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Sexually abusive youth: A review of recidivism studies and methodological issues for future research

Clare-Ann Fortune, Ian Lambie *

Clinical Psychology Training, Psychology Department, University of Auckland, Private Bag 92019, Auckland, New Zealand

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Abstract

This paper is a critical review of the recidivism studies on sexually abusive youth. Recidivism studies looking at sexually abusive youth have only appeared in the literature in the last 10 to 15 years and the small number of published studies, along with difficulties in defining recidivism, have affected the quality of outcome data. The most consistent criteria for recidivism applied in the literature uses official records to determine subsequent arrests and/or convictions for sexual and/or non-sexual offences. However, official records are conservative and so will underestimate recidivism rates. Recidivism rates for sexually abusive youth who have received treatment for sexual re-offending are approximately 10%, though rates vary greatly (0% to 42%), while recidivism rates for non-sexual offending are higher (ranging between 8% and 52%). Research indicates that comparison groups of untreated sexually abusive youth have higher rates of sexual and non-sexual re-offending than those who have received treatment. Specific recommendations are made for strengthening research design in future studies. These include using multiple sources to determine recidivism (e.g. official records, self-report, family report and standardised psychological tools), having comparison groups of treatment dropouts and untreated sexually abusive youth and including long-term, longitudinal follow-up of youth.

Keywords: Recidivism; Adolescent sex offenders; Juvenile sex offenders; Juvenile treatment outcomes; Juvenile delinquency; Sex offender treatment

1. Introduction

Adolescents are recognised as being perpetrators of a significant proportion of child sexual abuse (Davis & Leitenberg, 1987; Fehrenbach, Smith, Monastersky, & Deisher, 1986; Flanagan & Hayman-White, 2000; O'Shaughnessy, 2002; Veneziano, Veneziano, & LeGrand, 2000). In a New Zealand community study, Anderson, Martin, Mullen, Romans, and Herbison (1993) interviewed 497 women about sexual abuse. They found that nearly 50% of the perpetrators were under 25 years of age, while 50% of these were younger than 18 years (Anderson et al., 1993). Mullen, Anderson, Roman-Clarkson, and Martin (1991) concluded; "teenage offenders were a large and often quite violent group, who carried out one quarter of the offences" (p.2).

* Corresponding author. Tel.: +64 9 3737 599x85012; fax: +64 9 3737 450.
E-mail address: i.lambie@auckland.ac.nz (I. Lambie).

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The recognition of adolescents as perpetrators of sexual abuse has resulted in a rapid growth in specialised treatment programmes for sexually abusive youth since the late 1970s (Burton & Smith-Darden, 2000; Freeman-Longo & Knopp, 1992) and more recently an increased body of research (O'Shaughnessy, 2002). To date, most research has focused on creating a profile of and treating sexually abusive youth with only limited research looking at recidivism among this population (Becker, 1990). It is only in the past 10 to 15 years that studies of recidivism among sexually abusive youth have emerged.

The current review looks at recidivism among sexually abusive youth and then focuses on outcome studies of adolescent sex offender treatment programmes. As the majority of sexually abusive youth are male, it should be assumed that we are referring to male offenders, unless otherwise specified. To undertake this review we utilised the electronic databases provided in PsycINFO, ERIC and Medline (searching for articles published between 1986 and September 2005) as well as consulting with clinical and research colleagues in the field of sexually abusive youth. The focus of this review is exclusively sexually abusive youth. Only articles that reported the use of specific outcome measures to determine programme effectiveness were included.

Recidivism is the commonly used criteria in outcome studies to ascertain treatment effectiveness and so definitions of recidivism used in the literature will be summarised. Rates of both sexual and non-sexual recidivism among sexually abusive youth will be examined. This review will also consider methodological issues in recidivism research and finally discuss directions for future research.

The current review includes empirical literature on recidivism among sexually abusive youth. Recidivism studies reviewed in this article, including the outcome studies of specialised treatment programmes, are summarised in Tables 1 and 2. Table 1 summarises studies which have looked at recidivism among sexually abusive youth while Table 2 focuses on specialised treatment outcome studies for these youth. These tables have been adapted and updated from Worling and Curwen (2000). Table 2 has been expanded to include details of the type of treatment offered and the treatment setting. That is, it is noted whether the treatment programme was community-based or residential and the type of therapy that was offered (e.g. individual, group and family). The addition of this category allows for comparison of recidivism rates to be made between programmes which are similar and encourages greater awareness of the differences between programmes when making comparisons. This review does not include a discussion of factors associated with criminal recidivism in adolescents who have sexually offended as this has been covered by other authors (e.g. see Worling & Långström, 2003, for a recent excellent review).

Table 1
Studies of recidivism among adolescent sexual and non-sexual offenders

Study	Country	Young sex offenders group *N*	Young non-sex offenders group *N*	Follow-up period	Recidivism measure(s)	Rates of sexual recidivism	Rates of non-sexual recidivism
Långström and Grann (2000)	Sweden	46	0	Mean 5 years	Convictions	20%	65%—general
Långström (2002)	Sweden	117	0	Mean 116 months	Convictions	30%	42%—violent non-sexual
Nisbet et al. (2004)	Australia	292	0	Mean 7.3 years	Adult arrests and convictions	9%—arrests 5%—convictions	61%—convictions
Rasmussen (1990)	USA	170	0	Up to 5 years	Convictions	14%	54%
Rubenstein et al. (1993)	USA	19	58	Approx 8 years	Adult criminality (arrests and incarcerations)	SO—37% Violent NSO—10%	SO—89% Violent NSO—69%
Sipe et al. (1998)	USA	124	132	1–14 years	Adult arrests	SO[a]—10% NSO[b]—3%	SO Violent 6% Property 16% Other 15% NSO Violent 12% Property 33% Other 23%

[a] SO = Sexual offender group.
[b] NSO = Non-sexual offender group.

2. Defining recidivism

One of the problems in recidivism research on sexually abusive youth is the lack of a clear and consistently used definition of the term 'recidivism'. This can be firstly illustrated by Kahn and Lafond (1988) who had a sample of over 350 adolescent sexual offenders, aged 12 to 18 years (mean of 14.5). The offenders had attended a state juvenile correction treatment facility in Washington for sentences ranging from between 2 months and 4 years. Follow-up ranged between a few weeks and 6 years after leaving the residential facility and the authors stated the results indicated that approximately 9% had sexually re-offended while 8% had committed new non-sexual offences. However the methodology of this study was weak. The sample was only defined as a population of 'over' 350 adolescent sexual offenders and the criteria for recidivism is not clear from the published article. In his review, Weinrott (1996) states that the recidivism measure was juvenile reconviction. If this is true, the recidivism rates more than likely underestimated the actual rates of re-offending by this sample as it did not include juvenile arrests, nor adult arrests or convictions. This may explain why such low rates of recidivism were found.

