Sexual Assault Referral Centre (SARC) Review of Peer-Reviewed Publications

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Executive Summary

- Treatments for adverse psychological outcomes following sexual assault should be symptom specific.
- The treatment of childhood victims of sexual abuse improves symptom severity. Trauma-focused CBT-behavioural treatments in combination with supportive therapy and a psychodynamic element (e.g., play therapy) appear to work best for self-esteem, sexualised behaviour and anxiety.
- For sexually abused children, behavioural and global symptoms are most effectively treated with a combination of CBT and supportive therapy and depression is best treated by psychodynamic therapies.
- When treating sexually abused children, longer treatment durations are likely to yield larger improvements in symptoms. Over twenty sessions are most effective for externalising behaviour, sexualised behaviour, self-concept, social skills and caregiver symptoms. Between ten and twenty sessions are more effective for PTSD.
- The treatment of adults sexually abused as children improves symptoms. Cognitive-behavioural approaches and EMDR had the largest treatment effect. Supportive therapy, which includes counselling, is contraindicated.
- The treatment of adult victims of rape or sexual assault suggests that may reduce symptoms. EMDR demonstrated improvements in PTSD, depression, anxiety and dissociation. Cognitive processing therapy demonstrated improvements in PTSD, depression and guilt. Psycho-educational approaches demonstrated improvements in PTSD, depression, anxiety, guilt and dissociation.
- Male victims of sexual abuse and assault are under researched, but there is some evidence that boys benefit as much if not more than girls for symptoms of sexualised behaviours and social functioning.

Contents

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Glossary of terms

Database Acronyms

ASSIA	Applied Social Sciences Indexes and Abstracts
CENTRAL	Cochrane Central Register of Controlled Trials
CDSR	Cochrane Database of Systematic Reviews
CINAHL	Cumulative Index to Nursing and Allied Health Literature
CJA	Criminal Justice Abstracts
CPCI	Conference Proceedings Citation Index – Social Science & Humanities
DAI	Dissertation Abstracts International
EBM	EBM Reviews
EMBASE	Excerpta Medica Abstract Journals
ERIC	Education Resource Information Centre
ICTRP	International Clinical Trials Registry Platform
LILACS	Literature in the Health Sciences in Latin America and the Caribbean
MEDLINE	Medical Literature Analysis and Retrieval System Online
mCRT	Meta Register of Controlled Trials
PILOTS	Published International Literature on Traumatic Stress
PsychInfo	Psychological Abstracts
SSA	Social Services Abstracts
SSCI	Social Sciences Citation Index
SWA	Social Work Abstracts
VAA	Violence and Abuse Abstracts

Intervention Acronyms

AT	Assertiveness training
BBIP	Brief behavioural intervention procedure
CAED	Clinician assisted emotional disclosure
CAT	Cognitive analytical therapy
CBT (TF/NTF)	Cognitive-behavioural therapy (trauma-focused/non-trauma focused)
CCT	Child-centred therapy
CPT	Cognitive processing therapy
CR	Cognitive restructuring
DBT	Dialectical behaviour therapy
EFT	Emotion focused therapy
EMDR	Eye movement desensitisation and reprocessing
IRT	Image rehearsal therapy
PE	Prolonged exposure
PMR	Progressive muscle relaxation
SC	Supportive counselling
SCST	Specific coping skills training
SD	Systematic desensitisation
SIT	Stress inoculation therapy
SP	Supportive psychotherapy
STAIR	Skills training in affect and interpersonal regulation
ST	Supportive therapy

SECTION 1: Effective support for victims of sexual violence: A systematic review of reviews

1.1. Introduction

Sexual violence is recognised as a global problem that can take the form of sexual abuse, rape and sexual assault against children and adults (Bidarra, Lessard & Dumont, 2016; García-Moreno, 2013). Although estimates vary due to the use of different definitions of sexual violence and sampling methods, some prevalence figures suggest that up to 27% of men and 35.6% of women are exposed to actual or attempted sexual assault and rape in their lifetime (García-Moreno, 2013; Peterson, Voller, Polusny & Murdoch, 2011). This extends to sexual violence experienced in childhood, with 7.9% of men and 19.7% of girls recalling some form of sexual abuse in their formative years (Pereda, Guilera, Forns & Gómez-Benito, 2009). Data from England and Wales mirrors findings that females generally report more frequent exposure to sexual violence, with approximately 0.4% of males and 2.5% of females aged 16 to 59 experiencing some form of sexual victimisation (Ministry of Justice/Home Office/Office for National Statistics, 2013). Yet, these data may only reflect a proportion of the wider population who experience sexual violence, due to significant underreporting of such acts (Spohn & Tellis, 2012).

The effects of sexual violence have been well-documented. Among all types of adversity that people may experience in the lifetime, sexual violence is thought to be associated with more severe psychological outcomes due to its deliberate and intimate nature as opposed to natural occurrences (Ehring & Quack, 2010). A range of intrapersonal and interpersonal difficulties have been reported by adult victims, including anxiety, depression, posttraumatic distress disorder (PTSD), self-harm or suicidality, substance use, and detrimental effects on coping and self-esteem (Campbell & Wasco, 2005; Elliot, Mok & Briere, 2004). In addition, some children who experience sexual abuse display conduct problems in school, physiological changes and the premature development of sexualised behaviours (Putnam, 2003). Recent literature has also drawn attention to the negative implications of delayed disclosure in adults who experienced sexual abuse in childhood, including poor perceptions of social support and interpersonal conflict (Lamoureux, Palmieri, Jackson & Hobfoll, 2012; Tener & Murphy, 2015). The effects of sexual violence are compounded in light of experiencing other forms of adversity in child and adulthood (Witt et al., 2016).

As the body of literature on the prevalence and effects of sexual violence continues to develop, studies have turned to evaluate the effectiveness of interventions designed to support

victims and reduce negative outcomes associated with their adverse experiences. Treatment outcome research is particularly salient given the psychological and economic costs as a result of sexual violence. In the UK alone, the cost of sexual violence is estimated at £3.2 billion per annum (Saier-Tessier, 2014). This has implications for criminal justice and health services that respond to sexual violence. Numerous empirical investigations concerning the effectiveness of various support and treatment approaches have emerged and are discussed below.

1.2. Description of interventions

Therapeutic models designed to support and treat victims of rape, sexual assault and child sexual abuse typically fall into cognitive-behavioural, psychodynamic and supportive approaches.

1.2.1. Cognitive-behavioural approaches

Cognitive-behavioural therapy (CBT) is a popular term often used to describe interventions that view trauma symptomology as being sustained by an individual's perception of an adverse event (Hofmann, Asnaani, Vonk, Toyer & Fong, 2012). Variants of CBT have been developed such as cognitive analytic therapy (CAT), cognitive processing therapy (CPT) and cognitive restructuring that use similar principles. Interventions can also include assertiveness training (AT), eye movement desensitisation and reprocessing (EMDR), exposure therapies and stress inoculation training (SIT). Collectively, these interventions refer to a broad range of treatments that are based upon cognitive-behavioural models which seek to challenge unhelpful thoughts in order to manage disorders (Foa, Keane, Friedman & Cohen, 2008). Cognitive-behavioural approaches are recommended as a short-term treatment, with some clients responding to fewer sessions and those with more complex needs requiring a longer course of therapy (Foa et al., 2008). A recent review of cognitive-behavioural attrition rates indicated that 15.9% of clients' dropout pre-treatment, rising to 26.2% during treatment (Fernandez, Salem, Swift & Ramtahal, 2015). Tentative evidence (Imel, Laska, Jakupcak & Simpson, 2013) suggests that interventions with a trauma-focus (such as trauma-focused CBT or exposure) may experience higher dropout than those that are 'trauma-avoidant' (such as person-centred approaches), although future research is needed to establish if this is a general trend or an artefact of differences in study methodology.

1.2.1.1. Assertiveness training

AT in the context of sexual assault, rape and abuse, is a method of building skills with the aim of preventing future victimisation, using techniques derived from the work of Lange and Jakubowksi (1976) and Rational Emotive Therapy (Ellis, 1977). Clients are encouraged to

speak to others about their adverse experiences as a means of enhancing social support and modifying attitudes. Through a process of rehearsal, it is expected that a client's fear and use of avoidance would decrease after AT, as the capacity to use learnt skills to manage distress increases (Resick, Jordan, Girelli, Hutter & Marhoefer-Dvorak, 1988).

1.2.1.2. Cognitive analytic therapy

CAT is derived from the work of Ryle (1990) and aims to understand the origins of a person's thoughts, feelings and behaviours. It combines cognitive models with analytical or psychodynamic approaches that seek to explore previous experiences that may explain difficulties within a client's presentation. A key feature of this approach is the collaborative nature in working to identify sequences and patterns of thoughts, feelings and behaviours that sustain a specific problem (Kerr, 2015). Recent research has highlighted that CAT may have benefits for victims of childhood sexual abuse (Calvert, Kellett & Hagan, 2015).

1.2.1.3. Cognitive processing therapy

CPT is a manualised treatment based on information processing theories (Resick & Schneike, 1993). It was first designed to treat PTSD symptoms in rape victims but has since been extended to include the wider trauma population (Resick, Monson & Chard, 2014). It is primarily concerned with revising maladaptive cognitive beliefs that are activated in response to adversity, by identifying maladaptive thoughts and associated feelings and behaviours, and exposing the client to their stressful event through writing or reading an account of their experience (Resick et al., 2014). The aim of the sessions is to assist the client to identify thinking errors that can maintain posttraumatic symptoms. Evidence suggests that CPT enjoys broad support in reducing distress among populations with PTSD (Cusack et al., 2016). Dropout rates can range up to 26.4% (Galovski, Blain, Mott, Elwood & Houle, 2012).

1.2.1.4. Cognitive restructuring

CR is an intervention designed to identify maladaptive thoughts and cognitive distortions associated with distress (Foa et al., 2008). It places emphasis on individual appraisals of the event that are thought to determine reactions, rather than the event itself. The purpose of CR is to modify and replace existing irrational thoughts about the event with adaptive cognitions. CR has shown some efficacy in the treatment of posttraumatic stress symptoms (Cusack et al., 2016) and among sexual assault victims (Foa & Rauch, 2004).

1.2.1.5. Eye movement desensitisation and reprocessing therapy

EMDR is a psychotherapeutic technique first devised by Shapiro (1989), based on the chance observation that eye movements appeared to reduce the intensity of distressing thoughts. The approach proposes that negative symptoms arise due to inadequate storage of

memories associated with the adversarial event (Shapiro, 2002). EMDR aims to resolve traumatic memories, desensitise the client to triggers associated with the event and encourage positive ways of coping (Rothbaum, 2005). EMDR has been found to be moderately effective in reducing distress among wider studies of children and adults exposed to adversity (Cusack et al., 2016; Rodenburg, Benjamin, de Roos, Meijer & Stams, 2009). EMDR is a relatively brief intervention in terms of its functional duration; the length of treatment should be guided by the needs of the client, such that those with exposure to multiple traumas may require a longer period of treatment (Foa et al., 2008). However, EMDR has not been found to significantly worsen symptoms, with one study reporting a completion rate of 78% (Taylor et al., 2003).

1.2.1.6. Exposure therapies

Exposure therapies aim to reduce distress associated with exposure to a stressor (Foa et al., 2008). They are based on emotional processing theories (Rauch & Foa, 2006) and like CPT, propose that symptoms are maintained by unwanted thought patterns. Exposure therapies can include prolonged exposure and systematic desensitisation and involve an educational component about common reactions to adversity, before the client is gradually and repeatedly confronted with stressors through in-vivo and imaginal exposure. As a result, it is expected that the negative conditioned response to the stressor is reduced as exposure increases (Foa et al., 2008). Exposure therapies have shown some efficacy among populations with PTSD symptoms (Cusack et al., 2016), including sexual assault victims (Foa & Rauch, 2004). Although there are no specific guidelines in respect of treatment duration, 10 sessions of prolonged exposure (PE) have been suggested to approximate actual clinical practice (Abramowitz, Deacon & Whiteside, 2012). Exposure therapies experience a dropout rate of approximately 31.9% (Taylor et al., 2003).

1.2.1.7. Stress inoculation training

SIT is a therapeutic technique designed to help clients build resiliency to handle adverse events and minimise distress. It was first proposed by Meichenbaum (1977) as a way to alter an individual's maladaptive thoughts about adverse events that contribute towards distress, in order to prepare them for the effects of subsequent stressors. The aims of SIT are to educate the client about the nature of stress so they can acquire coping skills that are subsequently put into practice. SIT has been observed to demonstrate reductions in distress comparable cognitive treatments (Flaxman & Bond, 2010) as well as comparable attrition rates (22.1%) with exposure therapy and EMDR (Hembree et al., 2003).

1.2.2. Psychodynamic approaches

Psychodynamic or psychoanalytic approaches have a long history of attending to the distress of people exposed to adversity, including victims of sexual assault and rape. Psychodynamic modalities underpin many treatment approaches and are known for their focus on emotional states and meaning in experiences. Specifically, psychodynamic approaches include an exploration of distressing emotions, past experiences, defence mechanisms, wishes and fantasies, interpersonal relationships and resolving intra-individual conflicts that maintain distress (Shedler, 2010). Psychodynamic approaches have shown mild to moderate efficacy in addressing a variety of psychological disorders (Abbass, Hancock, Henderson & Kisley, 2006). The duration of psychodynamic treatment varies according to the complexity of the client's presentation, from as little as eight sessions to more long-term work of approximately two years (Shelder, 2010). Based on a sample of 69 studies, 20.0% of clients dropped out of psychodynamic therapy prematurely (Swift & Greenberg, 2012).

1.2.3. Supportive approaches

Supportive psychotherapeutic approaches refer to a range of therapies that contain elements of cognitive, behavioural and psychodynamic techniques. Supportive approaches can include humanistic treatments, person-centred counselling or psychotherapy (Rogers, 1959; Winston, 2004). The goal of such treatments is to provide a safe environment for the client to describe their experiences of adversity and its effects on themselves and those around them. Collectively, this empowers to client to identify helpful ways of managing distress and normalise their experiences (Winston, 2004). Attrition rates for supportive approaches are broadly comparable to those for CBT. One low-intensity service reported a dropout rate of 31% among those who originally opted-in to receive person-centred therapies (Grant et al., 2012), although other estimates are around 17.3% (Swift & Greenberg, 2012).

