth noting that Cox proportional hazards regression, which is commonly used in recidivism research, only tests for covariate effects in general. However, like multiple regressions in normally distributed data, interpretation is similarly fraught in survival models with immunes

¹⁷ In this study, the time to re-offend data are fitted by a Weibull mixture distribution of the form $P[1 - \exp\{-(\lambda t)^\alpha\}]$, $t \geq 0$. The likelihood ratio test is used to find the best model (see Maller and Zhou 1996 for detail).

because there is more non-linearity in non-normally distributed data (Maller and Zhou 1996:132; 135-165).

Our analysis is restricted to estimates of general re-offending because there are too few cases to accurately estimate rates of sexual re-offending. Table 3 presents four sets of findings on the rate of re-offending for (a) all youth ($n = 365$); (b and c) proved court and conference cases only ($n = 211$); and (d) all youth by type of signal SAAS offence ($n = 339$).¹⁸ Turning first to 3a, the ultimate probability of re-offending, P , is the same for those with and without prior offending (0.88, which means an estimated 88 per cent will ultimately re-offend).¹⁹ However, youth with pre-SAAS offending re-offended at a significantly faster rate (chi-square = 39.28 with 1 degree of freedom [hereafter df]) than those with no pre-SAAS offending ($\lambda = 1.060$ and 0.144, respectively). The median time to re-offend was, respectively 0.6 years (7 months) and 4.6 years. As Table 3a shows, the effect of site of finalisation is not significant (chi-square = 4.86 with 2 df).

For 3b (proved court and conference cases only), the effect of fitting site of disposition after fitting prior offending is significant (chi-square = 4.3 with 1df) and there are significant differences between λ for the four groups (chi-square = 48.94 with 2 df). For those with no pre-SAAS offending, the rate of re-offending for conference youth was significantly slower than that for court youth ($\lambda = 0.154$ and 0.251, respectively). Figure 1 shows the results visually: the median time to re-offend is considerably longer for conference youth with no pre-SAAS offending (4.3 years) than their court counterparts (2.6 years). As expected, for both court and conference youth, those with no pre-SAAS offending have a lower rate of re-offending than those with pre-SAAS offending.

For 3c (proved court and conference cases only), the rate of re-offending for youth referred to Mary Street ($\lambda = 0.242$) was significantly slower (chi-square = 16.22 with 1 df) than those not referred ($\lambda = 0.690$). When the pre-SAAS offending is taken into account, likelihood-ratio tests give more information. For those with no pre-SAAS offending, referral to Mary Street reduced the

¹⁸ Excludes 26 cases that do not fit the four categories (ten cases each of consensual sex and 'moonling', when a youth exposed his bottom in an act of defiance to the police or others; and six miscellaneous others).

¹⁹ In this analysis and the subsequent ones, the best model was of the form 010: same P s, different λ , and same α , indicating that the groups had a similar ultimate probability of re-offending but different rates of re-offending.

rate of re-offending significantly (chi-square = 6.97 with 2 df), $\lambda = 0.138$ compared with $\lambda = 0.249$ for those not referred). The median time to re-offend for Mary Street referrals (4.7 years) was nearly twice as long as those not referred (2.6 years) (Figure 2, Groups 1 and 2). However, for those with pre-SAAS offending, being referred to Mary Street or not had no significant effect on re-offending (chi-square = 0.54 with 1 df), as shown by Figure 2, Groups 3 and 4).

For 3d, four offence groups were created from $n = 339$ cases in the analysis. Group 1 ($n = 161$) comprises all offences with a child under 12 or a sibling as victim involving physical contact, including penetrative and 'touch' offences. Group 2 ($n = 104$) is all cases of rape and attempted rape against peers or adult victims. Group 3 ($n = 40$) includes street forms of indecent assault and harassment, and Group 4 ($n = 34$) contains indecent behaviour and exposure (exhibitionism) offences. There are significant differences between λ for the four groups (chi-square = 21.87 with 3 df). Groups 1 and 3 have slower rates of re-offending (which means a longer median time to re-offend) than Groups 2 and 4. Further analyses showed that the difference in λ between Groups 1 and 3 was not significant (chi-square = 1.76 with 1 df), and that the difference between λ for Groups 2 and 4 was not significant (chi-square = 0.11 with 1 df). There were too few cases in Groups 3 and 4 to perform a reliable analysis using the mixture model and controlling for previous offending. From Table 2, we note that Group 1 youth (i.e., those with a victim under 12 years) had a significantly lower prevalence of pre-SAAS offending compared to the three other groups, and they were also more likely to be referred to Mary Street.