Another early study into recidivism was carried out by Smets and Cebula (1987) who used a sample of 21 boys aged between 13 and 18 years. Smets and Cebula (1987) followed 14 adolescents for a duration of up to 1 year. They found recidivism rates to be 5%. However, recidivism was rather poorly defined simply as "repeated his offenses" (Smets & Cebula, 1987, p. 253). It is unclear whether the youth was formally arrested or charged for the re-offending or whether it was self-reported.

A more recent study by Prentky, Harris, Frizell, and Righthand (2000) included a sample of 96 juvenile sex offenders ranging in age from 9 to 20 (mean was 14 years), who were referred for assessment and treatment to a specialised, community-based treatment programme. Of these, 75 were followed up after 12 months. They found an 11% recidivism rate, of which 4% had re-offended sexually and 7% non-sexually. However not only did this study have a relatively short follow-up period but the study included the rather vague definition of recidivism as 're-offended'. Exactly what information was used to establish re-offence is not clear from the article.

Generally, in the last 15 years, there has in fact been a tightening in definitions of recidivism used in the literature. For example some studies have based recidivism rates on subsequent incarceration. This criteria was used by Brannon and Troyer (1995), who defined recidivism in terms of adolescent sexual offenders who entered an adult correctional facility. Brannon and Troyer used a sample of 36 adolescent sexual offenders (aged 14–19 years) who attended a residential offender treatment programme for an average of 7 months. The researchers carried out a point of time agency survey which looked at the length of parole supervision provided for each offender and the youth's community re-adjustment as well as details of criminal charges. Details on criminal charges were obtained through the Department of Corrections which provided a print out of details including the name, committing offence(s) and level of care provided for each adolescent sexual offender involved in the study. Rates of recidivism, using this definition, were 17% including one sexual crime (3%) and five (14%) non-sexual offences (battery and four property offences). The definition of recidivism may have resulted in conservative figures as only those offenders who went on to enter an adult facility for their offending were included. Including arrests and convictions for new offences may have increased the recidivism rate found in this study.

Massop (1995) has recommended that one way to address the problems of recidivism is to compare arrest records, conviction rates and self-reported disclosure from clients. He compared conviction records with arrest records and concluded that conviction records may also be skewed due to plea bargaining, pleading not guilty and that arrest records may be distorted as it is up to police discretion who is arrested and what crimes are reported. Massop therefore suggested that both arrest and conviction records may underestimate the actual extent of recidivism taking place among sexual offenders and that a single data source to measure recidivism is likely to be incomplete.

One study that has utilised self-report was conducted by Becker (1990). She evaluated a multi-component outpatient treatment programme for adolescent sexual offenders aged between 13 and 18 years. At 1 year follow-up, 52 adolescents who had completed treatment were interviewed. She found, on the basis of self-reported re-offending and referrals, that 10% of adolescents had re-offended sexually. The use of referrals as a measure of re-offending may be viewed as a particularly conservative measure, and it may not include sexual offences that adolescents committed but were not arrested or convicted of. It only includes offences for which the adolescent was referred on to treatment. However, Becker was able to balance this rather conservative measure by also including the second criteria, self-reported re-offending. Self-reports may expose offending that has not come to notice of social or law enforcement agencies, as long as the questionnaire remains anonymous.

Table 2
Published recidivism rates from follow-up studies of specialised adolescent sexual offender treatment (updated and adapted from Weinrott, 1996; Worling & Curwen, 2000)

Study	Country	Treatment type and setting	Treatment group *N*	Comparison group *N*	Follow-up period	Recidivism measure(s)	Rates of sexual recidivism	Rates of non-sexual recidivism
Alexander (1999)	USA	Meta-analysis[a]	79 studies, 10,988 subjects (1025 juveniles)	0	1 year–5+ years	Rearrest for new sexual offences	Treated—7%[b]	Not measured
Allan et al. (2003)	Australia	Unclear	326 (included treated, referred, assessed only and no contact groups)		Mean=4.2 years	Convictions	Total sample—10% (Treated—11%, Referred—0%, Assessed only—33%, No contact—8%)	Total sample—66%
Becker (1990)	USA	Outpatient, specialised, multi-component	52	0	1 year	Self-report or re-referral	10%	Not measured
Borduin et al. (1990)	USA	Outpatient, specialised, MST and individual therapy	16 (8 in MST and 8 in IT)	0	*M*=3 years (21–49 months)	Arrests	MST—13% IT—75%	MST—25% IT—50%
Borduin et al. (2000)	USA	Outpatient, specialised, MST and individual therapy	24	24	8+ years	Criminal charges	Treatment—13% Comparison—42%	Treatment—30% Comparison—63%
Brannon and Troyer (1995)	USA	Inpatient, group	36	0	4+ years (not clear)	Adult correctional care	3% (*n*=1)	14% (*n*=5)
Bremer (1992)	USA	Inpatient, specialised, primarily group, also family and individual	193	0	Several months to 8.5 years	Sexual convictions and self-report of sex offences	Convictions—6% Self-report—11%	Not measured
Edwards et al. (2005)	UK	Inpatient, specialised, CBT group and individual therapy	24 (treatment completers)	25 (treatment dropouts)	6 to 107 months	Conviction or caution for sexual, violent and non-violent general offences	Completers—0% Dropouts—16%	Completers: violent—8.3% and general—25% Dropouts: violent—32% and general—68%
Gretton et al. (2001)	Canada	Specialised, outpatient	220	0	7–106 months (*M*=55 months)	Charges or convictions	15%	General—51% Violent—30%
Hagan and Cho (1996)	USA	Inpatient, specialised, group, sex education, and some individual and family therapy	100 (50 rapists and 50 molesters)	0	2–5 years	Convictions for offending	Rapists—10% Molesters—8%	Rapists—54% Molesters—38%
Hagan and Gust-Brey (1999)	USA	Inpatient, specialised, group, sex education, and some individual and family	50 rapists	0	10+ years	Convictions, sentences and dispositions	After 5 years—8% After 10 years—16%	After 5 years—74% After 10 years—90% (overall criminal behaviour)
Hagan et al. (2001)	USA	Inpatient, specialised, group, sex education, and some individual and family	50 rapists, 50 child molesters and 50 delinquents	50	8 years	Convictions	Rapists—16% Child molesters—20% Delinquents—10% Control—0.4% (est)	Not measured

(continued on next page)

Table 2 (*continued*)