1.2.4. Other approaches

A range of other therapies have been used to manage the effects of child sexual abuse, sexual assault and rape for child and adult victims. Among adult samples, imagery rehearsal therapy (IRT) is used in the treatment of nightmares that can occur after a stressful event (Casement & Swanson, 2012), although there is limited evidence with regard to its effectiveness in sexual assault cases. One study reported high attrition rates of 46.2% (Krakow et al., 2001). In situations where intervention is desired in the months immediately after the adverse event, brief behavioural intervention procedures (BBIPs) follow a process of inducing affect about the event or relaxation, and cognitive-behavioural procedures (Foa, Hurst-Ikeda & Perry, 1995). The procedure has been reported to significantly lower PTSD symptoms in a

sample of rape victims two months post-incident (Foa et al., 1995). Relaxation techniques may also be used alone or in the context of other therapeutic approaches to reduce distress and specifically hyperarousal symptoms which prevent engagement with stress-related stimuli (Taylor et al., 2003). Evidence suggests relaxation does not worsen symptoms and has a completion rate of 78.9% (Taylor et al., 2003).

For children exposed to adversity including sexual abuse, play therapy is a medium to express feelings safely. It is based on the belief that a child's internalised thoughts and feelings can be represented openly through play rather than through more direct methods which may be perceived as threatening (Kot et al., 1998). Play therapy has the benefit of allowing the child to communicate distress but to also engage in self-discovery and growth (Myers, 2015). Although no specified duration of treatment is prescribed, favourable treatment outcomes are generally associated with a longer duration of play therapy (Leblanc & Ritchie, 2001). Estimates for attrition rates for play therapy are as high as 60% (Campbell, Baker & Bratton, 2000).

1.3. Aim and purpose of review

In response to the growing body of research on the effectiveness of support for sexual violence victims, numerous reviews have been conducted to synthesise the treatment outcome literature. Indeed, a sufficient number of reviews concerning treatment evaluation have now become available over the past three decades. However, these reviews have also become unmanageable in number and vary in scope or quality, which would make it difficult to draw conclusions about the effectiveness of a specific type of support or intervention. Conducting a 'review of reviews' is the next logical step and an approach that is increasingly embraced by organisations such as the UK College of Policing (e.g. Wheller & Wire, 2014) and among the wider psychological literature (e.g. Benuto & O'Donohue, 2015; Maniglio, 2009) as a way to condense and identify pertinent findings from a large pool of empirical studies. It is therefore necessary to bring together reviews of treatment outcomes for sexual violence in order to compare and contrast evidence to aid clinical decision-making.

SECTION 2: Search method

A systematic search of the literature was undertaken in order to identify reviews that considered the effectiveness of support and treatment for victims of sexual assault, child abuse and rape.

2.1. Inclusion criteria

Review articles were examined based on the following criteria: (1) written in English; (2) meta-analytic and systematic review articles of psychological or mental health interventions; (3) published in a peer-reviewed journal; and (4) included child, adolescent and/or adult victims of sexual abuse and rape in childhood and/or adulthood. There were no restrictions in respect of the location or date of the review articles. Reviews were excluded if purely narrative in nature or they did not disaggregate data for victims of sexual assault among other adverse events, such as physical abuse.

2.2. Identification and selection of review studies

A computer literature search was conducted to by the two authors to identify review articles that considered treatment outcomes for children, adolescents and adults who had experienced sexual abuse, sexual assault and rape in childhood and/or adulthood. Search terms included: “sexual abuse”, “sexual assault”, “rape”, “therapy”, “support” and “intervention” (see Appendix I for summary of search terms). In order to provide a thorough review, search methods recommended by Lipsey and Wilson (2001) and Hunter and Schmidt (2004) were employed. Firstly, this involved the exploration of multiple electronic databases such as the Campbell Systematic Reviews, Cochrane Library, Medline and PsychInfo (see Appendix II for full list of databases). Articles were searched up until 9 May 2016. Secondly, the reference lists of the systematic reviews were manually searched in order to identify other reviews. Finally, contact was made with relevant authors for additional material or clarification.

The two authors extracted relevant information from the review articles for the purposes of later analysis, including: the author(s) and year of publication, inclusion and exclusion criteria, studies cited, sample characteristics, interventions assessed and outcome measures.

SECTION 3: Literature search results

3.1. Literature search

The search initially revealed 35 abstracts among the databases of interest and these were reviewed by the two authors to determine suitability. Some of the abstracts appeared in multiple databases and it was not always clear from the text whether the article met the inclusion criteria. One study (Ehring et al., 2014) was removed as it was not possible to disaggregate data for sexual assault survivors from those exposed to childhood adversity. A further study (MacDonald et al., 2006) was superseded by an updated version published elsewhere in the review sample (MacDonald et al., 2012). Fourteen studies were removed as these were narrative reviews and therefore did not provide data for the calculation of effect sizes. Of the remaining 18 reviews, a further five were removed as they did not report effect size data. A summary of the study selection process is presented in Figure 1.

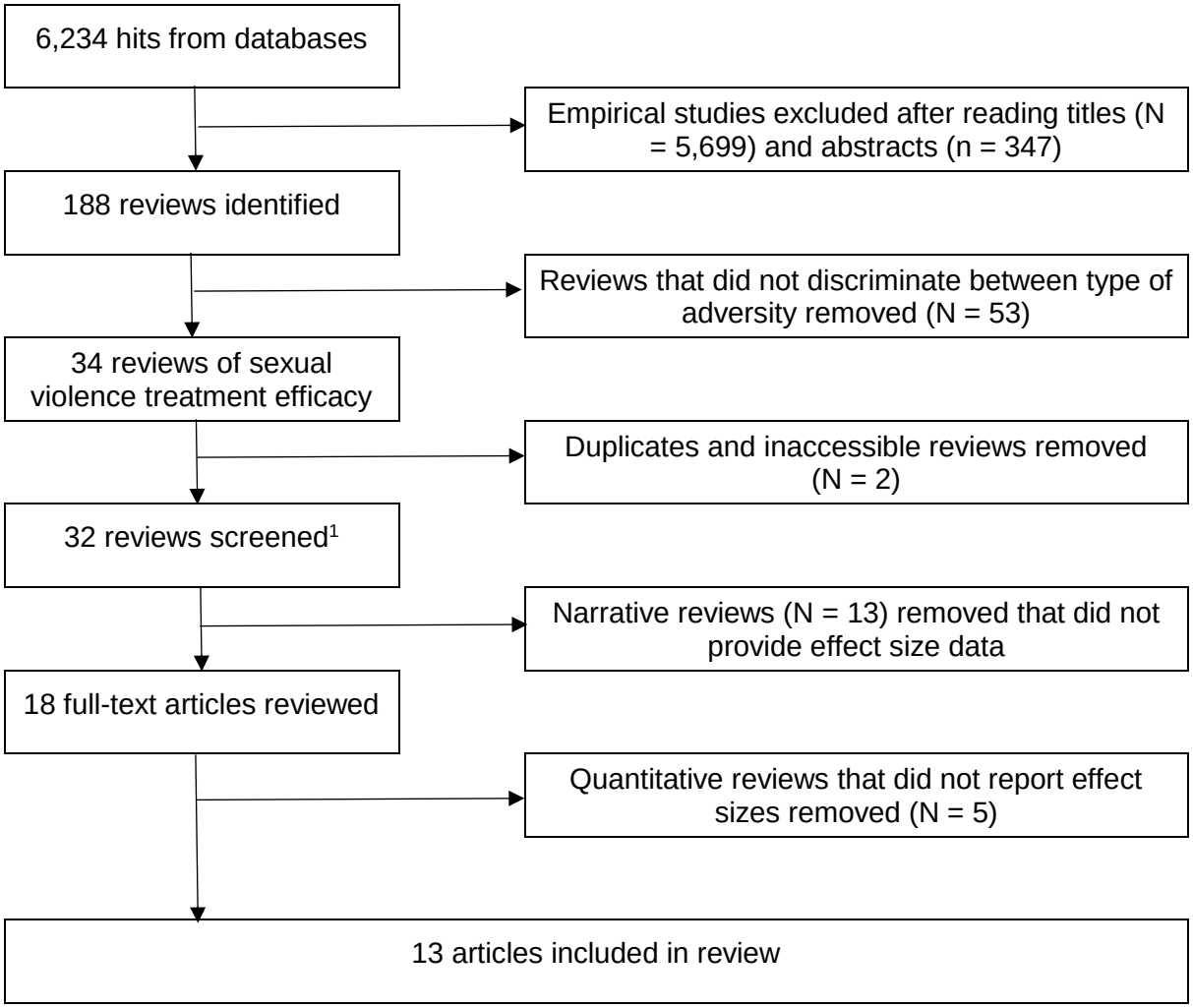

Figure 1. Results of literature search.

[1] The characteristics of the 33 screened reviews are presented in Appendix III.

3.2. Study characteristics

A total of 13 review studies were included in the analysis. The articles were published between 1996 and 2013, reviewing a total of 147 studies including 6,750 participants (96.6% female; 3.4% male). Seventy-one studies featured in more than one review. Of the studies included in the 13 reviews, 61 sampled children and adolescents under 18 years who experienced sexual abuse, 26 studies sampled adult victims of rape or sexual assault in adulthood, and a further 60 studies consisted of adult victims of historical child sexual abuse. In respect of the treatment modalities included in the 148 studies, 53 studies explored the effectiveness of individualised therapy only, 73 evaluated group interventions and 14 examined mixed treatment modalities. Six studies were of joint child-non-offending parent interventions. Characteristics for the 13 reviews are summarised in Table 1.

Table 1. Characteristics of 13 review studies prior to quality assessment.

Authors & year of publication	Study type	Treatment population	Interventions assessed	Outcomes assessed
Callahan et al. (2004)	Systematic review	186 adults (176 females; 10 males) sexually abused as children	Group interpersonal psychodynamic therapy	Anxiety Control Depression Fear Interpersonal problems PTSD
Corcoran & Pillai (2008)	Meta-analysis	516 participants (majority female, aged between 7-13) and non-offending parents	Child only or parent-involved treatment	Externalising symptoms Internalising symptoms PTSD Sexualised behaviours
de Jong & Gorey (1996)	Meta-analysis	513 females (aged between 18 to 64) sexually abused as children	Short or long-term group intervention	Affect Depression Distress Self-esteem
Harvey & Taylor (2010)	Meta-analysis	1,169 sexually abused children and adolescents (83-90% female) over 6 years' old	Child CBT Child-centred therapy EMDR Family CBT Play therapy Trauma-focused CBT Supportive counselling Stress inoculation therapy Group and individual treatment	Caregiver outcomes Coping/functioning Externalising symptoms Global outcomes Internalising symptoms PTSD Self-concept/esteem Sexualised behaviours Social skills/competency
Hetzel-Riggin et al. (2007)	Meta-analysis	1,839 sexually abused children aged 2 to 14 years and their non-offending parents	Abuse-specific treatment Cognitive-behavioural Supportive counselling Play therapy Group and individual treatment	Behavioural problems Distress "Other" problems Self-concept Social functioning
Peleikis & Dahl (2005)	Systematic review	1,087 females sexually abused as children	Individual and group psychotherapy	Anxiety Depression Self-esteem Trauma
Price et al. (2001)	Systematic review	288 adults sexually abused as children	Cognitive-behavioural Experiential Psychodynamic/interpersonal Supportive	Depression Dissociation Global functioning PTSD/trauma

Authors & year of publication	Study type	Treatment population	Interventions assessed	Outcomes assessed
Reeker et al. (1997)	Meta-analysis	220 adults sexually abused as children	Cognitive-behavioural Integrated (combination of psychoeducation & expressive therapies such as art/play)	Anxiety Depression Externalising Fear General distress Internalising Self-esteem Sexualised behaviours
Regehr et al. (2013)	Systematic review	405 female (mean age 32.2 years) victims of rape and sexual violence in adulthood	Assertion training Cognitive processing therapy EMDR Prolonged exposure Stress inoculation therapy Supportive counselling or psychotherapy	Depression Anxiety Guilt Fear PTSD
Sánchez-Meca et al. (2011)	Meta-analysis	1,141 sexually abused children aged 4 to 17	Humanistic Play therapy Psychodynamic Supportive Trauma-focused CBT	Anxiety/stress Behaviour problems Depression “Other” variables Self-esteem Sexualised behaviour
Taylor & Harvey (2009)	Meta-analysis	654 adult (majority female) victims of sexual assault or rape	Assertion training Behavioural intervention CBT Cognitive processing therapy Cognitive restructuring EMDR Imagery rehearsal Prolonged exposure Progressive muscle relaxation Supportive counselling Systematic desensitisation Stress inoculation therapy Individual & group modalities	PTSD Rape trauma Various other moderator analysis in respect of timing, duration, frequency, relationship to therapy
Taylor & Harvey (2010)	Meta-analysis	1,841 adults (88-92% female) sexually abused as children, aged between 31-45 years’ old	Cognitive analytical therapy Cognitive processing therapy EMDR Person-centred approaches Psychodynamic Trauma-focused CBT Individual and group modalities	Externalising symptoms Global symptoms Internalising symptoms Interpersonal functioning PTSD/trauma Self-esteem

Authors & year of publication	Study type	Treatment population	Interventions assessed	Outcomes assessed
Trask et al. (2011)	Meta-analysis	Sexually abused children aged 2 to 17 Mixed gender, ethnicity	CBT Family therapy “Other” Individual, group or combined modalities	Externalising symptoms (e.g. ADHD, aggression, Conduct Disorder, sexualised behaviours) Internalising symptoms (e.g. anxiety, depression) Psychological outcomes (e.g. PTSD)

3.3. Quality assessment

The quality of the systematic reviews and meta-analyses was assessed using the AMSTAR method (Shea, 2007). The method scrutinises aspects of the review methodology in respect of 11 criteria, such as the independence of the study selection process and whether an assessment of scientific quality and bias was provided. Each item is assigned a score of 1 if the criterion is satisfied, or a score of 0 if the criterion is not met, is ambiguous or is not applicable. Individual scores are then summed to produce an overall total, of which a score of 11 is the maximum. AMSTAR determines the quality of a reviews on three levels: scores of 8 to 11 are high quality; scores of 4 to 7 are moderate quality and scores of 0 to 3 are low quality. While the AMSTAR method is primarily used to establish the quality of reviews including randomised controlled trials, it has also been shown to display good psychometric properties in reviews including non-randomised trials (Pieper, Mathes & Eikermann, 2014) in the absence of alternative quality assessments.

The AMSTAR method determined that of the 13 articles assessed, five reviews (Harvey & Taylor, 2010; Regehr et al., 2013; Sánchez-Meca et al., 2011; Taylor & Harvey, 2009; 2010) were of high quality. Four reviews (Corcoran & Pillai, 2008; Hetzel-Riggin et al., 2007; Pelekis & Dahl, 2005; Trask et al., 2011) were found to be of moderate quality and another four reviews (Callahan et al., 2004; de Jong & Gorey, 1996; Price et al., 2001; Reeker et al., 1997) were of low quality. Table 2 presents information on aspects of the study quality assessed using AMSTAR.