Discussion

Ours is the first study to examine the re-offending of youth charged with a range of sexual offences, whose cases were finalised by court, conference, and formal caution. The main findings can be encapsulated as follows. Prior criminal history has the strongest influence on future offending. The impact of two other variables of interest—whether the case was finalised in conference or court and referred to a specialist programme (Mary Street) or not—depends on the best fit of the Weibull

mixture model. In both instances, the best fit reflected differences in the time to fail but not the ultimate probability of failure. Referral to a conference reduced the median time to re-offend, but only for youth with no pre-SAAS offending; likewise, referral to Mary Street reduced the median time to re-offend, but only for youth with no pre-SAAS offending. With small numbers of cases and relatively short follow-up times for some cases, we are unable to control for other covariates and cannot rule out the role of confounding factors.

For research Q1, the SAAS criminal histories dataset reveals an overall unadjusted rate of sexual re-offending of 9 per cent, and general re-offending, 54 per cent at the cut-off date. Comparing these rates to those reported in the literature (7 to 14 per cent for sexual re-offending, 29 to 53 per cent for general re-offending), the SAAS rate for sexual re-offending is within range, and the SAAS rate for general re-offending is at the top of the range. As anticipated by others (e.g., Broadhurst and Loh 2003; Caldwell 2007; Nisbet *et al.* 2004; Zimring *et al.* 2007, 2009), SAAS youth were more likely to have new charges for non-sexual than sexual offending. Moreover, most youth charged with new sexual offences also had non-sexual charges, confirming the view of youth versatility in offending (Miner 2007; Zimring *et al.* 2009). There were too few youth with new sexual charges to analyse the factors associated with sexual re-offending; but unlike general re-offending, no relationship between prior offending and sexual re-offending was observed.

For Q2, on the prevalence of general re-offending by site of finalisation for all cases ($n=365$), the rate is higher for court (63 per cent) than conference (49 per cent) or caution (27 percent) youth; but the Weibull mixture survival analysis shows that these differences are largely explained by variation in prior offending. For the sub-set of proved court and conference cases ($n = 211$), a slower rate of re-offending was observed for conference than court youth, but only for those with no previous offending.

For Q3, the analysis of proved court and conference cases ($n = 211$) shows that the Mary Street programme has a significant impact on reducing the rate of general re-offending, but only for youth with no prior offending. Those with no prior offending, who *were not* referred to Mary

Street, offended relatively sooner than those who were referred. However, for the youth with prior offending, referral to Mary Street (or not) had no impact on the speed of their potential re-offending.

For Q4, the analysis by offence type shows that sexual assault of children and siblings (Group 1) and street harassment (Group 3) have significantly slower times to re-offend than sexual assault of peers or adults or offences with no physical contact. Group 1 youth have lower levels of prior offending and are more likely to be referred to Mary Street, both of which are significantly associated with a lower likelihood of re-offending.

Coupled with other research on case referral and disposition in the South Australian youth justice system (Author/s 2006), we find a complex enmeshment of youth admissions, offence types, and legal and therapeutic responses, which are difficult to disentangle in a statistical analysis of a relatively small number of cases in a naturalistic setting. Certain types of sexual offences (intra-familial, those involving children under 12 years and siblings), when reported to the police, are more likely to be referred to a conference than court. This occurs because youth more frequently admit these offenses to legal authorities (and admit them earlier) and their prior offending is less developed. Conference outcomes more often include a referral to Mary Street than court outcomes. Proved court cases are more likely to be intra- than extra-familial; and the intra-familial cases are more likely referred to Mary Street. Compared to youth who admit early on, whose sexual victims are young and intra-familial, and who are referred to a conference and Mary Street, there is another group who do not admit their offending to authorities early in the legal process, who have offended against peers, and have more well-developed criminal histories, and are referred to court, but not to Mary Street. This latter group comprises the versatile, high-frequency youthful generalist offenders, with no obvious markers of 'atypical sexual interests'.