Study	Country	Treatment type and setting	Treatment group *N*	Comparison group *N*	Follow-up period	Recidivism measure(s)	Rates of sexual recidivism	Rates of non-sexual recidivism
Hagan et al. (1994a)	USA	Inpatient, specialised, group, sex education, and some individual and family	50 rapists	0	2 year	Convictions	10%	58% (overall criminal behaviour)
Hagan et al. (1994b)	USA	Inpatient, specialised, group, sex education, and some individual and family	50	0	2 year	Convictions	8%	38%
Kahn and Chambers (1991)	USA	Specialised, multisite (8 outpatient, 2 institutional)	221	0	*M*=20 months	Convictions	8%	General—45%
Kahn and Lafond (1988)	USA	Inpatient, specialised multifaceted group (denial, offender's abuse history, dysfunctional values and attitudes, social skills, deviant arousal)	350	0	Few weeks—6 years	Juvenile convictions	9%	8%
Lab et al. (1993)	USA	Specialised, group, CBT, family and individual	46	109	0–3 years	Convictions	Treatment [c]—2% Control—4%	Treatment—24% Control—18%
Lambie et al. (2000) [d]	NZ	Specialised, community-based, wilderness, group, individual and family	14	0	2 years	Self report	0%	Not measured
Mazur and Michael (1992)	USA	Outpatient family and group also sex education and relapse prevention	10	0	6 months	Self report and parent report	0%	Not measured
Miner (2002)	USA	Inpatient and specialised	86	0	Mean 4.3 years	Arrest, conviction or parole violation	8%	General—47% Criminal—55%
Prentky et al. (2000)	USA	Specialised, outpatient	75	0	12 months	Re-offence	4%	Non-sexual—7%
Ryan & Miyoshi (1990)	USA	Multisite, specialised, inpatient and outpatient	69	0	12–30 months	Re-arrest and self and parent report	9%	Not measured
Schram et al. (1991)	USA	Multisite, specialised, outpatient and inpatient	197	0	5 years	Adult and adolescent convictions and arrests	Arrests—12% Convictions—10%	Arrests—51% Convictions—48%
Seabloom et al. (2003)	USA	Outpatient, specialised, group and individual psychotherapy, family therapy and family group psychotherapy, 'marathons' [e] and "Family Journal" [f]	52	Referred—18 Withdrawn—52	14 to 24 years (mean 18 years)	Arrests, charges and convictions	Treated—0%, 0% [g] Referred—6%, 0% Withdrawn—10%, 8%	Treated—8%, 8% Referred—44%, 39% Withdrawn—22%, 18%

Smets and Cebula (1987)	USA	Outpatient sexual offender group therapy with follow-up family and individual	21	0	2 years	Re-offending	5%	Not measured
Smith and Monastersky (1986)	USA	Outpatient, family and group	112	0	*M*=29 months (17 to 49)	Criminal charges	14%	35%
Waite et al. (2005)	USA	Inpatient, specialised, CBT group and individual	144 (self contained treatment group)	112 (prescriptive treatment group)	0	5–125 months	Adult and juvenile re-arrests	Self contained group—4.9% Prescriptive group—4.5% Self-contained group Non-sexual assault—31% Property—11% Prescriptive group Non-sexual assault—47% Property—19%
Worling and Curwen (2000)	Canada	Specialised, outpatient, concurrent group, individual and family, CBT and relapse prevention	58	90	2–10 years (*M*=6 years)	Criminal charges	Treated—5% Comparison—18%	Treated—40% Comparison—82%

Treatment type and setting key

Abbreviations	Definition
Treatment type	
CBT	Cognitive behaviour therapy
Family	Family therapy
Group	Group therapy
Individual	Individual therapy
MST	Multisystemic therapy
Multi-component	Includes group, covert sensitisation, satiation, social skills training, sex education, relapse prevention, CBT model
Wilderness	Wilderness component included in treatment programme
Treatment setting	
Inpatient	Inpatient, residential and institutional correction facility treatment programme
Multisite	Multiple site treatment outcome study
Outpatient	Outpatient and community-based treatment programme
Specialised	Specialised sexual offender treatment programme

[a] Meta-analysis of sex offenders, including a small group of adolescents.
[b] This meta-analysis included adult and adolescent studies. The recidivism rates from the adolescent studies are reported here.
[c] Sexual Offender Treatment programme group (SOT).
[d] Denotes that official records from the child welfare agencies were used.
[e] See text for further description of this type of treatment.
[f] See text for further description of this type of treatment.
[g] Percentage of arrests, percentage of convictions.

2.1. Summary of defining recidivism

Generally, since Smets and Cebula (1987) and Kahn and Lafond (1988), researchers have started to use stricter definitions of recidivism, mostly relying on some form of official records to determine subsequent arrests and/or convictions for sexual and/or non-sexual offences. Still others have used subsequent incarceration. Of those studies reviewed here (see Tables 1 and 2 for a summary), Worling and Curwen (2000) and Lab, Shields, and Schondel (1993) all defined recidivism as criminal charges for sexual offences as well as non-sexual offences. Kahn and Chambers (1991) and Hagan and colleagues (Hagan & Cho, 1996; Hagan & Gust-Brey, 2000; Hagan, Gust-Brey, Cho, & Dow, 2001; Hagan, King, & Patros, 1994a, 1994b) restricted their definition to include only those new sexual and non-sexual offences which resulted in convictions. Edwards et al. (2005) used a definition of recidivism that included convictions and cautions following treatment termination for sexual, violent and general offences. Alexander (1999), Borduin, Henggeler, Blaske, and Stein (1990) and Smith and Monastersky (1986) looked at arrests for both sexual and non-sexual offences. Re-arrest rates are commonly used, as offenders may not get a conviction, thus reducing the risk of positive treatment effect bias. Schram, Milloy, and Rowe (1991) included both new convictions and arrests when calculating recidivism rates among their sample. Gretton, McBride, Hare, O'Shaughnessy, and Kumka (2001) defined re-offending in terms of "any charges or convictions that occurred in the follow-up period" (p. 435).

Some adolescents leave/complete treatment while they are still 'youth' and so it is important to also consider offending that may not have been dealt with through the adult justice system but rather through child social and youth justice agencies. For example Waite et al. (2005) included both adult and juvenile re-arrests in their definition of recidivism.

Definitions of recidivism vary among studies. The most consistent criteria throughout the research is a definition of recidivism that includes convictions and arrests for sexual and non-sexual offences. Variation in defining recidivism means that direct comparisons of re-offending rates between studies is difficult. Official records will produce conservative estimates of re-offending but this could be balanced out if triangulation were to occur. Triangulation could be partially achieved through obtaining self and family reports of re-offences as well as using official records.

3. A review of recidivism research

This section first reviews studies which have investigated levels of sexual and non-sexual re-offending among sexually abusive youth, most of which include a comparison group of non-sexual offenders. These are summarised in Table 1. Despite the rapidly growing number of treatment programmes, published outcome studies for sexually abusive youth remain relatively rare. Table 2 summarises the main outcome studies on specialised adolescent sex offender treatment programmes that were published between 1986 and 2004. Selected studies will be looked at in more detail.

3.1. Recidivism among sexually abusive youth

Sipe, Jensen, and Everett (1998) followed up 256 adolescent sex offenders for between 1 and 14 years (including 124 male subjects who were referred for non-violent sexual offences and 132 males in the comparison group of non-sexual offenders). The results for the juvenile sexual offender group showed that 10% were arrested for sexual offences as adults, compared to only 3% of non-sexual juvenile offenders. Non-sexual adult offences were reported as percentages for violent, property and other offences. For the juvenile sexual offender group these rates were 6%, 16% and 15% respectively, compared to 12%, 33% and 23% for non-sexual juvenile offenders. Overall, the sexual offenders went on to have fewer arrests for any adult offence (33%) compared to non-sexual offender group (44%). However, the sexual offender group did have more arrests as adults for sexual offences than the comparison group. Sipe et al.'s study included a clear definition of recidivism and a large sample but as it was carried out on a non-clinical population comparisons with outcome studies should be done cautiously.