Table 2. Article quality using the AMSTAR method (Shea et al., 2007) for 13 studies reporting effect size data.

Review	A priori inclusion criteria	Independent procedures	Comprehensive literature search	Status of publication as criterion	Included excluded list	Included study characteristics	Scientific quality assessed	Scientific quality in conclusions	Tests of heterogeneity	Publication bias tested	Conflict of interest noted	TOTAL (out of 11)
Regehr et al. (2013)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	**10**
Harvey & Taylor (2010)	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	**8**
Sánchez-Meca et al. (2011)	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	No	**8**
Taylor & Harvey (2009)	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	**8**
Taylor & Harvey (2010)	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No	**8**
Corcoran & Pillai (2008)	Yes	Yes	Yes	?	No	Yes	Yes	No	Yes	No	No	**6**
Peleikis & Dahl (2005)	Yes	Yes	Yes	?	No	Yes	Yes	Yes	?	No	No	**6**
Trask et al. (2011)	Yes	?	Yes	Yes	No	Yes	No	No	Yes	Yes	No	**6**
Hetzel-Riggin et al. (2007)	Yes	?	Yes	No	No	Yes	No	No	Yes	Yes	No	**5**
Price et al. (2001)	Yes	?	Yes	No	No	Yes	No	No	No	No	No	**3**
Reeker et al. (1997)	Yes	?	No	Yes	No	Yes	No	No	No	No	No	**3**
Callahan et al. (2004)	Yes	?	?	?	No	Yes	No	No	?	No	No	**2**
De Jong & Gorey (1996)	Yes	?	Yes	No	No	No	No	No	No	No	No	**2**

Note: '?' denotes where information for this category was not explicitly clear from the published study text.

3.4. Effect sizes

Traditional probability values are confounded by sample size and so are not regarded as the benchmark of study finding importance. The American Psychological Association Task Force on Statistical Inference (Wilkinson & APA Task Force on Statistical Inference, 1999) advise that, “reporting and interpreting effect sizes in the context of previously reported effects is essential to good research” (p. 599). Using effect sizes when reporting results has important benefits. They allow study findings to be compared in terms of how similar or dissimilar their results are across related studies, and hence allows the relative impact of study features, such as type of population or intervention, to be assessed.

Effect size is a measure of standard deviation number from the mean. Two of the most widely used in psychology are Hedges’ *g* and Cohen’s *d*. Both of these measures consist of the difference between means divided by the standard deviation. Although both *d* and *g* are somewhat positively biased, this bias is small for sample sizes that are moderate or large (Grissom & Kim, 2005).

As the differences between Cohen’s *d* and Hedges’ *g* are small (Lakens, 2013), Cohen’s (1988) guidelines were used in this report whilst interpreting small (0.20), medium (0.50), and large (0.80) effect sizes.

3.5. Overall findings on effectiveness

All effect sizes for all 13 reviews are presented in Appendix IV. Due to the overlap of individual studies within the review articles, the wide range of review article date and the varied quality of the review articles, the results will be based on those with a quality rating of between eight to ten (high quality). Fortunately, these also provide largely non-overlapping data and are all published within the last six years.

3.5.1. The most rigorous studies (quality assessed between 8 and 10)

Quality 10: Regehr et al. (2013) included only studies which included adult victims of rape or sexual assault and employed a RCT or non-randomised naturally occurring control group design to allocate victims to treatment or control groups. Their systematic review found 'tentative' evidence that both cognitive and behavioural interventions, particularly Cognitive Processing Therapy (CPT), Prolonged Exposure Therapy (PE), Stress Inoculation Therapy (SIT), and Eye Movement Desensitization and Reprocessing (EMDR), appear to decrease symptoms of PTSD, depression and anxiety.

Quality 8: Sánchez-Meca et al. (2011) included only studies of the psychological treatment of children and adolescents that had experienced sexual abuse. They found that for a range of outcome measures, treatment was associated with significant improvement in symptoms. Regarding type of treatment, trauma-focused cognitive-behavioural treatments combined with supportive therapy and a psychodynamic element (e.g., play therapy) were most effective. Reports from clinicians regarding improvements were generally higher than self, partner or global reports. For most outcomes, the most effective treatment was CBT in conjunction with other therapies such as PT and/or ST. The least effective appeared to be was PT alone.

Quality 8: Taylor and Harvey (2010) included only studies that included adults sexually abused as children. They found moderate effect sizes for post-traumatic stress disorder or trauma symptoms, internalizing symptoms, externalizing symptoms, self-esteem, and global functioning or symptoms. They found that improvements were largely maintained at follow-up. In relation to types of treatment, Taylor and Harvey found that when comparing treatment with controls, EMDR had the largest treatment effect, followed by CPT, then PE, SIT and brief CBT. The treatment effects are maintained up to one year post therapy (the longest follow-up reported by the studies). The least effective treatment approach was supportive counselling (SC) which had effects that were at best weakly beneficial, and at worst mildly damaging.

Quality 8: Taylor and Harvey (2009) included studies for sexual assault victims experiencing PTSD or rape trauma symptoms. They found consistent results in favour of the intervention which were maintained at follow-ups from 6–12 months after treatment. Studies represented diverse treatment approaches, with the largest improvement associated with EMDR, SD, CBT and CPT, and the least effective being SC. They also explored treatment delivery and found that better outcomes were achieved with individual therapy compared to group. Using semi-structured approaches and homework techniques were also positively related to larger improvements.

Therefore, the most promising approaches across cohorts appears to be trauma focused work using a cognitive approach alone (e.g. CPT, EMDR, PE) or in conjunction with other treatments (e.g. CBT with play therapy for children).

SECTION 4: Treatment of childhood sexual abuse

4.1. Studies exploring treatment of sexually abused children

Only one of the quality reviews presented disaggregated data by treatment type for children and adolescents and that was Sánchez-Meca et al. (2011). Therefore, the results below are based on this review. Although Harvey and Taylor (2010) did include some analysis of treatment type, this was at a broad level (e.g. cognitive-behavioural) rather than specific treatments. Their analysis, therefore, is less informative than Sánchez-Meca et al.'s (2011) and therefore treatment type data is based on Sánchez-Meca et al.'s (2011) paper. Harvey and Taylor (2010) provide detailed analysis of treatment delivery variables however, and so the data presented on treatment delivery is from Harvey and Taylor (2010).

Sánchez-Meca et al.'s (2011) investigated the efficacy of a range psychological treatments delivered to children and adolescents that had experienced sexual abuse. Their analysis includes 33 articles that met their selection criteria and was composed of 44 treatment groups and seven control groups. The effect size is the difference between pre-test and the post-test means, and is presented by symptom. All of the symptom comparisons were statistically and clinically significant, in contrast to the control groups which did not achieve significant improvements. Their results by symptom are presented below. CBT includes TF-CBT and EMDR; humanistic interventions include client-centred therapy; support programmes are interventions to the child and family; eclectic approaches are combinations of techniques originating from different theoretical orientations.

4.1.1. Efficacy of treatment type by symptoms

Self-esteem: the most effective therapies (in effect size order) were CBT + play + ST, HT, CBT + ST, CBT + ST + play. The least effective was play therapy alone (see Figure 4.1.1).

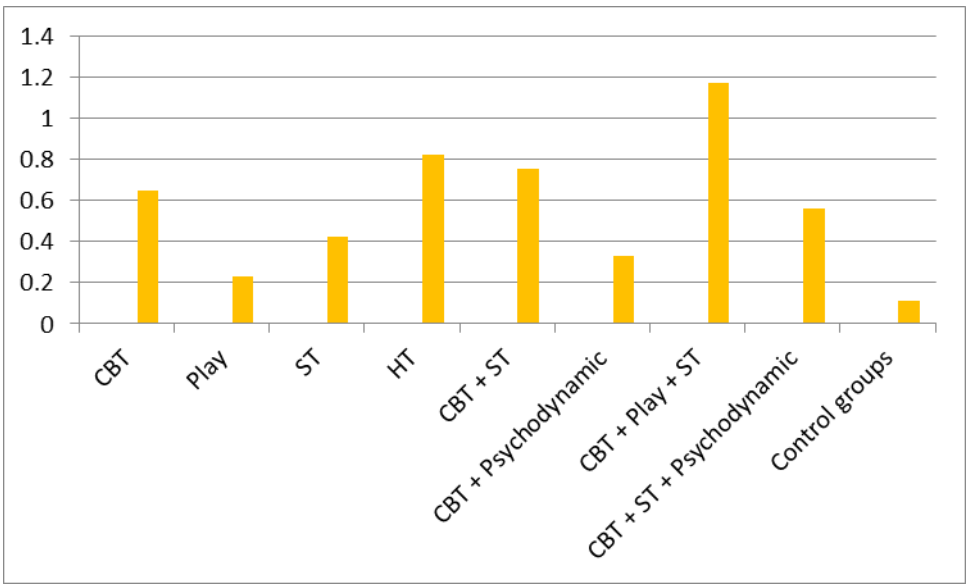

Figure 4.1.1. Effect sizes (d values) for self-esteem by treatment type.

Behavioural problems: The most effective treatment for behavioural problems was CBT + ST, followed by CBT + play + ST, psychodynamic, and supportive. The least effective treatment was play therapy alone (see Figure 4.1.2).

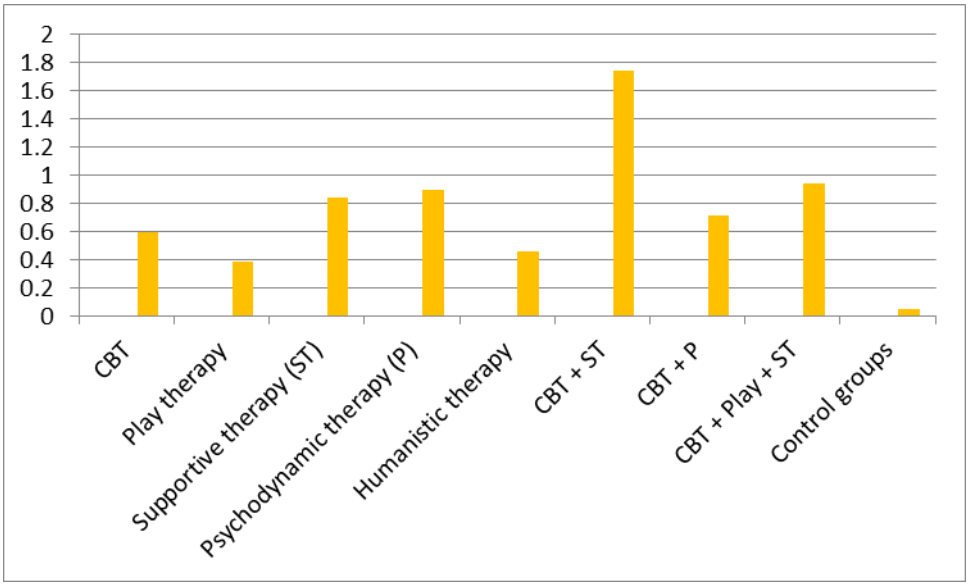

Figure 4.1.2. Effect sizes (d values) for behavioural problems by treatment type.

Sexualised behaviour: The most effective treatment for sexualised behaviour was CBT + play + ST, followed by psychodynamic and play therapy. The least effective was humanistic therapy (see Figure 4.1.3).

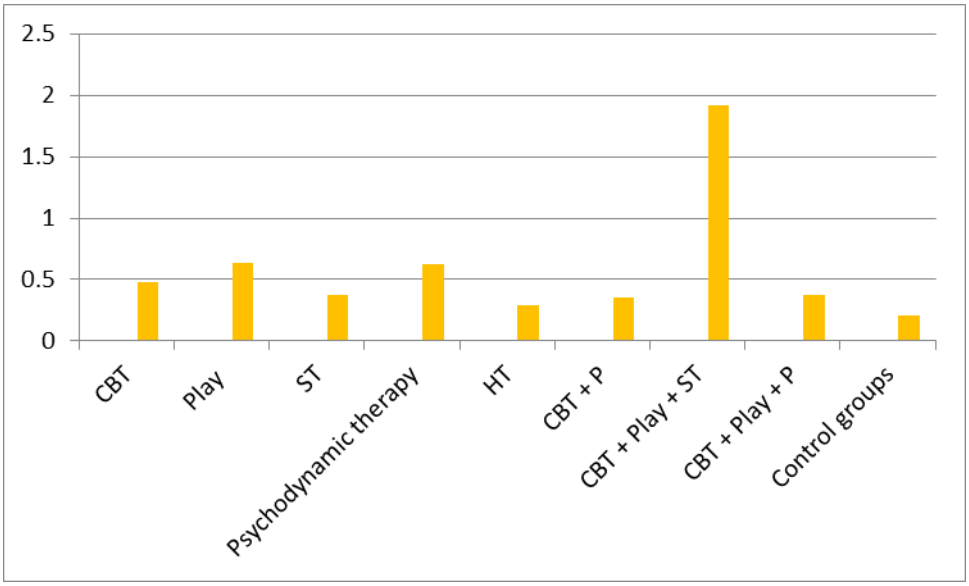

Figure 4.1.3. Effect sizes (d values) for sexualised behaviour by treatment type.

Anxiety: The most effective therapy for anxiety was CBT + play + psychodynamic which was closely followed by CBT + psychodynamic. The least effective was humanistic therapy although the effectiveness of all of these therapies was similar (see Figure 4.1.4).

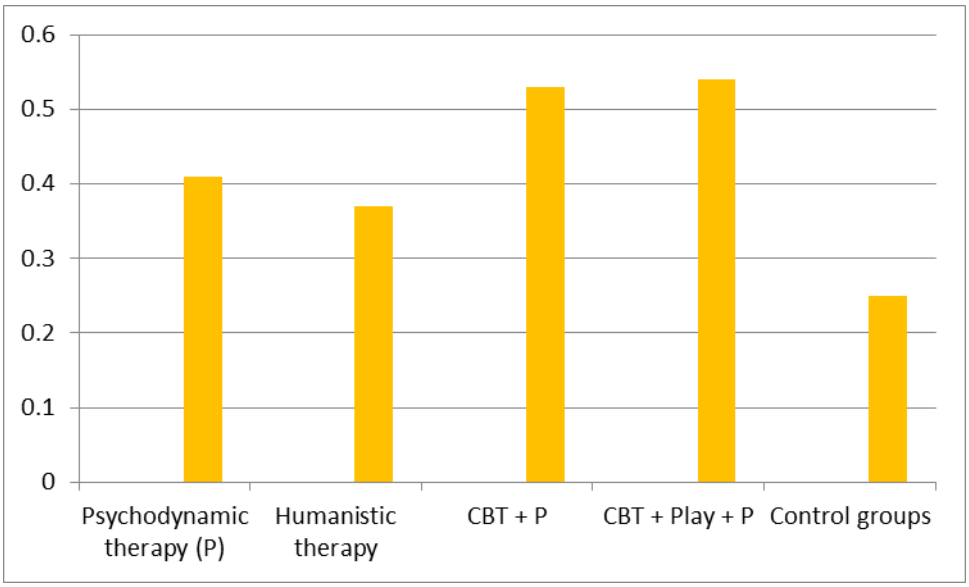

Figure 4.1.4. Effect sizes (d values) for anxiety by treatment type.