Two concluding points can be made. First, while concurring with Latimer *et al.* (2005) and McCold (2008) that analyses of restorative justice and recidivism are beset by problems of selection bias, we would take this point further. When conferences are used as a diversion from court for

admitted youth, we are comparing the impact of differing *legal pathways* for youth, not as some say, differing ‘treatment’ modalities of court and conference, which youth ‘opt into’. In our data, the legal pathways are set in motion by a youth’s admission to an offence early on, which is correlated with no previous offending, intra-familial offending, and younger-aged victims; these cases are more likely referred by the police to a conference and are more likely referred to Mary Street as part of a conference outcome. It would be misleading to say that conference youth are ‘self-selecting’ or have ‘chosen’ to participate in conferences because in this jurisdiction, it is largely a police officer who makes this determination, not a youth. Although some conference youth may be more motivated to change than court youth, as Latimer *et al.* (2005: 139) and Robinson and Shapland (2008) suggest, we might expect that a significant lever for change is not a conference alone, but a longer term engagement with a specialised programme such as Mary Street. In assessing restorative justice and recidivism, future research should pay careful attention to an enmeshment of key factors that set youth on differing legal pathways. The primary selection factor is a youth’s early admission to the police. Here, it is important to recall that randomised field experiments of youth justice conferences, such as RISE, analyse a select group of early admitting youth and are, as a consequence, no less affected by selection bias. Because our study observed cases in a naturalistic setting, we were able to depict a broader set of cases and legal pathways. In doing so, we see that the presence of distinctive legal pathways makes it difficult to assess the independent ‘effects’ of conference and court on re-offending.

Second, we note the limits and uncertainties of our analysis. Although some differences in the time to re-offend were observed between conference and court youth, there were no differences in the ultimate probabilities of recidivism. The significant slowing of the rate of re-offending for first-time offenders referred to a conference or to Mary Street may dissipate once other factors are controlled. Nevertheless, we find that referral to a conference does not increase the risk of re-offending for sex offending youth, who are often assumed to be a high-risk group. And, for first-time offenders, referral to a specialist programme decreases the likelihood of subsequent re-

offending. Our analyses were limited by sample size and in some instances, insufficient follow-up time. The added sensitivity of mixture models in survival analysis hold out the promise of better evaluation of interventions and should encourage researchers to continue to gather larger samples followed up for longer periods.

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Table 1. Volume/frequency and type of pre- and post-SAAS general offending by site of finalisation (unadjusted estimates of post-SAAS offending)

	Total	Court	Conference	Caution
PRE-SAAS OFFENDING				
<i>Volume of prior offending</i>	<i>n = 365</i>	<i>n = 209</i>	<i>n = 115</i>	<i>n = 41</i>
	%	%	%	%
Youth with pre-SAAS (prior) offending	38	50	22	19
one prior offence	8	6	10	12
2-5 prior offences	17	23	9	7
6+ prior offences	13	21	3	0
Of 138 youth with pre-SAAS offending, mean number of offences	7.3	8.8 ^a	2.7	1.9
<i>Most serious offence type</i>	<i>n = 138</i>	<i>n = 105</i>	<i>n = 25</i>	<i>n = 8</i>
	%	%	%	%
Sexual	3	4	0	0
Violent	36	40	20	37
Non-violent non-sexual	61	56	80	63
POST-SAAS OFFENDING				
<i>Volume of post offending</i>	<i>n = 365</i>	<i>n = 209</i>	<i>n = 115</i>	<i>n = 41</i>
	%	%	%	%
Youth with post-SAAS (post) offending	54	63	49	27
one post offence	9	8	10	10
2-5 post offences	18	18	22	10
6+ post offences	27	37	17	7
Of 198 youth with post-SAAS offending, mean number of offences	11.2	13.7 ^b	6.1	6.8
<i>Post-SAAS most serious offence type</i>	<i>n = 198</i>	<i>n = 131</i>	<i>n = 56</i>	<i>n = 11</i>
	%	%	%	%
Sexual	16	18	12	9
Violent	32	37	25	18
Non-violent non-sexual	52	45	63	73
POST-SAAS OFFENDING, proved cases only (n = 252)				
<i>Volume of post offending</i>	<i>n = 252</i>	<i>n = 103</i>	<i>n = 108</i>	<i>n = 41</i>
	%	%	%	%
Youth with post-SAAS offending	54	68	50	27
Of 135 youth with proved SAAS case and post-SAAS offending, mean number of offences	10.9	15.1 ^b	6.2	6.8

Notes

^a Significantly higher than conference or caution, $p < .05$.