Rubenstein, Yeager, Goodstein, and Lewis's (1993) sample included 19 sexual offenders and 58 non-sexual but violent offenders. Follow-up was carried out after approximately 8 years. Information was collected on the number, nature and timing of arrests, and the duration and timing of incarcerations. Rubenstein and colleagues found that by age 24, 37% of the sexual offenders had an adult criminal record for one or more sexual offences, in comparison to only 10% of the violent non-sexual offenders. Furthermore, 89% had arrests for non-sexual crimes compared to 69% of the comparison group. A strength of the study by Rubenstein et al. lies in the relatively long follow-up period (8 years).

However, the relatively small sample of sex offenders (19) makes it difficult to make generalisations to other sexually abusive youth. The authors also failed to provide details of the programme run by the correctional facility and, in particular, whether it included a specialised sexual offender treatment component. For this reason this study has been included in this section rather than in the next section with those which evaluated treatment programmes.

Rasmussen (1999) looked at recidivism in a group of 170 youth sex offenders (aged 18 years or younger, mean age 14 years) many of whom who had attended either community-based or inpatient treatment facilities (10% were not referred for treatment). Data were collected from juvenile court records and recidivism was defined as the number of days from the date in 1989 when the offenders were convicted in a juvenile court of a sexual offence to the date during follow-up when they were reconvicted in juvenile court for another criminal offence. Rasmussen (1999) found general recidivism to be 58.8% after 5 year follow-up. Sexual re-offence data showed that 14% had been convicted of a new sexual offence and 54% had re-offended non-sexually (Rasmussen, 1999). However, a limitation of this study was the inclusion of some offenders who did not complete or attend treatment. Approximately a third failed to complete treatment and 14% were either not referred for treatment or failed to follow through with the referral (Rasmussen, 1999). It may have been of interest to look at these groups separately and compare recidivism among treatment completers, non-completers and no treatment in order to explore the effectiveness of the treatment that some adolescents in this study received.

Nisbet, Wilson, and Smallbone (2004) followed up 303 male sexually abusive youth adolescent who had been assessed by the Sex Offender Program (SOP) of the New South Wales Department of Juvenile Justice. A minimum period of 4 years between assessment and follow-up of adult offending was included (mean follow up period 7.3 years). Recidivism was defined as the presence of charges or convictions as adults for both sexual and non-sexual offences. They were able to obtain adult re-arrest and reconviction data for 292 of these individuals. They found that 25% were reconvicted for sexual offences prior to their 18th birthday. Overall 9% came to the attention of police as adults (over the age of 18) for further alleged sexual offences, of which 5% of these were reconvicted for sexual offending. Overall 61% were reconvicted of non-sexual offences as adults. However relative to some of the other research included in this review the sample was quite old when first assessed (mean age 16.05 years, S.D. = 1.61).

Långström and Grann (2000) looked at a sample of 46 young sex offenders (mean age 18.13) who had been referred for forensic psychiatric evaluations. They followed up approximately 5 years after offenders had left prison or treatment, or from the first day of probation. Historical, clinical and criminal information was collected from forensic psychiatric evaluations. Information on criminal reconvictions for sexual and general re-offending (including sex offences) were gathered from a national register. Only 12 in the sample had attended compulsory forensic psychiatric inpatient treatment but this group was collapsed into the overall population and no description was given as to whether or not it included specialised sex offender treatment. Långström and Grann (2000) found recidivism rates of 20% for sexual offending and 65% for general recidivism. However these findings should be viewed with a little caution because, as with Nisbet et al. (2004), the age of this sample was quite old (ranged from 15 to 20 years) relative to other samples (for example compare with Kahn & Chambers, 1991; Schram et al., 1991). The relatively limited sample size may compromise the results.

Using a similar sample to above, Långström (2002) followed 117 young sex offenders after release from prison or treatment (mean follow-up was 116 months). Långström (2002) found that 30% of sex offenders had been reconvicted for sexual offences and 42% for violent non-sexual offences. However, as was the case above (see Långström & Grann, 2000), recidivism rates among young offenders who had received treatment were not separated out from the general study population, thus treatment efficacy was not assessed.

Recidivism studies by Rasmussen (1999), Rubenstein et al. (1993) and Sipe et al. (1998) illustrate the difference in rates of sexual and non-sexual re-offending by adolescent sex offenders. The studies by Långström and Grann (2000), and Långström (2002) also indicate expected levels of sexual and non-sexual recidivism among sexually abusive youth. However, although some of their sample had received treatment no details were given of the treatment and no analysis was included on differences in recidivism between treatment and non-treatment groups. Therefore, although these studies (Långström, 2002; Långström & Grann, 2000; Rubenstein et al., 1993; Sipe et al., 1998) indicate the levels of adult offending that can be expected from adolescent sexual and non-sexual offenders, nothing is learned about the effectiveness of specialised programmes for the treatment of sexually abusive youth. We now turn to look more closely at outcomes studies which have attempted to evaluate specialised programmes and look at sexual and/or non-sexual recidivism rates of sexually abusive youth who have received specialised treatment.

3.2. Outcome studies

A study of recidivism among convicted sexually abusive youth ($N=326$) was conducted by Allan, Allan, Marshall, and Kraszlan (2003) in Australia. The age at index sex offence ranged between 9 and 17 years (mean 15.1 years). Ninety-seven offenders in this sample were referred to the Psychological Service, some of whom were referred onto another agency (referred group) for treatment ($n=12$), some ($n=12$) were assessed but did not receive treatment (assessed only group), 73 received treatment (treated group) and 213 had not contact with the Psychological Service. At follow-up (mean=4.2 years) overall recidivism rates indicated that 9.5% of the sexually abusive youth who were convicted of sexual offences in Western Australia (from January 1990 to the end of June 1998) were convicted of new sexual offences and 66% of new non-sexual offences. When they investigated the level of intervention offenders had received they found that 11% of the treated group had re-offended sexually, a third of those in the assessed only group, 8% of the no contact group and 0% of the referred group. Overall the study found only one variable which predicted sexual re-offending once follow-up time had been taken into account and that was level of intervention. The authors suggest that this result be interpreted with caution due to the small number of offenders who were reconvicted for sexual offences (Allan et al., 2003). However, as the authors acknowledge a strength of this research is its relatively large sample and the fact that it follows the offenders into adulthood and is not limited to offending as children (Allan et al., 2003).

Lab et al. (1993) conducted a retrospective evaluation of case data in 155 files held by the juvenile court. The study involved the comparison of 46 adolescent offenders who were assessed as low to medium risk of re-offending and who received sexual offender treatment and 109 controls with a history of sexual offending referred to alternate programmes which rarely included specific interventions for sexual offenders and were considered high risk for re-offending. Lab et al. collected data including offence incident information, demographic information and risk scores. Follow up was not uniform and the exact length is not clear from the article but appears to have been between 0 and 3 years. They found that rates of sexual re-offending were 2.2% for the SOT (sex offender treatment) group and 3.7% for the control group. Rates for either sexual or non-sexual re-offending were 24% and 18% for the SOT and control groups respectively.