Depression: The most effective therapy for depression was Psychodynamic, followed by ST and CBT + psychodynamic. The least effective was humanistic therapy (see Figure 4.1.5).

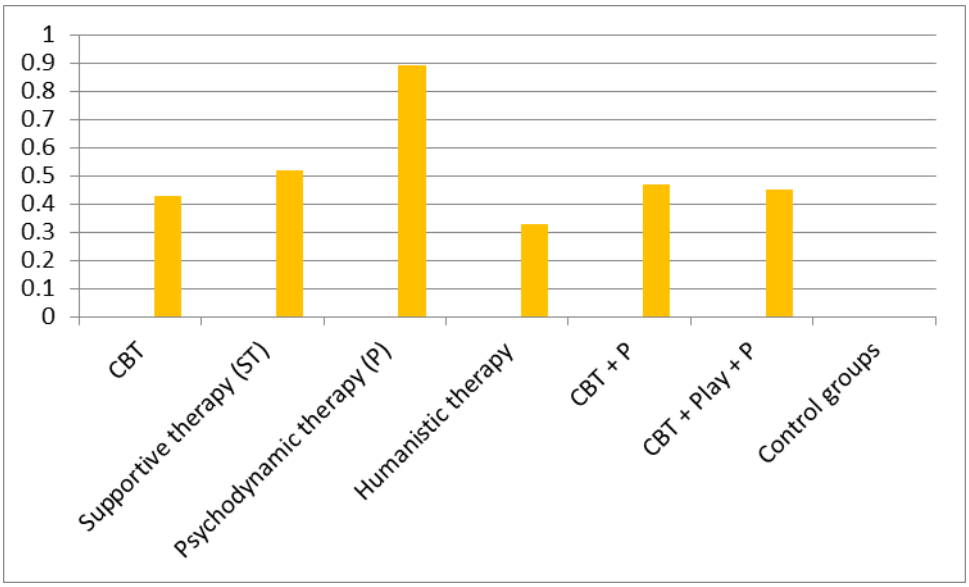

Figure 4.1.5. Effect sizes (d values) for depression by treatment type.

Global symptoms: The most effective therapy for global symptoms was CBT + ST, followed by CBT + Play + ST. The least effective was play alone. Play, psychotherapy and humanistic approaches appeared to be ineffective when used in combination with other therapies (see Figure 4.1.6).

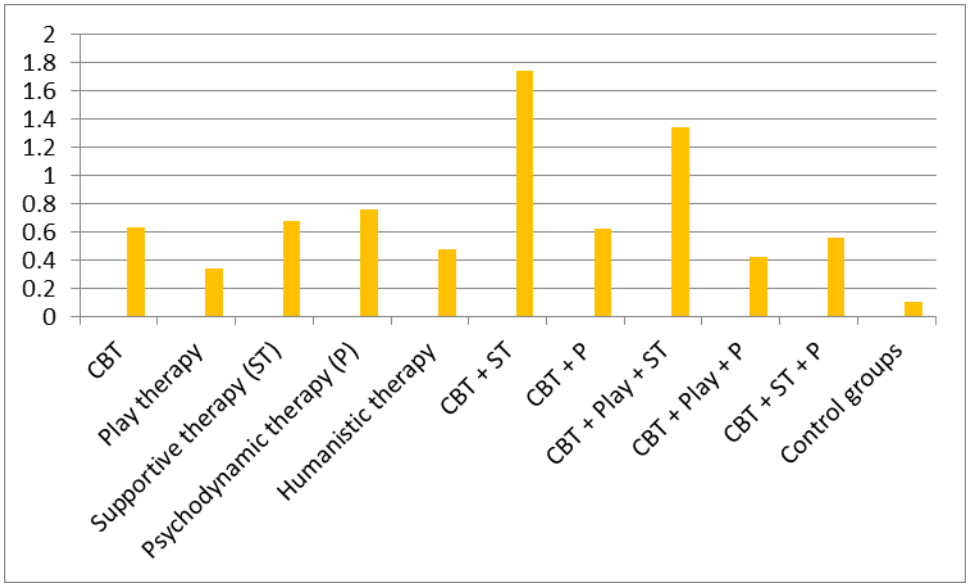

Figure 4.1.6. Effect sizes (d values) for global symptoms by treatment.

4.1.2. Efficacy of treatment type by treatment delivery

Sánchez-Meca et al. (2011) found that longer treatments were associated with large improvements in children's symptoms, which was consistent with an earlier meta-analysis (Hetzel-Riggin et al., 2007). Sánchez-Meca et al. (2011) did not find any other treatment differences between treatment characteristics such the use of manualised treatment, the type of therapist or breath of therapist experience, in terms of effectiveness of treatment. There were some interesting trends however, such as an increase in the size of the improvement as the proportion of women increased; as the victims age increased; and as the percentage of intrafamilial (compared to extrafamilial) sexual abuse victims increased.

One review, Harvey and Taylor (2010), included detailed treatment delivery variables for children and adolescents sexually abused as children. This paper presents analysis of the psychotherapy treatment from 39 studies, mainly composed of interventions to address the psychological effects of childhood sexual abuse. Their data allows comparison of treatment delivery factors. CBT includes TF-CBT and EMDR, they do not however define 'insight-oriented' interventions although this presumably includes humanistic and eclectic. Therefore, the results below are drawn from Harvey and Taylor (2010).

Duration of treatment: There is a clear pattern that treatments lasting over 20 weeks are more effective than shorter treatment durations (see Figure 4.1.7).

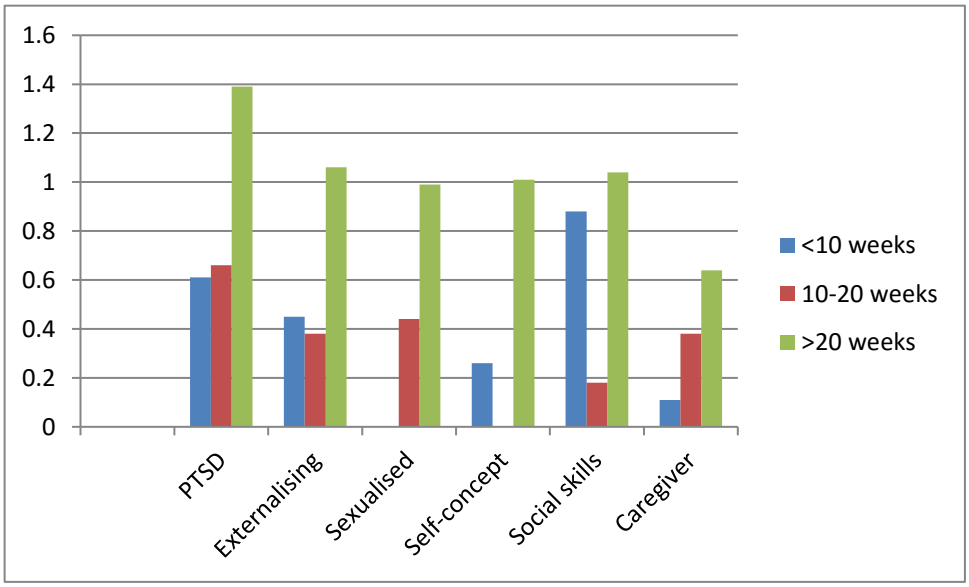

Figure 4.1.7. Effect sizes (d) for duration of treatment by symptom type.

Number of sessions: Six out of seven symptom types appear to benefit from over 20 sessions. The exception is for PTSD where between 10 and 20 sessions appear slightly more effective (see Figure 4.1.8).

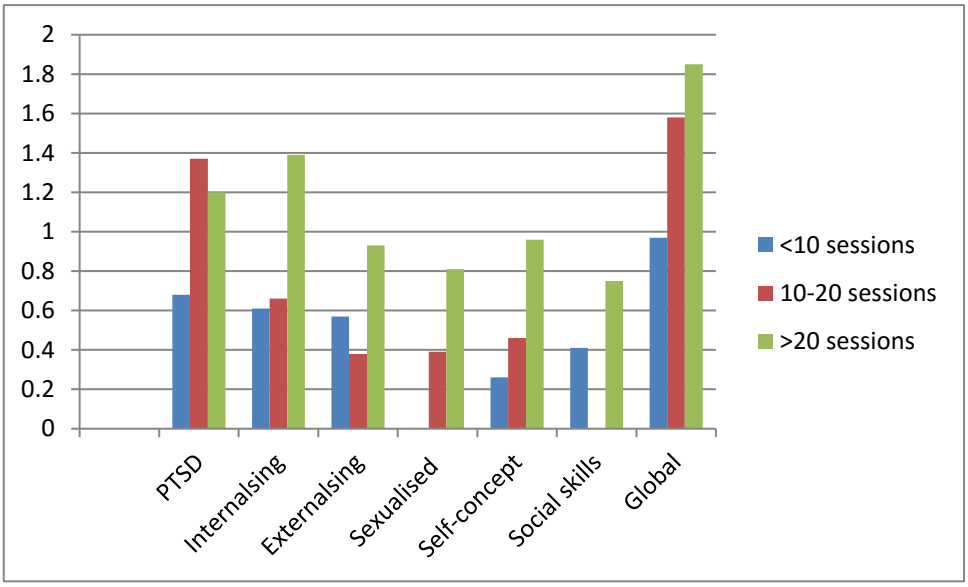

Figure 4.1.8. Effect sizes (g) for number of sessions by symptom type

Length of session: Sessions lasting one hour appear to be more efficacious for PTSD and externalising symptoms than longer sessions (see Figure 4.1.9).

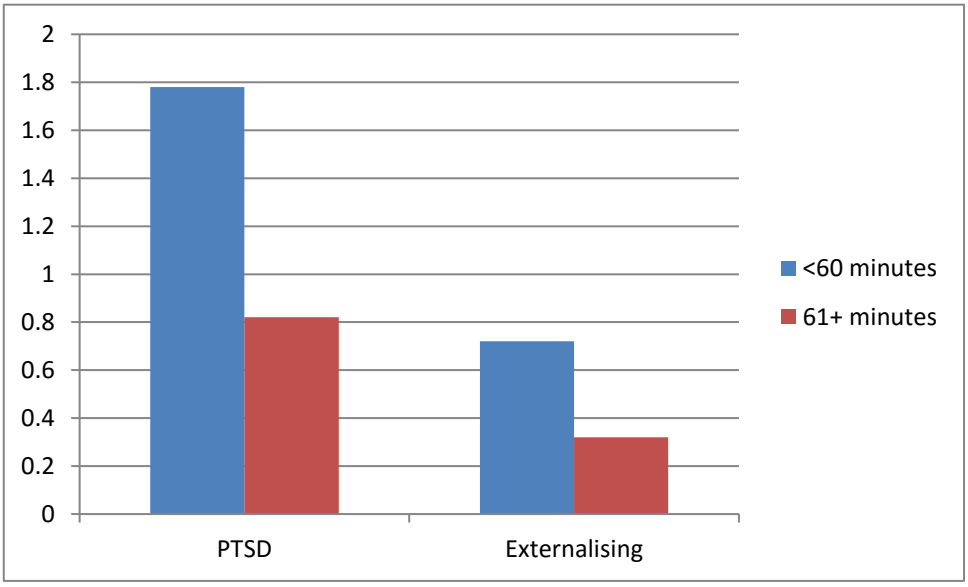

Figure 4.1.9. Effect sizes (d) for session length by symptom type

The mode of treatment: Treating PTSD symptoms appears to be best achieved by using a family modality, whereas externalising and self-concept symptoms are best targeted by using a mixed modality approach (see Figure 4.1.10).

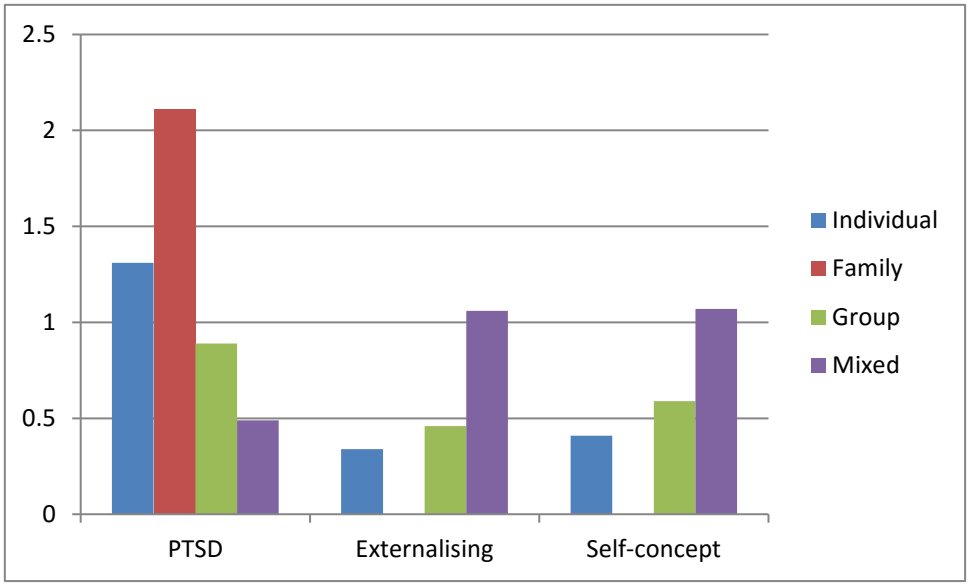

Figure 4.1.10. Effect sizes (d) for treatment modality by symptom type.

Structure: Manualised approaches are favoured for PTSD symptoms, semi-structured are better for interpersonal symptoms of sexualised behaviour and social skills. Unstructured approaches appear somewhat best for externalising symptoms (see Figure 4.1.11).