^b Significantly higher than conference, $p < .01$.

Table 2. Selected characteristics of youth with and without pre-SAAS general offending (unadjusted follow-up time)^a

	All youth <i>n</i> =365	no pre-SAAS offending <i>n</i> =227	pre-SAAS offending <i>n</i> =138	χ^2	df	<i>p</i>
Youth has post-SAAS general re-offending	54%	38%	79%	57.07	1	.000
Youth has post-SAAS sexual offending	9%	8%	9%	0.12	1	.731
Mean SEIFA index of YP's place of residence ^c	934.5	946.8	914.5	3.48	363	.001
Youth has personal problems ^d	27%	23%	34%	4.95	1	.026
Youth identifies as Aboriginal	9%	3%	20%	31.64	1	.000
Youth admitted fully or partially to SAAS offence	68%	77%	53%	21.80	1	.000
Youth went to court	57%	46%	76%	32.20	2	.000
SAAS offence was proved	69%	75%	60%	9.61	1	.002
SAAS offence victim is under 12	47%	56%	32%	19.96	1	.000
SAAS offence is intrafamilial	24%	29%	17%	6.72	1	.000
Youth referred to Mary Street for SAAS offence	27%	33%	17%	11.71	1	.010

Notes

^a All percentages are of *n*=365 youth; they vary slightly from percentages of victims (*n*=351) discussed in the text.

^b The *Index of Relative Socio-Economic Disadvantage* is one of five Socio-Economic Indexes for Areas (SEIFA) constructed from census data to measure different aspects of socio-economic conditions (ABS 1998). It is based on income, educational attainment, type of job, and level of unemployment in each postcode area. Lower index values are associated with increased disadvantage. The mean SEIFA index for South Australia in 1996 was 987. We tested this variable using a *t*-test rather than a Chi-square.

^c Evidence of one or more of the following: substance addiction, learning difficulties, mental health problems, history of victimisation, and family instability and conflict. Information was gleaned from the police report, criminal histories, and court documents.

Table 3. Probability and rate of general re-offending for selected covariates (Weibull mixture model)

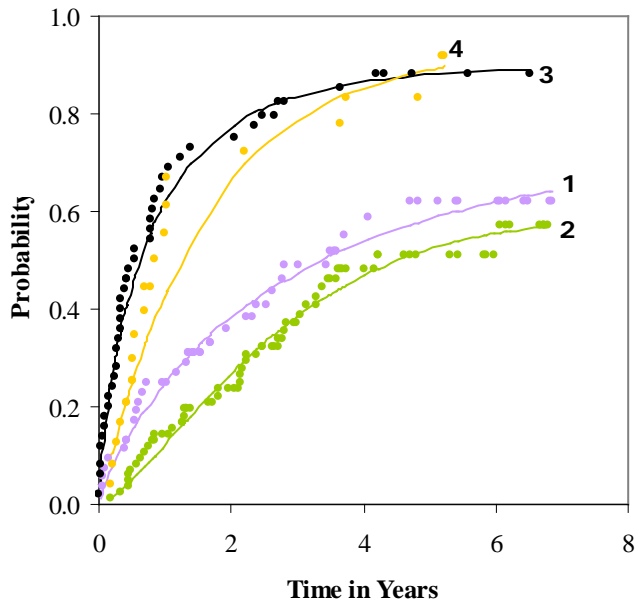
covariate	<i>n</i>	<i>n-fail</i> ^a	<i>P</i> (95% CI) ^a	λ	(95% CI) ^a	α ^a	Weibull median time to re-offend (years)
(a) all youth	365	196	0.75 (0.59, 0.86)	0.433	(0.265, 0.708)	0.75	1.4
<i>No pre-SAAS offending</i>	227	87	0.88 (0.80, 0.94)	0.144	(0.107, 0.196)	0.88	4.6
(1) court	104	43	0.88 (0.80, 0.94)	0.175	(0.122, 0.251)	0.88	3.8
(2) conference	90	37	0.88 (0.80, 0.94)	0.138	(0.095, 0.202)	0.88	4.8
(3) caution	33	7	0.88 (0.80, 0.94)	0.083	(0.040, 0.174)	0.88	8.0
<i>Has pre-SAAs offending</i>	138	109	0.88 (0.80, 0.94)	1.060	(0.821, 1.368)	0.88	0.6
(4) court	105	86	0.88 (0.80, 0.94)	1.147	(0.876, 1.501)	0.88	0.6
(5) conference	25	19	0.88 (0.80, 0.94)	0.904	(0.611, 1.335)	0.88	0.7
(6) caution	8	4	0.88 (0.80, 0.94)	0.543	(0.254, 1.161)	0.88	1.2
(b) all proved court and conference cases^b	211	123	0.79 (0.58, 0.91)	0.435	(0.249, 0.761)	0.78	1.4
(1) no pre-SAAS offending / court	53	27	0.89 (0.76, 0.96)	0.251	(0.156, 0.403)	0.87	2.6
(2) no pre-SAAS offending / conference	84	36	0.89 (0.76, 0.96)	0.154	(0.100, 0.235)	0.87	4.3
(3) pre-SAAS offending / court	50	42	0.89 (0.76, 0.96)	1.169	(0.801, 1.705)	0.87	0.6
(4) pre-SAAS offending / conference	24	18	0.89 (0.76, 0.96)	0.714	(0.451, 1.132)	0.87	0.9