As little difference was found between adolescent sexual offenders in the SOT and control groups, the authors concluded that the specific sexual offender treatment programme was no better at reducing re-offending amongst adolescent sexual offenders than traditional treatment (Lab et al., 1993). Overall this study is weak in its description of the method used to conduct the research, making the study hard to replicate.

The efficacy of residential adolescent sex offender programmes was illustrated in research by Bremer (1992). This study involved 285 subjects released between April 1982 and January 1991 from an intensive treatment programme designed for serious juvenile sex offenders. Follow-up data was drawn from questionnaires completed during a phone interview or by subjects and returned by mail (self-report of sexual re-offending and positive programme elements) as well as conviction records. At follow-up Bremer (1992) was able to locate 193 offenders who had been at risk for varying lengths of time, from less than 6 months to 102 months (8 1/2 years). Rates of recidivism were 6% for sexual offences, with a self-reported re-offence rate of 11%.

Kahn and Chambers (1991) looked at the rates of recidivism among 221 adolescent sexual offenders aged between 8 and 18 years (mean=14.7). The study involved a retrospective evaluation of case data of 221 adolescent sexual offenders who entered treatment programmes. At follow-up (on average 20 months post treatment) the number and type of post referral juvenile court convictions for sexual and non-sexual offences were recorded. The results indicated that 7.6% of adolescent sexual offenders re-offended sexually and 6.6% non-sexually.

Hagan and Cho (1996) found that there was a difference between rates of sexual and non-sexual re-offending among rapists and adolescent abusers. Hagan & Cho compared two groups, adolescent rapists (against own age or older) and child sexual offenders (against children), who attended a treatment programme which involved group, individual and family therapy, behavioural assessment and management, sex education and general education. There were 50 in each group with an age range of 12–19 years and a mean length of time on the programme of 8 months. Follow-up was carried out 2 to 5 years after release from juvenile custody. Rates of recidivism for sexual offences were 10% for rapists and 8% for molesters, while for non-sexual offences rates were higher for both rapists and molesters (54% and 38% respectively).

Other researchers have looked, not only at recidivism, but elements of treatment that may positively impact on treatment. Mazur and Michael (1992) looked at a sample of 10 subjects between 13 and 17 years who were part of a 16 week treatment programme. One verbal follow-up was made 6 months after the completion of treatment (Mazur &

Michael, 1992). Although it is not clearly stated within the article, the 'verbal' follow-up appears to have taken the form of self-reports by the adolescent which the authors state were corroborated by their parents. Follow-up found rates of recidivism to be 0% which the authors attributed to the use of relapse prevention plans (Mazur & Michael, 1992). However it is worth noting that the sample was small and description of the follow-up was limited. A strength of this study was that participants (both the client and their family) were asked about the opportunity to relapse. However, the use of official records on re-arrest and re-convictions for sexual crimes may have lead to a different recidivism outcome. It would also have been interesting to also report levels of non-sexual offending.

Lambie et al. (2000) also looked at aspects of a treatment programme which were seen by graduated offenders as assisting them in not re-offending. They investigated the wilderness group therapy component of a community treatment programme for sexually abusive youth. The study looked at 14 adolescent sexual offenders (average age 16 years), as well as 12 parents (eight mothers, two father, and two both parents). Data was collected from a number of sources including the Sexual Response Questionnaire (SRQ), the Rosenberg Self-esteem Scale (RSE) and interviews with the adolescents and their parents (Lambie et al., 2000). Conviction data was collected from child protection service computer records. Lambie and colleagues looked at a number of variables including social skills, peer relationships, victim empathy, cognitive distortions, safety plans and coping with high risk situations, sexual offending cycle, perceived level of risk, intimacy and sexuality. Follow-up was carried out 2 years post-treatment and showed that none of the adolescent sexual offenders had been reconvicted. However this study included no comparison group and the sample size was small (14 adolescent sex offenders).

Miner (2002) looked at recidivism in 86 male adolescent offenders who had received treatment in a corrections-based sex offender treatment programme. The main purpose of this study was to identify variables which predicted re-offence risk, however information on recidivism was included. Recidivism was defined as "an arrest, conviction or parole violation resulting from any type of new criminal behaviour" (Miner, 2002, p. 427). Recidivism data was collected from three sources (two automated databases and data from parole files). Only 8% were found to have re-offend sexually at follow-up (ranged from a few months to 6.5 years, mean = 4.29 years). Miner (2002) also found criminal recidivism (any re-offending) rates of 55% and general recidivism (excluding sexual offences) of 47%. However the sample may be overly representative of severe sexual offenders as to be admitted to the corrections programme the young sex offenders had to have failed a community-based residential sex offender specific treatment programme or have been considered unsuitable for such a programme.

Waite et al. (2005) investigated re-offending amongst 256 adolescent sex offenders who attended one of two institutional, specialised treatment programmes. The specialised treatment programme involved cognitive behaviour focused, group and individual therapy sessions. Adolescents in the intensive programme ('self-contained' treatment group) were housed within dedicated units with other sex offenders, while adolescents involved in the less intensive programme ('prescriptive' treatment group) attended the specialised treatment programme as 'outpatients' and were housed with the general population of juvenile offenders (Waite et al., 2005). Recidivism was defined as adult and juvenile re-arrests and data was obtained from the Virginia Criminal Information Network and Department of Juvenile Justice Juvenile Tracking System. Recidivism rates for sexual offences were similar for both treatment groups (4.9% for the 'self-contained' treatment group and 4.5% for the 'prescriptive' treatment group). Recidivism rates for non-sexual person offences (e.g. simple assault, attempted murder, robbery, etc.) were 31% for those receiving 'self-contained' treatment and 47% for those receiving 'prescriptive' treatment while property offences (e.g. fraud, drugs and firearm offences, breaking and entering) were 11% and 19% respectively (Waite et al., 2005). Although this study lacked a comparison group of untreated adolescent sex offenders, a strength of the study lay in its definition of recidivism which included juvenile and adult re-arrests. Overall the study indicated that the level of intensity of specialised sex offender treatment the adolescent had received had little impact on sexual recidivism.

3.3. Summary of recidivism research findings

The focus of this review was outcome studies of treatment programmes for adolescent sex offenders. There are more recent studies on recidivism among sexually abusive youth (e.g. Allan et al., 2003; Långström & Grann, 2000) however they are not evaluations of programme effectiveness and therefore have been excluded.

The outcome studies reviewed here have shown that rates of re-offending by sexually abusive youth who have completed a specialised treatment programme vary for both sexual and non-sexual offences. Some results should be viewed with caution as often small sample sizes are used (e.g. Lambie et al., 2000; Mazur & Michael, 1992). Overall,

however, recidivism research suggests that some adolescent sex offenders go on to re-offend. The studies reviewed here suggest that anywhere between 0% and 40% will re-offend sexually with an average rate of sexual recidivism for those sexually abusive youth who receive treatment of about 8–10%. As many as 90% of sexually abusive youth will re-offend non-sexually (though usually the rate ranges between 8% and 50%).