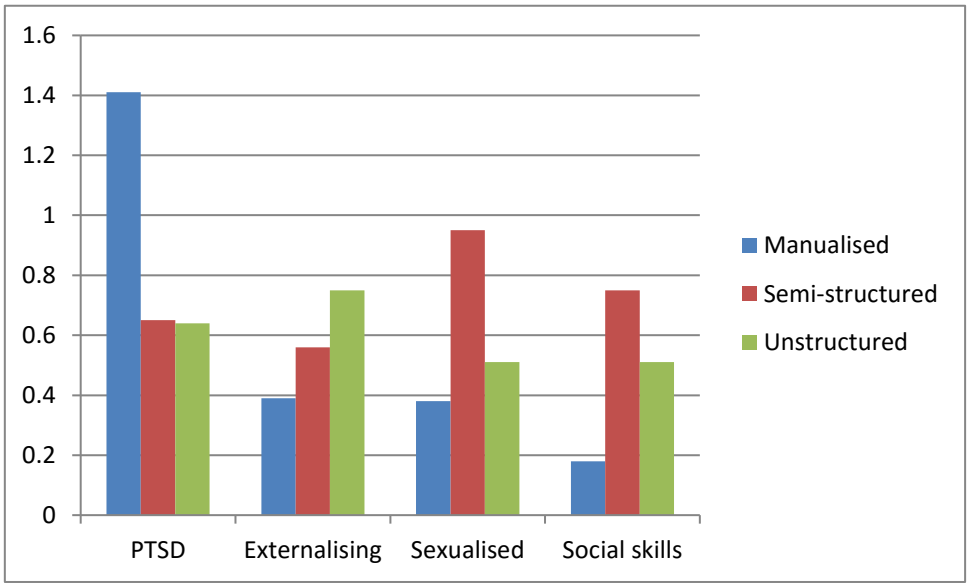

Figure 4.1.11. Effect sizes (d) for therapy structure by symptom type.

Education components of the treatment: Instructional rather than dialogue-based approaches appear to be more effective in targeting social skills, self-concept and caregiver symptoms (see Figure 4.1.12).

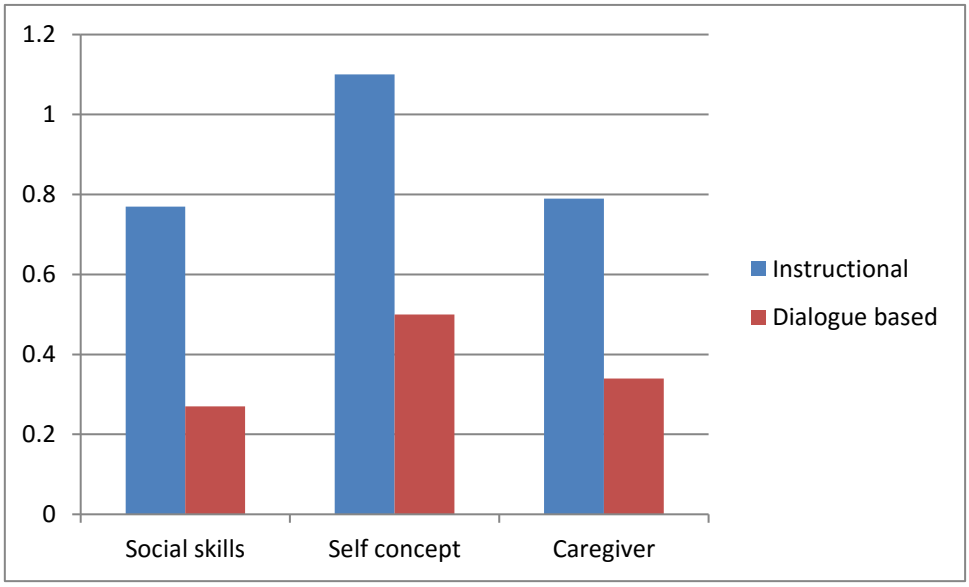

Figure 4.1.12. Effect sizes for educational components by symptom type.

4.2. Studies exploring treatment of adult victims of childhood sexual abuse

One review, Taylor and Harvey (2010), included disaggregated data for adults who were sexually abused as children. Their analysis is based on 44 studies which comprised of 59 treatment conditions. Where possible they present data using both a repeated measure design (where the participants act as their own control group, frequently whilst on a waiting list for treatment) and independent measures design where the treatment group is compared to a no treatment group (frequently 'business as usual'). Independent designs are preferable due to the more rigorous study quality inherent in independent samples designs. Therefore, data using independent designs this is presented in the analysis below. Repeated measures data is only included where independent data is lacking. Therefore, the results below are from Taylor and Harvey (2010) alone (all effect sizes are Hedges' *g*), using independent designs wherever possible.

Longitudinal treatment gains: Across symptom types, the pattern is of small to moderate effect sizes immediately post-treatment. These generally increased slightly at 1-3 months' post-

treatment, fell at 4-6 months' post-treatment and the regained, or exceeded previous symptom reduction (see Figure 4.2.1).

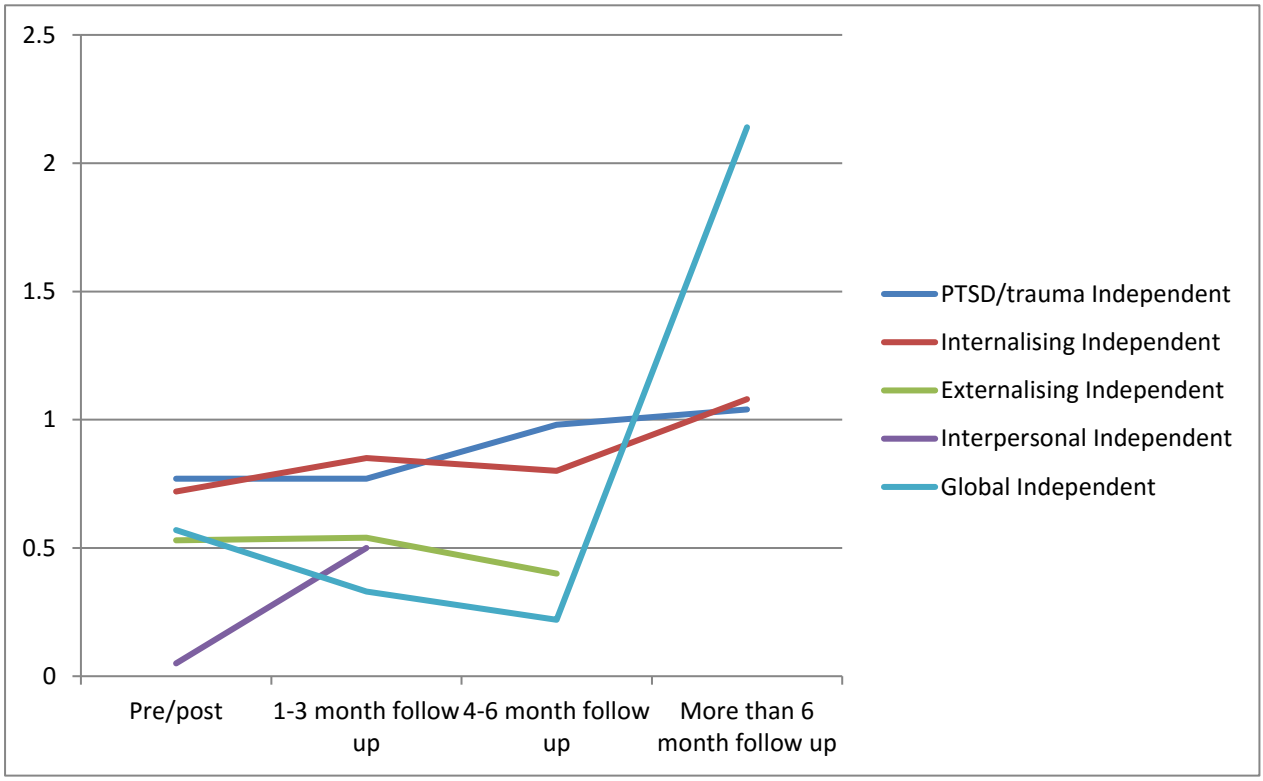

Figure 4.2.1. Effect sizes (g) of symptom improvement over time by symptom and study type.

4.2.1. Participant variables

White participants appear to benefit more from therapy than do African Americans (there is no European data; see Figure 4.2.2).

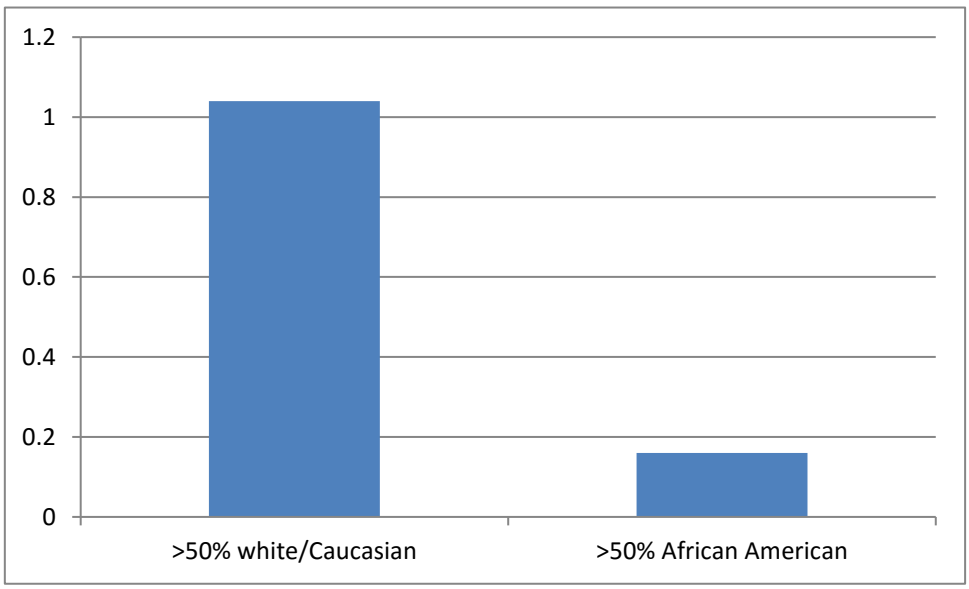

Figure 4.2.2. Effect sizes (g) of symptom improvement by ethnicity.

Income: Participants with low annual income do least well of all income groups, fairing substantially worse than low to moderate earners (see Figure 4.2.3).

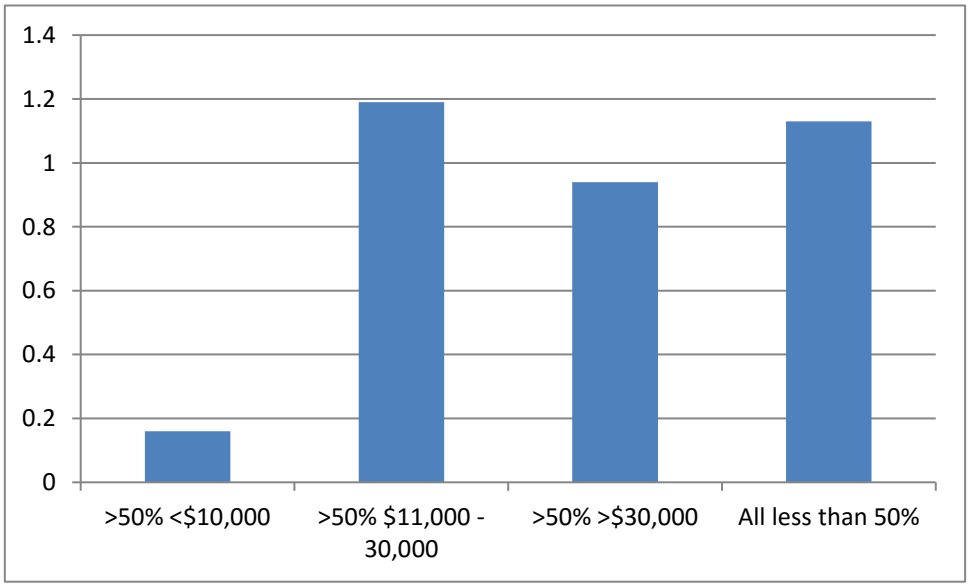

Figure 4.2.3. Effect sizes (g) of symptom improvement by participant income band.

4.2.2. Treatment variables

Treatment delivery: Repeated measures data suggests that group delivery results in the largest effect sizes. Individually delivered interventions are a viable alternative, with both repeated and independent data suggesting large improvements in symptoms (see Figure 4.2.4).

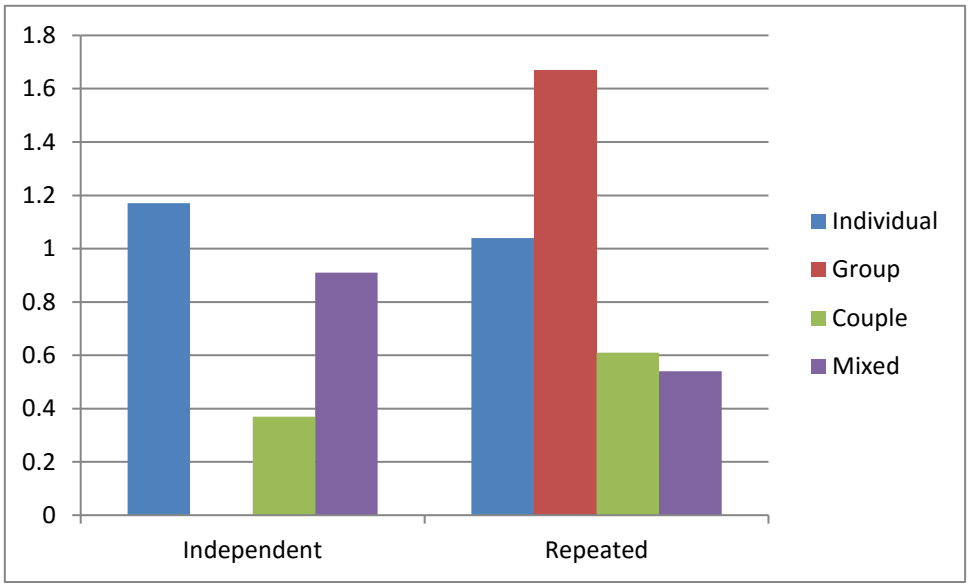

Figure 4.2.4. Effect sizes (g) of symptom improvement by delivery mode.

Treatment duration: Treatments lasting less than ten weeks appear the most effective at reducing symptoms (see Figure 4.2.5).