Table 3 (continued)

covariate	<i>n</i>	<i>n-fail</i> ^a	<i>P</i> (95% CI) ^a	λ (95% CI) ^a	α ^a	Weibull median time to re-offend (years)
(c) all proved court and conference cases^b	211	123	0.79 (0.58, 0.91)	0.435 (0.249, 0.761)	0.78	1.4
Referral to Mary St	96	44	0.79 (0.66, 0.88)	0.242 (0.148, 0.396)	0.87	2.7
No referral to Mary St	115	79	0.79 (0.66, 0.88)	0.690 (0.467, 1.018)	0.87	0.9
(1) no pre-SAAS offending / Mary St	73	27	0.90 (0.77, 0.96)	0.138 (0.087, 0.219)	0.87	4.7
(2) no pre-SAAS offending /no Mary St	64	36	0.90 (0.77, 0.96)	0.249 (0.161, 0.386)	0.87	2.6
(3) has pre-SAAS offending / Mary St	23	17	0.90 (0.77, 0.96)	0.632 (0.380, 1.050)	0.87	1.0
(4) has pre-SAAS offending /no Mary St	51	43	0.90 (0.77, 0.96)	1.137 (0.788, 1.639)	0.87	0.6
(d) offence group	339	177	0.72 (0.57, 0.83)	0.456 (0.287, 0.725)	0.78	1.4
(1) child and sibling victims ^c	161	70	0.75 (0.62, 0.85)	0.242 (0.150, 0.392)	0.83	2.7
(2) rape and attempted rape	104	65	0.75 (0.62, 0.85)	0.762 (0.482, 1.204)	0.83	0.8
(3) indecent assault and harassment ^c	40	22	0.75 (0.62, 0.85)	0.393 (0.199, 0.776)	0.83	1.6
(4) no contact offences	34	20	0.75 (0.62, 0.85)	0.670 (0.338, 1.326)	0.83	1.0

^a *n-fail*, number of cases re-offending by the cut off date; *P*, ultimate probability of re-offending; λ , rate of re-offending; and α , the shape of the Weibull model. The analysis is of 211 proved court cases and admitted conference cases. Our data record whether or not youth were referred to Mary Street, not if they attended or dropped out.

Figure 1. Failure time (re-offending) distribution, any new charge by prior offending and site of disposition



Notes
 Actual time to re-offend:
 dotted lines = Kaplan-Meier Estimator
 Estimated time to re-offend:
 solid line = fitted Weibull model

Groups, N=211:
 1 = no prior offending / court
 2 = no prior offending / conference
 3 = has prior offending / court
 4 = has prior offending / conference

Figure 2. Failure time (re-offending) distribution, any new arrest charge by prior offending and referral to Mary Street