Few of the studies reviewed included a control group (sexually abusive youth who had not received treatment or treatment dropouts) and are needed in order to see the actual effectiveness of treatment in reducing re-offending and in particular sexual recidivism. Those studies that did include a control group indicate that untreated sexually abusive youth have higher rates of sexual and non-sexual re-offending than those who received treatment. However, both treated and untreated sexually abusive youth show higher rates of non-sexual re-offending than sexual recidivism. It is those studies that have included a comparison group to which we now turn.

4. Utilization of comparison groups

Few recidivism studies on sexually abusive youth have used well defined comparison groups. In order for recidivism rates to be meaningful they need to be seen in relation to rates for those sexually abusive youth who do not receive treatment.

Hagan et al. (2001) compared adolescent rapists, child molesters, non-sex offending delinquents, and a sample of males from the general population (each group contained 50 individuals). Although it was positive to see a comparison group being included it would also have been useful to include a group of adolescent rapists and/or child molesters who did not receive treatment in order to ascertain treatment efficacy.

Alexander (1999) conducted a meta-analysis of 79 studies with a total of 10,988 subjects (adult and adolescent sexual offenders) with comparisons between treated and untreated sexual offenders. Recidivism was defined as re-arrest for new sexual offences, some of which may not have resulted in subsequent conviction. A range of data were collected including the decade treatment took place, length of follow-up, location of treatment (prison/hospital/outpatient), mode of treatment, whether relapse prevention was or was not included, duration of treatment, and whether treatment was voluntary or mandatory (Alexander, 1999). At between 1 and 5 year follow-up, Alexander (1999) found that rates of recidivism for those treated were 13%, compared to 18% for the non-treatment group.

Seabloom, Seabloom, Seabloom, Barron, and Hendrickson (2003) evaluated the effectiveness of a sexuality-positive adolescent sexual offender treatment programme. The programme offered group and individual psychotherapy sessions, family therapy, family group psychotherapy, marathon sessions (extended group sessions carried out in a retreat setting) and "Family Journey" (sessions which included family educational/sexual awareness seminars). The authors measured criminal recidivism (arrest rates, charges and convictions) 14 to 24 years (mean = 18 years) after participants (N = 122) had left the programme. Seabloom et al. (2003) compared those who had completed treatment, had withdrawn from treatment and had been referred to other treatment options. They reported that none of those who completed treatment were found to have subsequently re-offended sexually. Six[1] percent of those who were referred for treatment were rearrested, though none were convicted for further sexual offences. Ten percent of those who had withdrawn from treatment were rearrested and 8% convicted for new sexual offences. Criminal recidivism (any new criminal offence, including new sexual offences) was reported for each group as arrests and convictions and are as follows for the three groups; 8% and 8% respectively for the group who had completed treatment, 44% and 39% for the group that were referred only and 22% and 18% respectively for the group that had withdrawn from treatment. Rates for non-sexual offending are not reported here but are reported under four categories within the article; drug, property, violent and other offences. These results suggest that adolescent sex offenders who successfully completed treatment were less likely to be rearrested or reconvicted for sexual and non-sexual offences (Seabloom et al., 2003). Although there were no official records of sexual re-offending by those who completed treatment, this does not mean that no sexual offending took place, they may simply have avoided official detection. A strength of the design was that it allowed comparisons to be made between adolescents who successfully completed treatment and those who did not start or complete treatment. The study also included a long term follow-up.

In a recent study Edwards et al. (2005) compared treatment dropouts with treatment completers. The study included 49 adolescents (aged 12–16 years) attending a specialised residential treatment programme in the UK. Treatment

[1] Rates of arrests and convictions are reported as proportions by Seabloom et al. (2003) and have converted to percentages in this review to ease comparison with other studies.

completers were youth who stayed in treatment for the full length of the programme based on funded time (at least 2 years). Treatment dropouts were youth who left the programme for various reasons (e.g. treatment breakdown, escalating behaviour or personal choice) despite treatment staff recommending they continue the programme as they were not considered to have reached treatment targets (Edwards et al., 2005). Recidivism was defined as any conviction or caution following treatment termination. Offence data was collected from two national databases in England and Wales, with a minimum follow-up period of 6 months (range 6 to 107 months). Offences were categorised as sexual, violent or general. Recidivism rates were compared between treatment completers and treatment dropouts. Re-offence rates for treatment completers were 0% sexual re-offending, 8.3% violent, non-sexual re-offending and 25% non-violent, general re-offending. Rates for the treatment dropouts were 16%, 32% and 68% respectively. Overall, youth in the treatment completers group were found to have offended less in all offence categorises since leaving treatment with analysis suggesting there are significant differences between the two groups in rates of general and violent re-offending (Edwards et al., 2005). This study is unique amongst the studies included in this review as it included treatment completers and dropouts. It illustrated that completing treatment decreases the risk of adolescent sexual offenders going on to re-offend post treatment, when compared with those who do not complete treatment. This study would have been strengthened by the inclusion a comparison group of untreated adolescent sex offenders in order to further assess the efficacy of specialised treatment programmes.

The first, and to date only randomized study found on adolescent sexual offender treatment was carried out by Borduin, Henggeler et al. (1990) and Borduin, Mann et al. (1990). They followed up 16 adolescent sexual offenders (mean age 14 years) and randomly assigned each client to multisystemic therapy (MST) or the individual therapy (IT) conditions (8 in each). Individual therapy (IT) focused on personal, family, and academic issues and included psychodynamic, humanistic, and behavioural models of therapy. Individual therapy (IT) did not include any sex offender specific treatment. Borduin, Henggeler et al. (1990) and Borduin, Mann et al. (1990) defined recidivism as sexual or non-sexual offences and checked for the history of arrests using juvenile and adult court records and police records. Follow-up was carried out an average of 3 years (range 21–49 months) after leaving treatment and showed that rates of recidivism for the MST group was 12.5% for sexual offences, and 25% for non-sexual offences, compared to 75% for sexual offences, and 50% non-sexual offences for the IT group. Overall the research showed that MST was more effective in reducing sexual and non-sexual re-offending by adolescent sexual offenders 3 years after leaving treatment. However this does not show what rates of recidivism would be if the offenders received no treatment. The sample size was also very small.