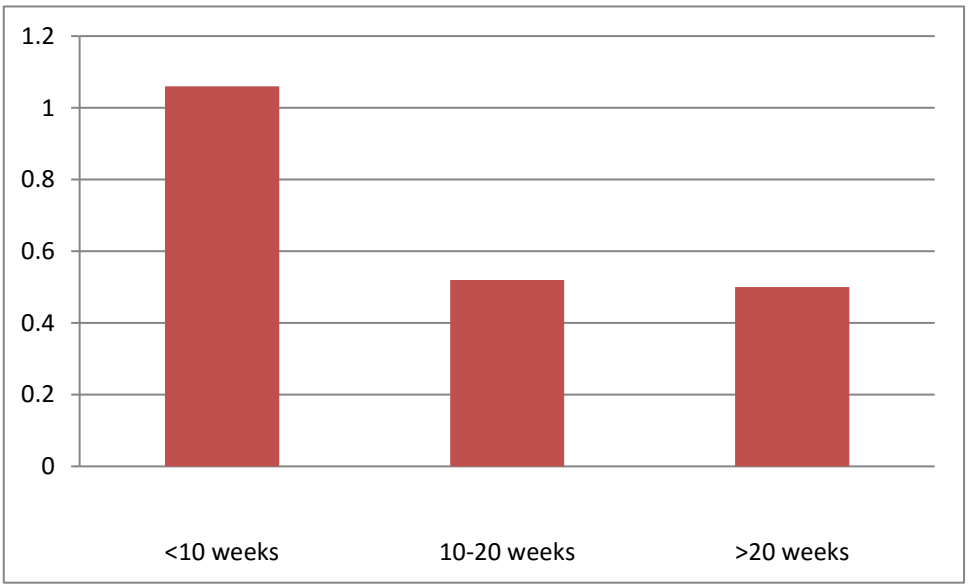

Figure 4.2.5. Effect sizes (g) for symptoms by treatment duration

Number of sessions: The most effective dose of treatment appears to be under ten sessions, which show a large effect size. This is closely followed by a dosage of over 20 sessions, with intermediate dosage being the least effective (see Figure 4.2.6).

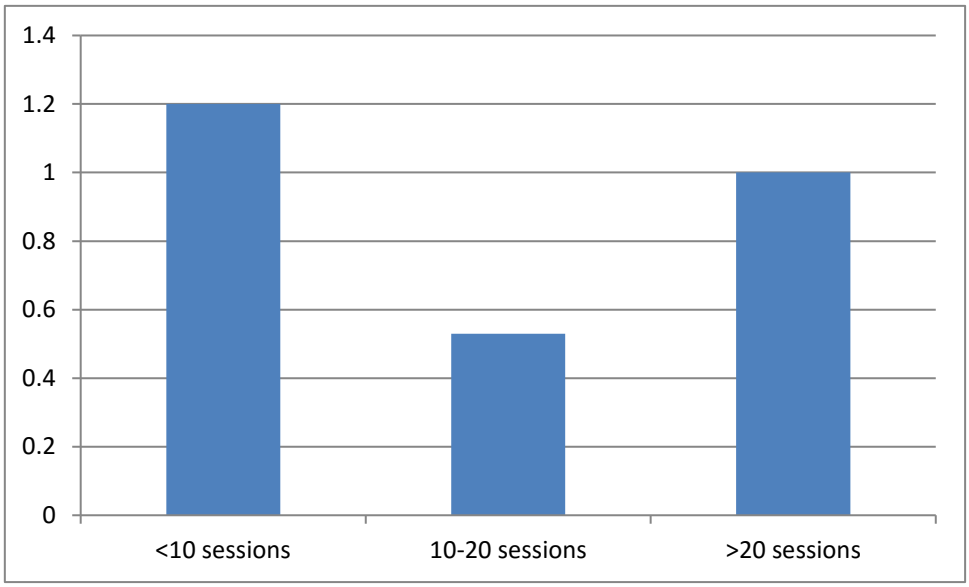

Figure 4.2.6. Effect sizes (g) for symptom reduction by number of sessions.

Session length: Consistent with previous results above, a session length of 60 minutes or under appears most appropriate to reduce symptoms (see Figure 4.2.7).

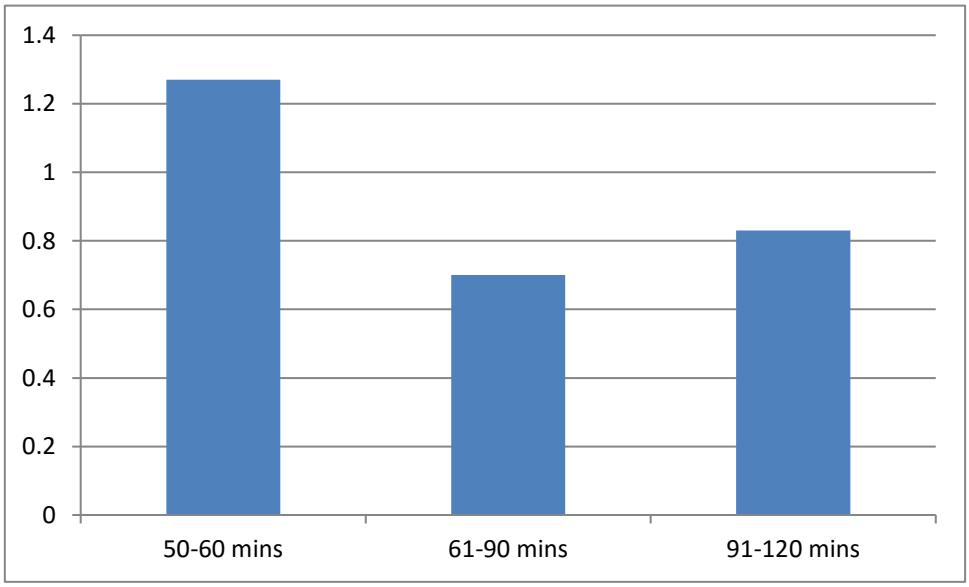

Figure 4.2.7. Effect sizes (g) for session length by symptom reduction.

Frequency of sessions: Twice per week appears to be the most appropriate intensity of treatment for maximum symptom reduction (see Figure 4.2.8).

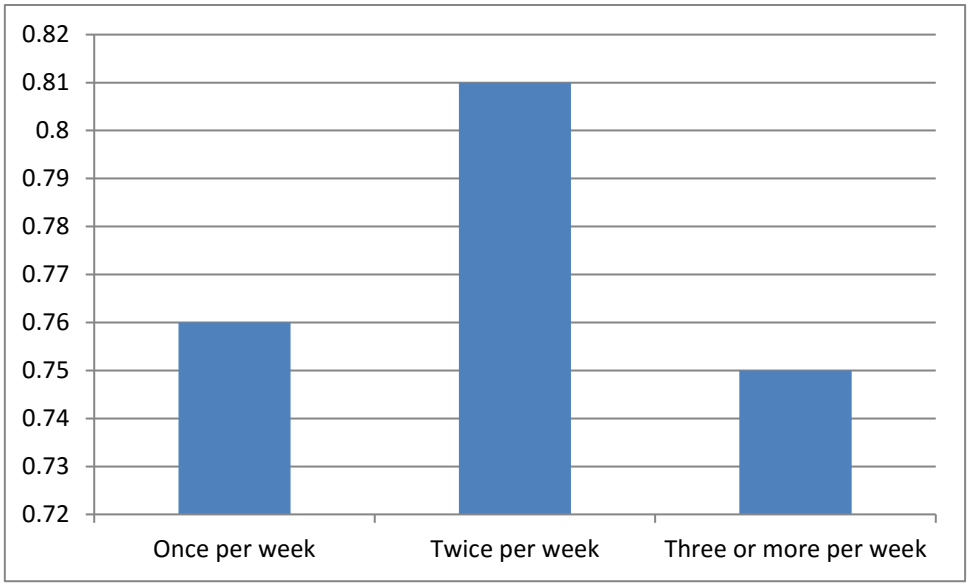

Figure 4.2.8. Effect sizes (g) for intensity of session delivery by symptom reduction.

Therapy structure: Manualised interventions showed the largest effect sizes, and unstructured interventions the least (see Figure 4.2.9). Instructional rather than self-directed or dialogue based processes were most effective (see Figure 4.2.10).

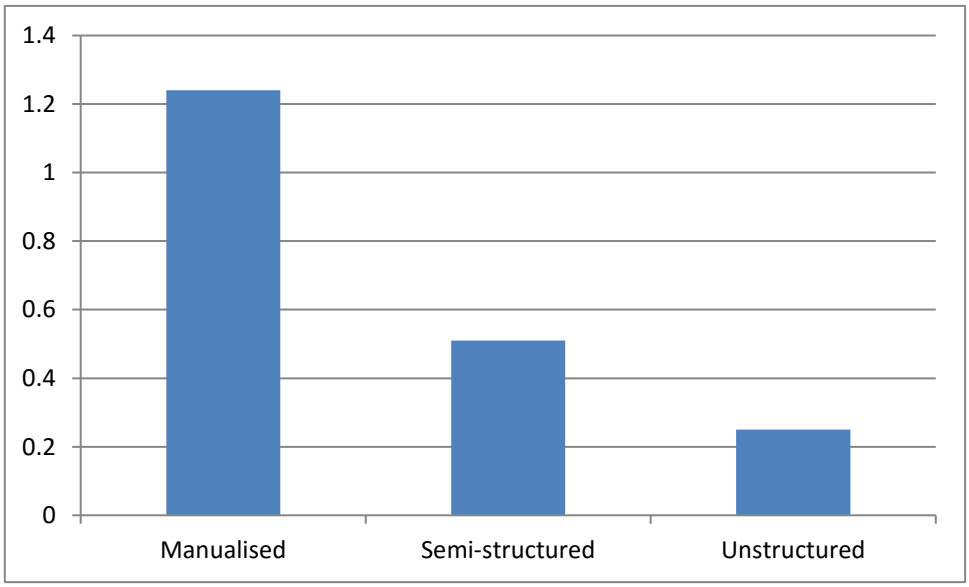

Figure 4.2.9. Effect sizes (g) for therapy structure by symptom reduction.

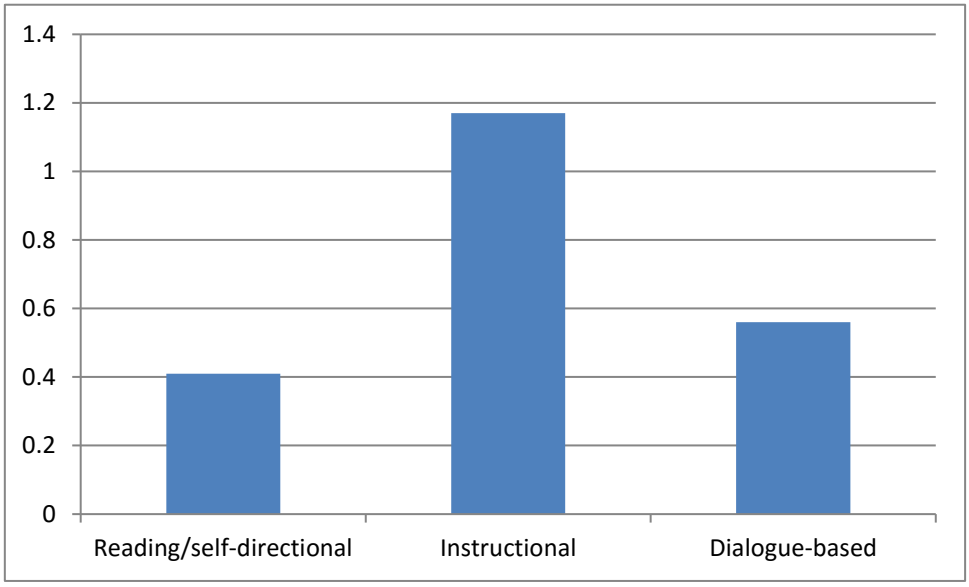

Figure 4.2.10. Effect sizes (g) for therapy process by symptom reduction.

4.3. Studies exploring treatment of adult victims of sexual abuse

Regehr et al. (2013) included interventions to reduce distress in adult victims of rape and sexual violence. They only included randomised controlled trials (RCTs), which represent the most rigorous treatment evaluation design.

Any treatment appears to be more effective than waiting list controls. Depression showed the largest improvement, followed by PTSD and trait anxiety. The least impact was symptoms of guilt (see Figure 4.3.1).

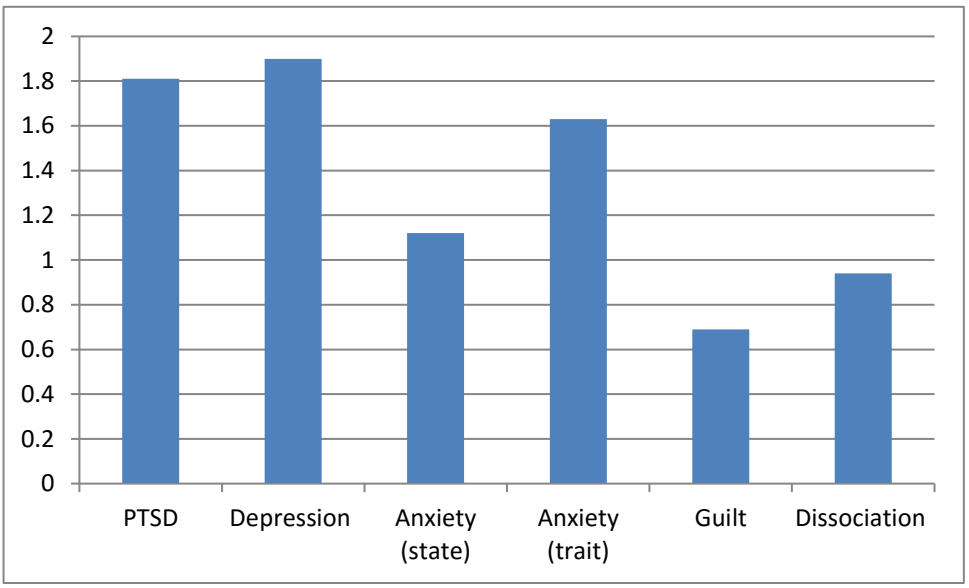

Figure 4.3.1. Effect sizes (g) for treatment versus waiting list controls by symptom type.

EMDR was clearly the most effective treatment for PTSD symptoms. It also appeared quite successful at alleviating anxiety also (see Figure 4.3.2). PE was most effective for trait anxiety, dissociation (no data for CPT on dissociation) and depression (no data for EMDR on depression).

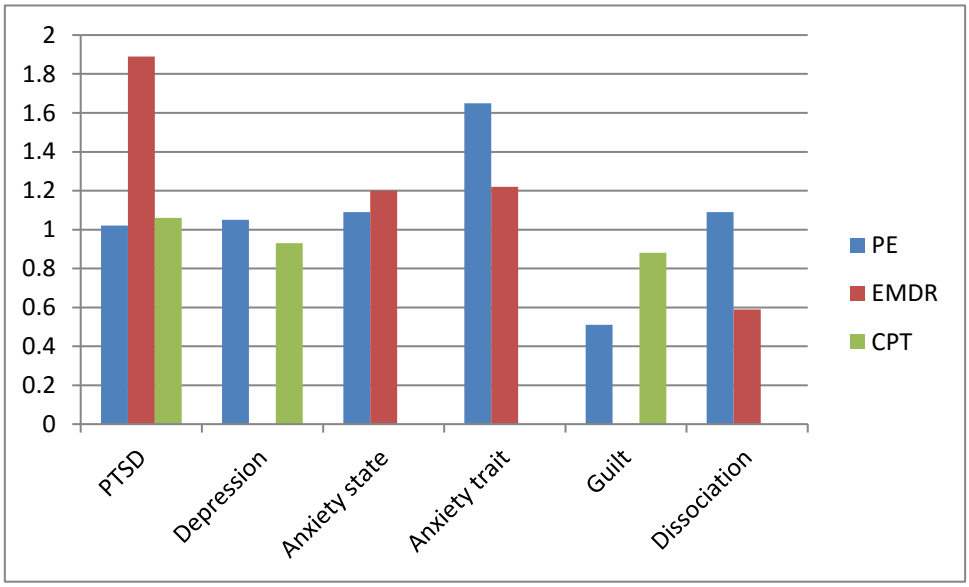

Figure 4.3.2. Effect sizes (g) for symptom type by treatment type versus waiting list controls.

4.4. Studies exploring treatment of adult victims of rape and sexual assault

Regehr et al. (2013) included only studies of adult victims (19 years or older) of rape or sexual assault and employed a RCT or non-randomised naturally occurring control group design to allocate victims to treatment or control groups. Eligible study participants included both male and female adults who had been victims of sexual assault, although no studies including males met inclusion criteria Individuals who were victims of ongoing childhood sexual abuse only were excluded. They included six studies with a total number of 405 participants and present Hedges' *g* effect sizes. Intervention were coded as: Stress inoculation training (SIT); prolonged exposure (PE); supportive counselling or supportive psychotherapy (SC or SP); cognitive processing therapy (CPT); assertiveness training (AT); and eye movement desensitisation and reprocessing therapy (EMDR).

4.4.1. Efficacy of treatment by symptoms

Overall, the interventions appear best at reducing depression and PTSD, and are least effective at reducing guilt (see Figure 4.4.1).

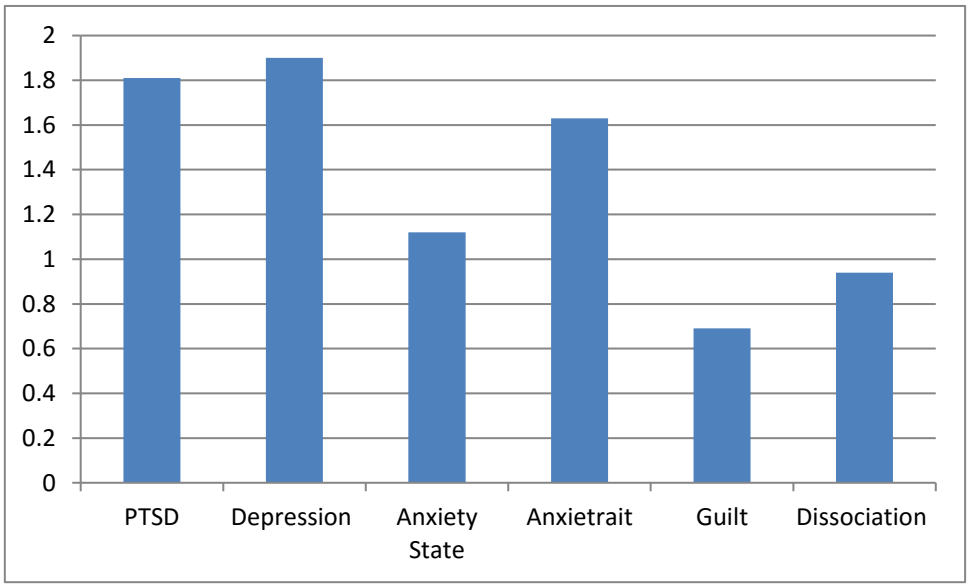

Figure 4.4.1. Symptom reduction by symptom type.

EMDR appeared most successful at reducing PTSD, and second most successful at treating trait anxiety. PE was most successful in treating trait anxiety (see Figure 4.4.2).

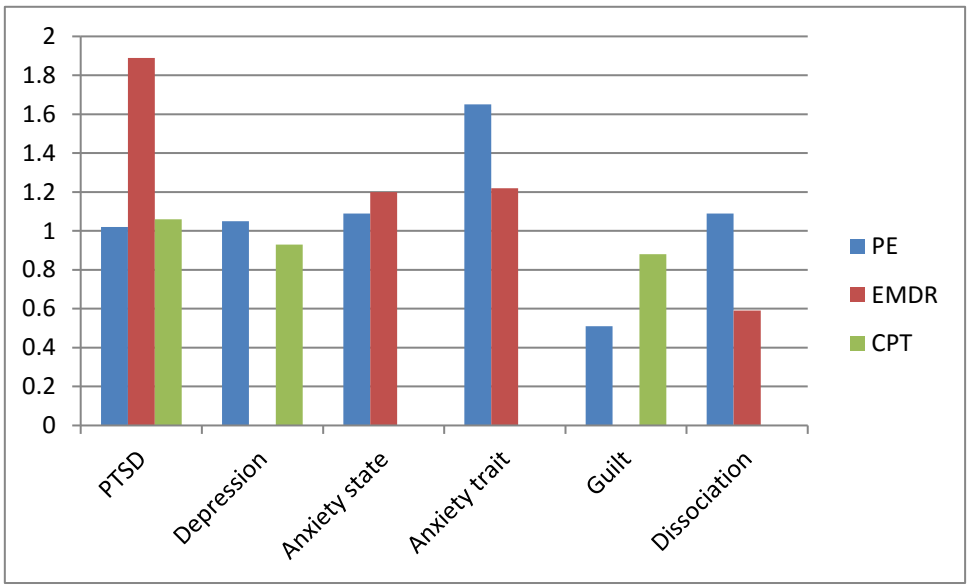

Figure 4.4.2. Treatment type by symptom.

When results were pooled by the study's authors, PE demonstrated improvements in PTSD, depression, anxiety, guilt and dissociation; EMDR demonstrated improvements in PTSD, depression, anxiety and dissociation; CPT demonstrated improvements in PTSD, depression and guilt.

Although not analysed, the rate of dropout was highest (30%) in the study involving the greatest intensity and the longest duration of treatment (Resick 2002), which lasted three months and involved 13 sessions of which 12 consisted of 90 minutes of individual therapy.

4.5. Studies exploring treatment of male victims of sexual abuse

It is difficult to fully determine the effectiveness of different types of support for male victims of sexual violence as they are largely under-represented in the literature (Vearnals & Campbell, 2001). Although the five reviews had set out to explore treatment effectiveness on male victims, they were limited by incomplete data or extremely low sample sizes for any meaningful analysis to be performed.

One review of child victims of sexual abuse (Harvey & Taylor, 2010) disaggregated data for male and female samples. They found larger effect sizes for boys than girls in respect of reducing sexualised behaviours and enhancing social functioning (see Figure 4.5.1).

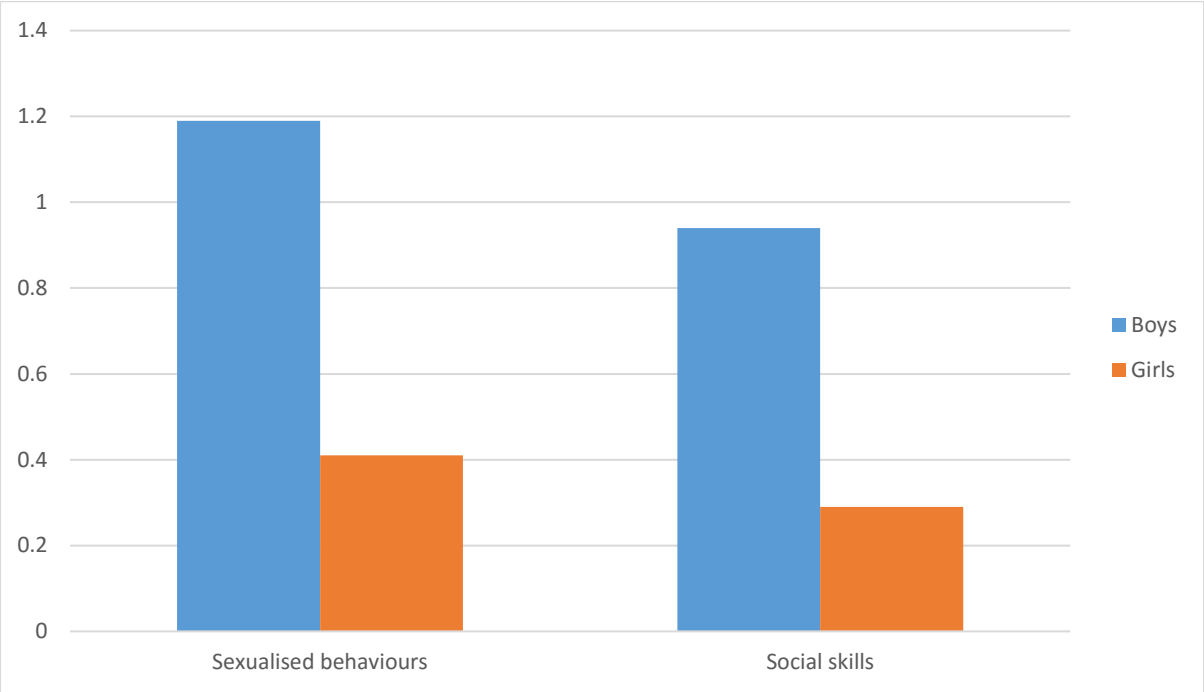

Figure 4.5.1. Effect sizes (g) for sexualised behaviours and social skills functioning by gender.

In the review of child sexual abuse victims by Sánchez-Meca et al. (2011), psychological outcomes did not significantly differ between males and females, although treatments were generally more effective when the composition of the sample was all-female rather than all-male (see Figure 4.5.2).

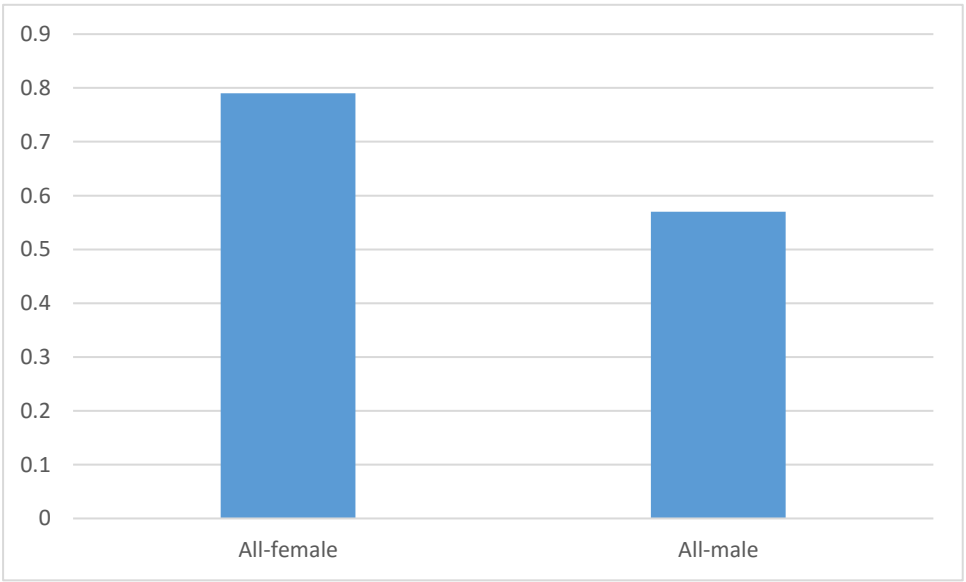

Figure 4.5.2. Effect sizes (d) by gender composition of the treated sample.

Among the 147 empirical studies reviewed across all review articles, only 27 sampled male victims of sexual abuse. Of these, three sampled male victims exclusively. For child victims of sexual abuse, findings suggest that males respond similarly to females on a range of outcome measures including anxiety, recognising feelings and trauma symptoms (Duffany & Panos, 2009; Friedrich et al., 1992). Among adults exposed to sexual abuse as children, males and females display similar improvements in trauma symptoms after receiving a group intervention compared to those on a waiting list (Sikkema et al., 2007). However, the literature on male sexual violence victims is extremely limited and it was therefore not possible to comment on effectiveness of different types of support for males.

SECTION 5: Discussion

The impact on children who experience sexual abuse including conduct problems, physiological changes and the premature development of sexualised behaviours (Putnam, 2003), highlights the need for early intervention to prevent the development of long lasting intra and interpersonal difficulties that may disrupt educational attainment and hence life opportunities (Hannan & Smyth, 1999).

Experiencing sexual abuse during childhood is associated with additional non-sexual adversity, further compounding the negative impact (Witt et al., 2016). Such difficulties have proven difficult to mitigate within schools (Mitchell, 2005) and are likely to contribute to children growing up to experience significant economic and social disadvantage over their lifetimes (Furlong, 2013). For example, delayed disclosure in adults who by the nature of nondisclosure are untreated, can result in poor perceptions of social support and interpersonal conflict (Lamoureux, et. al., 2012; Tener & Murphy, 2015). Among all types of adversity that people may experience in the lifetime, sexual violence is thought to be associated with more severe psychological outcomes due to its deliberate and intimate nature (Ehring & Quack, 2010). A range of intrapersonal and interpersonal difficulties have been reported by adult victims, including anxiety, depression, PTSD, self-harm or suicidality, substance use, and detrimental effects on coping and self-esteem (Campbell & Wasco, 2005; Elliot, Mok & Briere, 2004; Lindert, von Ehrenstein, Grashow, Gal, Braehler, & Weisskopf, 2014).

The documented impact of experiencing sexual victimisation (e.g., Ehring & Quack, 2010) reported by adult victims (Campbell & Wasco, 2005; Elliot, et al., 2004) suggests that treatments need to be symptom specific. Functional analysis is a tool to allow treatment providers an understanding of clinical problems that are associated with a history of trauma (Naugle & Follette, 1998), and identify appropriate interventions that address important and controllable target behaviours for the client (Haynes & O'Brien, 1990) that are changeable and treatment-responsive (Follette & Naugle, 2006). The current discussion of the review of reviews will therefore will presented by population (e.g. children, adult victims of childhood victimisation, adult victims of rape and sexual assault and male victims) and by symptom type. Where therapy delivery factors are known, these will also be discussed.