Worling and Curwen (2000) conducted their research on a specialised community-based treatment programme. The method included the completion of self-report measures during the initial assessment and then a follow-up 2–10 years later (mean 6 years, mean age 21.5 years) (Worling & Curwen, 2000). A battery of psychological tests was administered for standardised data on social, sexual and family functioning. This battery included self report tests (Multiphasic Sex Inventory—Juvenile Male—Research Edition (MSI-J-R) in particular the Child Molest and Rape Total scales) which was specifically designed to assess sexual attitudes, interests and behaviours of male sexual offenders (Worling & Curwen, 2000). Data collected during follow-up included criminal charges for sexual, violent non-sexual and non-violent offences. This study included 148 adolescent sexual offenders (139 males and 9 females) aged between 12 and 19 years (mean 15.5 years, S.D. = 1.5) (Worling & Curwen, 2000). Fifty-eight of the offenders (53 males and 5 female) formed the treatment group as they had at least 12 months of specialised treatment and 90 (86 males and 4 females), adolescents were included in the comparison group. Adolescents included in the comparison group had received assessment only, refused treatment, or dropped out before 12 months. Rates of recidivism varied between the treated and the comparison group. Rates for those who were treated were 5.17% for sexual re-offending,[2] 18.9% for violent non-sexual re-offending and 20.7% for nonviolent re-offending (Worling & Curwen, 2000). Rates for those who had not received treatment were 17.8%, 32.2% and 50% respectively.

One of the positive aspects of Worling and Curwen's (2000) research is that they overcame a problem associated with many of the studies reviewed here by including a comparison group who had not received treatment. As Marshall, Jones, Ward, Johnston, and Barbaree (1991) point out, deliberately withholding treatment from a group of sexual offenders would be ethically unacceptable so making use of those untreated offenders as Worling and Curwen did allows comparisons to be made and aids in the estimation of rates of recidivism when treatment is not received.

[2] In another article Worling (2001) considers differences in recidivism rates between adolescent sex offenders with different personality-based typologies.

4.1. Summary of the utilization of comparison groups

Research to date has included various forms of comparison methodologies when investigating recidivism in sexually abusive youth. Borduin, Henggeler et al. (1990) compared the effectiveness of two different treatments in reducing recidivism among sexually abusive youth. Borduin and colleagues (Borduin, Henggeler et al., 1990; Borduin, Schaefferm, & Heilbluma, 2000) found that multisystemic therapy was more effective in reducing sexual and non-sexual re-offending than individual therapy. However this study fails to show recidivism rates among both treatment groups compared to sexually abusive youth who received no treatment. The most recent research (Borduin et al., 2000) appears to be trying to overcome this shortcoming by including a comparison group of sexually abusive youth who did not receive treatment. Studies such as those by Alexander (1999) and Worling and Curwen (2000) investigated programme efficacy by comparing recidivism rates of sexually abusive youth who have received treatment with those who did not. Both these studies were able to show, by the inclusion of both treated and untreated populations, that treatment helps reduce re-offending by sexually abusive youth up to 10 years after treatment completion. Therefore in order to be able to convincingly conclude that treatment programmes for sexually abusive youth are effective in reducing the rate of re-offending, recidivism amongst treated sexually abusive youth must be compared to outcomes for those who do not receive treatment and/or those who did not complete treatment.

There are ethical reasons for not randomly allocating sexually abusive youth to treatment and non-treatment groups. There are, however, challenges for researchers in identifying sexually abusive youth who did not receive treatment. One option is a comparison group of those sexually abusive youth who were referred for treatment, were assessed but did not attend and another is sexually abusive youth who did not complete treatment (e.g. see Edwards et al., 2005). However researchers using these youth as comparison groups need to be aware that there may be selection factors operating and that these youth may systematically vary in some way from those who attend and/or complete treatment.

5. Directions for research

Research into recidivism among sexually abusive youth is a relatively new field. For this reason, many studies to date have been weak in design. Studies need to consider three main points; the population being studied and the utilization of comparison groups, the criteria used for recidivism and follow-up period. A fourth point to consider is other measures of programme effectiveness which may be worth utilising when evaluating programme efficacy. Table 3 summarizes some of the main methodological issues for recidivism research on sexually abusive youth.

5.1. Study population and the use of comparison groups

Researchers need to consider the characteristics of the study group and carefully select an appropriate comparison group to be used in the study. Most reviewers of the research on recidivism are critical of the lack of comparison or matched control groups (United States General Accounting Office, 1996). Studies need to compare treatment and non-treatment group (Marshall et al., 1991; United States General Accounting Office, 1996). This would allow for the examination of recidivism rates for sexually abusive youth who did not receive treatment and also enable the investigation of factors associated with re-offending (Marshall et al., 1991).

Consideration needs to be given to what criteria treatment and no treatment groups will be matched. Criteria for matching may need to look beyond the normal criteria of age, gender and SES. Groups could be matched on the following factors: sexual and non-sexual offending behaviours, risk level, abuse histories, psychological diagnosis, family characteristics (e.g. parental divorce/separation) and the presence or absence of other co-morbid factors such as social skills deficits, academic problems and substance abuse.

There is some suggestion that comparisons between treatment completers and matched untreated controls may be misleading without including treatment dropouts (Quinsey, Harris, Rice, & Laumiere, 1993). Differences between treatment completers and controls may reflect more about selection than treatment effects and so Quinsey et al. suggest therefore that it is important to include treatment dropouts in the control group. However untreated controls and treatment dropouts are both problematic and have their own biases of which researchers must be aware.

A strength of the research reviewed is that large samples of more than 100 are not uncommon. The strongest design would be a randomised study with sexually abusive youth randomly assigned to various treatment and non-treatment groups. However even in randomised studies, systematic differences are not always found between groups (Hanson,

Table 3
Methodological checklist for conducting outcome studies with sexually abusive youth

Criteria	Types	Problems	Use
Comparison group	Randomised	▪Ethics: should a control group of equally in need individuals be denied treatment?	▪Can be used with group >100 ▪May be suitable when individuals are randomized to different treatment conditions
	Matched	▪Ethical problems as above if matched prior to selection ▪Selecting the most appropriate variables to match	▪May be used for post-hoc study when untreated offenders can be located ▪Suitable for samples of less than 100
	Untreated	▪Selected. May be different to treatment group in important pre-existing characteristics	▪When randomized or matched group unavailable
	Treatment dropouts	▪Self selected. May be different to treatment group in important pre-existing characteristics	▪When randomized or matched group unavailable
Recidivism measure	Official arrests	▪Conservative. Underestimates rates of re-offending ▪Access to official records	▪Suitable with large numbers and long period of time since treatment
	Official convictions	▪Likely to be even more conservative than arrests ▪Access to official records	▪Suitable with large numbers and long period of time since treatment
	Adult incarceration	▪The most conservative measure ▪Criteria for incarceration may vary over time and in different locations ▪Access to official records	▪Unlikely to be suitable
	Self-report: interview and/or survey	▪Self-report biases such as social desirability, fear of official sanctions	▪Suitable for small numbers and with new programme
	Wider system: family, social workers, etc.	▪May not have complete information about offender's thoughts and behaviour	▪Suitable in conjunction with other measures, such as self-report, especially for new programme with small numbers
Offences	Sexual	▪Conservative. Narrow criteria increases chances of falsely showing no programme effect	▪Suitable with large numbers and long period of time since treatment
	Non-sexual	▪May only be indirectly related to sexual offending ▪May not be targeted by treatment	▪Suitable in as additional measure to sexual offending
Other measures	Standardised psychological tools	▪Self-report biases	▪Suitable for small groups and little or no follow-up period post-treatment
		▪May not be relevant to programme aims	▪Must be used prior to and after treatment
		▪May be measuring static (fixed) personally characteristics not dynamic (changeable) dimensions	▪Should be used in conjunction with other measures
Follow-up	Short-term <2 years Medium-term 2–5 years Long-term >5 years	▪Often too short to be useful	▪Less than 5 years considered preliminary ▪Will be more meaningful with large numbers

1997; Miner, 1997) and there are the ethical considerations in relation to withholding treatment. However efforts should be made to include a treatment group and non-treatment/comparison group even if assignment is not random. Though initial selection may cause some bias, matching can be used to control some of these and problems with differential mortality in the groups can be described (Miner, 1997).

5.2. Criteria for recidivism

Many of the studies reviewed here utilize official records when determining recidivism among sexually abusive youth (Alexander, 1999; Borduin, Mann et al., 1990; Brannon & Troyer, 1995; Bremer, 1992; Hagan & Cho, 1996; Hagan et al., 1994a, 1994b; Kahn & Chambers, 1991; Lab et al., 1993; Schram et al., 1991; Smith, & Monastersky,

1986; Worling & Curwen, 2000). However some of these studies used arrests as the criteria for recidivism, others used the number of convictions since leaving the programme, while still others included both arrests and convictions in their definition of recidivism.

Self-reports are rarely used. Mazur and Michael (1992) used self-report and parent-report of re-offending, while Lambie et al. (2000) supported computer data from the child protection services with self-reports of re-offending. Despite their obvious weaknesses, confidential self-reports can provide offending data for which the young person has been neither arrested nor convicted. Therefore they do have a role in outcome studies and can be used in conjunction with recidivism data from statutory records. Family reports of offending can also be another useful source of information and where possible should also be used.

Weinrott (1996) suggests that as young people in the United States are so geographically mobile, recidivism data gathered from official records in a single jurisdiction or even state-wide would not include arrests occurring elsewhere. A study in New Zealand would be able to circumvent this problem faced by researchers in North America as we have a smaller population and a country-wide law enforcement agency and official records are held by a single agency.

5.3. Follow-up period

Many reviewers are critical that the follow-up periods used in research on sex offender recidivism are not adequate (United States General Accounting Office, 1996). Most research uses only one follow-up period, of varying length. Data indicate that the longer the follow-up period, the more likely an offender is to re-offend therefore outcome studies need to use long-term follow-up (Marshall et al., 1991).

5.4. Other outcome measures

Sex offender programmes need to be evaluated, however it has been suggested that recidivism should not be the sole measure of program effectiveness (Freeman-Longo & Knopp, 1992; Marshall et al., 1991). Sexual abuse can have long-range effects on victims' lives and so any treatment effort to reduce the amount and severity of sexual violence, for any period of time and for any person, is a worthwhile endeavour and can be cost effective (Freeman-Longo & Knopp, 1992; Marshall et al., 1991). In this case the aim of treatment would be the reduction and control rather than the total elimination of the offending behaviour.

6. Overall conclusion

In the last two decades there has been an increase in research on sexually abusive youth. This has increased our knowledge of personality, system and offence characteristics. It has also resulted in a marked increase in the number of programmes available to treat sexually abusive youth. However it is only in the last 10 years that research has turned to look at the efficacy of these programmes.

This review focused exclusively on recidivism among sexually abusive youth and most of the research included came out of the United States. A few come out of Canada (Gretton et al., 2001; Worling & Curwen, 2000) and even fewer from other countries such as New Zealand (Lambie et al., 2000), Australia (Allan et al., 2003) and the United Kingdom (Edwards et al., 2005). Differences in the contexts in which programmes were developed, run and evaluated will have implications on the generalisability of findings. Recidivism rates found in different studies may be complicated by a number of other factors of which the reader needs to be aware when comparing studies. These include variations in the age of samples, sample sizes, follow-up periods, treatment settings and treatment type.

In most of the research reviewed the age range of the samples were similar, ranging from approximately 12 to 18 years (plus or minus a year) (for example see Becker, 1990; Brannon & Troyer, 1995; Hagan & Cho, 1996; Mazur & Michael, 1992; Smets & Cebula, 1987). However some studies included younger offenders. For example Schram et al. (1991) and Kahn and Chambers (1991) both included sex offenders as young as 8 years in their samples.

Another factor the reader should be aware of includes variability in follow-up length. In the studies reviewed follow-up was as short as a few weeks (Kahn & Lafond, 1988) through 14 years (Sipe et al., 1998) and even 24 years (Seabloom et al., 2003). It would be expected that the longer a sexually abusive youth is at risk, the greater the chance they will re-offend. This was highlighted by Hagan and Gust-Brey (1999) who found a recidivism rate for sexual re-offending of 8% after 5 years and 16% after 10 years. Therefore comparisons between studies with short follow-ups

(e.g. Becker, 1990; Mazur & Michael, 1992) and with longer follow-ups (e.g. Borduin et al., 2000; Rubenstein et al., 1993) should be done cautiously.

Sample size has implications for the power of the sample and the certainty we have in the results found being true results and not statistical errors. For this reason results from studies with small samples (Borduin, Henggeler et al., 1990; Lambie et al., 2000; Mazur & Michael, 1992; Rubenstein et al., 1993) should be viewed cautiously and also compared to other findings with care.

The studies reviewed cover a range of treatment settings. Treatment settings included residential and inpatient correctional settings and community-based and outpatient. No evaluation was found which included a comparison of the effectiveness of these different treatment settings on long-term outcomes. Treatment programmes also offered a range of therapy types (e.g. family, individual, group therapy). Therefore comparisons between outcome studies of different treatment settings and therapy types should be done with care. For a recent review of treatment approaches see Fanniff and Becker (in press). The authors conclude that cognitive behavioural and multisystemic therapy demonstrate the greatest promise in decreasing recidivism amongst sexually abusive youth (Fanniff & Becker, in press).

Research has involved almost exclusively male samples and female sex offenders have been largely left out of the research to date. Some studies have included females but usually their numbers are too small for any meaningful statistical analysis to be conducted (e.g. Allan et al., 2003; Rasmussen, 1999). This is an area that would warrant further research.

As outcome research is in its infancy there are a number of weaknesses in design which need to be consistently addressed by researchers prior to conducting research rather than relying exclusively on past studies which may be limited in the generalisability of their findings. The key issues explored here have been the use of comparison groups in order to assist in the interpretation of recidivism rates, definitions of recidivism and the follow-up length. Until such methodological issues are addressed it is impossible to determine with any accuracy whether traditionally based group and residential interventions are effective and/or more effective than programmes which use more ecologically based models such as multi-systemic and wrap around services (Borduin & Schaeffer, 2001). This review has highlighted aspects of existing recidivism research which could be improved in order to strengthen future research. A clear summary of the key issues to be considered when designing studies which evaluated specialised treatment programmes for sexually abusive youth is provided to guide future researchers in the field of recidivism and evaluations of programme effectiveness.

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