Although not discussed in the reviews it is important to note that current NICE (2005) guidelines suggest that therapy for PTSD symptoms that are mild in nature should only be offered after a period of 'watchful waiting'. Watchful waiting is recommended clients with

mild symptoms for less than four weeks. This involves a client monitoring their symptoms in terms of increases or decreases in severity in recognition that two thirds of clients improve without intervention.

5.1. Treatment of sexually abused children

The treatment of childhood victims of sexual abuse was evaluated by Sanchez-Mecca et al. (2011) and included studies of children and adolescents. They found that overall, treatment improved symptom severity. Trauma-focused CBT-behavioural treatments in combination with supportive therapy and a psychodynamic element (e.g., play therapy) worked best for self-esteem, sexualised behaviour and anxiety. Behavioural and global symptoms were most effectively treated with a combination of CBT and ST. Depression was best treated by psychodynamic therapies. Sanchez-Mecca et al. (2011) also found that longer treatments were associated with larger improvements in children's symptoms.

Harvey and Taylor (2010), found treatments over twenty weeks were more effective than shorter treatments for a range of child symptoms. Treatment duration is somewhat confounded by treatment delivery however. When exploring the number of sessions, externalising behaviour, sexualised behaviour, self-concept, social skills and caregiver symptoms were all best delivered over more than twenty sessions. PTSD however was most effective when delivered within ten to twenty sessions. Session length of less than sixty minutes were more effective that longer sessions. PTSD treatment was best delivered using a family modality, whereas improvements to externalising behaviour and self-concept were best delivered using a mixed modality. Finally, regarding the content, PTSD is most effective when a manualised therapy is used, whereas semi-structured approaches are best for sexualised behaviour and self-concept, with externalising symptoms best addressed with an unstructured approach.

Although not statistically significant, there were trends within the data that suggested older ages were associated with larger treatment gains. Research has not found clear effects of client age on symptoms (Yancey et al., 2013) and therefore it may be that age is related to outcomes in terms of changes to functioning. Research suggests that the age of sexual abuse experience is related differential neurological brain structures, which are recognised as contributing to a range of cognitive, behavioural, and psychological negative outcomes later in life such as anxiety, depression, substance abuse, dissociative disorders, and sexual (Blanco et al., 2015). These changes may also impede treatment, although research on this is currently lacking. Although no other treatment factors significantly affected outcomes, other research

highlights the importance of characteristics of the relationship between child and therapist and of listening to children's preferences and keeping children informed (Allnock, Hynes & Archibald, 2015).

5.2. Treatment of adults sexually abused as children

Taylor and Harvey (2010) explored treatment of adults sexually abused as children. They found moderate improvements for post-traumatic stress disorder or trauma symptoms, internalising symptoms, externalising symptoms, self-esteem, and global functioning or symptoms, which were largely maintained at follow-up. EMDR had the largest treatment effect, followed by CPT, then PE, SIT and brief CBT, with the least effective treatment approach being supportive counselling methods which may be counterproductive. They found that white participants appeared to benefit more from therapy than did African Americans (there was no European data). Research suggests that Black victims may be exposed to more sexual abuse than other ethnic groups, a higher frequency of abuse (Davis et al., 2006), be more likely to experience penetration as part of the abuse (Huston, Prihoda, Parra & Foulds, 1997) and may experience more negative social reactions to disclosure (Ullman & Filipas, 2005). Black victims may also experience longer lasting avoidance behaviours (Wyatt, 1990) and may have higher levels of trait dissociation than White victims (Douglas, 2009). Dissociation may be best treated with PE (Regehr et al., 2013). Participants with low annual incomes benefit least from treatment. This may be due to lower income clients being more susceptible to adversity (Mulia & Zemore, 2012) and utilising less effective self-management (Shneerson et al., 2015). Group delivery was found to be most effective, although individual therapy is also a viable alternative where group delivery is not practical. Duration of treatment was most successful when spanning less than ten weeks, with less than ten sessions, delivered twice per week and lasting between fifty and sixty minutes each. Finally manualised and structured sessions were most effect in reducing symptoms.

5.3. Treatment of adult victims of sexual assault and rape

Regehr et al. (2013) reviewed the treatment of adult victims of rape or sexual assault via studies employing a RCT or non-randomised naturally occurring control group. They found 'tentative' evidence that both CPT, PE, SIT and EMDR decreased symptoms of PTSD, depression and anxiety. Overall, they found that treatments were most effective in reducing depression and PTSD and least effective in reducing guilt symptoms. Exploring treatment type, they found PE demonstrated improvements in PTSD, depression, anxiety, guilt and dissociation; EMDR demonstrated improvements in PTSD, depression, anxiety and dissociation; and CPT demonstrated improvements in PTSD, depression and guilt.

5.4. Treatment of male victims of sexual abuse, assault and rape

Male victims of sexual abuse and assault are an under researched cohort in the literature (Vearnals & Campbell, 2001) and is plagued by low sample sizes. This may be due to a variety of factors such as substantiation of abuse allegations. Research suggests that girls are more likely to have their claim substantiated than boys (Eckenrode, Munsch, Powers & Doris, 1988), this is in spite of the fact that boys are more likely to be victims of rectal and oral penetration than girls (Hudson et al., 1997). This is possibly a reason why middle aged men who have a history of childhood sexual abuse are almost three times more likely to be out of the labour force due to sickness and disability, to be poorer and isolated compared to similarly aged abused women (Barrett, Kamiya & O'Sullivan, 2014). One review of child victims of sexual abuse (Harvey & Taylor, 2010) disaggregated data for male and female samples. They found larger effect sizes for boys than girls in respect of reducing sexualised behaviours and enhancing social functioning. Fortunately, those that do access help, interventions appear to be successful, indeed more successful than for females (Harvey & Taylor, 2010) in reducing sexualised behaviours and enhancing social functioning. In contrast Sanchez-Meca et al. (2011), found that symptom reduction did not significantly differ between males and females, which is consistent with other research (e.g. Duffany & Panos, 2009; Friedrich et al., 1992: Sikkema et al., 2007).

5.5. Summary

In summary, sexual abuse and sexual assault victims are amenable to treatment, but effective treatment is contingent on the population, symptoms, type of treatment and mode of delivery. Assessment is needed to understand the treatment needs of the client. Functional assessment may be an effective tool in this process of identifying difficulties associated with presenting problems in addition to accurate assessment of mental health symptoms. The mode of treatment needs to be selected in response to the clients' individual needs. This is in order for the most effective way for symptoms to be reduced to be employed.

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Appendix I: Search terms

- Rape / raped / raping / rapist
- Sex offence / sex offense
- Sexual abuse / Child sexual abuse / Childhood sexual abuse
- Incest
- Sexual assault / sexual violence
- Survivor / victim
- Child / infant / adolescent / teenage / adult
- Unlawful / unwanted / coerced / forced
- Anxiety
- Depression
- Distress
- Post-trauma / PTSD / post-traumatic / stress
- Trauma / traumatic
- Adverse / adversity
- Therapy
- Intervention
- Support
- Treatment
- Cognitive-behavioural / CBT
- Counselling
- Dialectal-behavioural / DBT
- Education
- Exposure
- Expressive
- Eye movement desensitisation reprocessing / EMDR
- Psychotherapy
- Psychodynamic
- Psychosocial
- Relaxation
- Review / literature review / systematic review / meta-analysis

Note. Variations of these terms were used (e.g. posttrauma/post trauma/post-trauma) but not included here for simplicity.

Appendix II: Databases searched

- Cochrane Library
- Campbell Systematic Reviews
- Embase (OVID)
- Medline
- PsychInfo
- Science Direct
- Scopus
- Sociological Abstracts (ProQuest)
- Social Sciences Citation Index

Appendix III: Screened review studies

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual abuse AND treatment	PsychInfo	Avinger & Jones (2007)	Qualitative literature review	Studies including pre and post measures	Information not provided Searches took place from 1985 to 2005	No search terms identified	<u>10 studies:</u> Baker (1987) Carbonell et al. (1995) Cohen & Mannarino (1992) Kitchur & Bell (1989) Kruczek & Vitanza (1999) Lindon & Nourse (1994) MacKay et al. (1987) Sinclair et al. (1995) Thun et al. (2002) Verleur et al. (1986)	230 sexually abused girls aged 11 to 18 Only 4 studies used control groups	Anger Anxiety Depression Dissociation Externalising Internalising Hostility PTSD Psychotic thinking Self-esteem Self-efficacy	CBT Drama therapy Humanistic TF-CBT Group therapies	Psychodrama models associated with lower depressive symptoms, while cognitive behavioural and multidimensional groups incorporating graduated exposure were associated with PTSD symptom reduction. No studies reported significant changes in externalising behaviour. Several group models resulted in significant reductions in group member' self-reported anxiety symptoms and increases in self-reported self-esteem.
N/A	Later review (Finklehor & Berliner, 1995)	Beutler, Williams & Zetzer (1994)	Qualitative literature review	None noted – reviewed naturalistic, quasi-experimental and experimental studies	Not noted	No search terms identified	Multiple. No specific studies considered in detail – general discussion provided	Sexually abused children. No other details	Anxiety Depression Eating disorders Phobias Sexualised behaviour Substance use	Broad discussion family, group and individual therapy. No treatments considered in detail	Argue for treatment of symptom patterns and thorough measurement of outcomes More rigorous research needed Treatment effectiveness needs to be evaluated

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
N/A	Later review (Taylor & Harvey 2009)	Callahan, Price & Hilsenroth (2004)	Systematic review	Studies must describe treatment consistent with notions of interpersonal psychodynamic therapy Study reported treatment outcomes using standardised measures of symptoms Pre-post data collected	Identified articles between 1989 and 2003 Databases not identified	Child(hood) sexual abuse Group therapy Group treatment Outcome	<u>5 studies:</u> Alexander et al. (1989) Carver et al. (1989) Cloitre & Koenen (2001) Lundqvist & Oejehagen (2001) Sharpe et al. (2001)	186 adults sexually abused as children 176 females, 10 males	Anxiety Control Depression Fear Interpersonal problems PTSD/trauma	Group interpersonal psychodynamic therapy	Interpersonal-psychodynamic group therapy effective for survivors of child sexual abuse Medium to large effect sizes for reducing distress and depression Participants in structured groups showed greater long-term improvement than those lacking structure

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual abuse AND meta-analysis	PsychInfo	Corcoran & Pillai (2008)	Meta-analysis	Sexual abuse was the reason for treatment referral Treatment provided to children & not adult survivors of sexual abuse Parents had to be involved in the treatment (child's sexual abuse was a focus of the intervention) Studies had to assess the result of treatment on child internalizing symptoms (e.g., depression, anxiety), externalizing (behavior problems), sexual behavior problems, or PTSD; Comparison or control group designs were required Information needed for effect size calculations	CINAHL Infotrac MEDLINE PsychInfo SSCI SWA Databases searched from 1980 to summer 2005	Child sexual abuse Victimisation Molestation Treatment Therapy Intervention Evaluation Outcome Research	<u>7 studies:</u> Celano et al. (1996) Cohen et al. (1996/1997) Cohen et al. (1998/2005) Cohen et al. (2004) Deblinger et al. (1996/1999) Deblinger et al. (2001) King et al. (2000) In the case of follow-up studies, only the first follow-up included	516 participants Majority female sample although smaller proportion of males included Aged between 7 to 13	Externalising Internalising PTSD Sexualised behaviour	CBT SC Intervention was delivered either individually to adult and child, or jointly	Parental involvement appears more beneficial than child-only treatment. A small but statistically significant finding. Internalising outcomes show the strongest effects, followed by PTSD, sexual behaviors, and externalising behaviors in children.

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual abuse AND intervention	PsychInfo	Cummings, Berkowitz & Scribano (2012)	Qualitative literature review	Search of literature within the "last 3 years" None noted.	Centers for Disease Control MEDLINE PsychInfo Substance Abuse and Mental Health Services Adminstration Last 3 years – approximately 2009/10 to 2011/12	No search terms identified	75 studies in paper, although 14 reviewed in more detail: Brkanac et al. (2003) Cohen et al. (2007) Farmularo et al. (1988) Harmon & Riggs (1996) Horrigan (1996) Keeshin & Strawn (2009) Looff et al. (1995) Meighen et al. (2007) Nugent (2007) Robb et al. (2008) Seedat et al. (2001) Seedat et al. (2002) Strawn et al. (2009) Stathis et al. (2005)	Survivors of child sexual abuse. No other sample characteristics provided.	PTSD	Pharmacology (SSRIs, mood stabilisers, anti-psychotics, anti-adrenergics) TF-CBT and combination of both	TF-CBT was effective in enhancing a broad spectrum of affective and behavioral functioning as well as parenting and child personal safety skills. Pharmacotherapy shows limited effectiveness for PTSD
Sexual abuse AND treatment	PsychInfo	Finklehor & Berliner (1995)	Qualitative literature review	Included previous reviews, articles in progress and studies that may be "loosely" considered to be treatment studies Must have quantitative measure to evaluate outcomes for children under 18 years At least 5 of the children in the sample needed to have received intervention during the interval period	Consulted previous review articles, literature search of journals in related fields, contacted researchers in the field No time frame specified, assuming no time limit on articles	No search terms identified	<u>29 studies:</u> Pre-post designs Clendenon-Wallen (1991) Cohen & Mannarino (1992) De Luca et al. (1993) Deblinger et al. (1990) Friedrich et al. (1992) Hack et al. (1994) Hiebert-Murphy et al. (1992) Hoier et al. (1987) Kitchur & Bell (1989) Lanktree & Briere (1995)	1,312 participants Ranged from young boys/girls, and included deaf children and those in institutions All CSA victims	Anxiety Caregiver reports Child behaviour Loneliness Locus of control PTSD/trauma symptoms Sexualised behaviour School reports Social support Suicide gestures	Abuse-specific CBT Crisis intervention Family therapy Mixed Psychodynamic "Psychotherapy" SC Sex education Individual and group therapy	Five studies evidenced that recovery is not simply down to passage of time or other external factors Effectiveness of sexual abuse treatments not yet evident Aggressiveness and sexualised behaviour do not always change as consistently in response to treatment

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
				Included studies that did not evaluate treatment effects but looked at other areas (e.g. effects on court testimony) as long as they compared treated and non-treated children			Larzelere et al. (1993) Mackay et al. (1987) Nelki & Waters (1988) Richardson (1994) Rust & Troupe (1991) Stauffer & Deblinger (1993) Sinclair et al. (1995) Quasi-experimental designs Downing et al. (1988) Gomes-Schwartz et al. (1990) Goodman et al. (1992) Oates et al. (1994) Sullivan et al. (1992) Experimental designs Baker (1987) Berliner & Saunders (1993) Burke (1988) Cohen & Mannarino (1996) Monck et al. (1994) Perez (1988) Verleur et al. (1986)				Need to find out why some children do not improve as much as others (e.g. avoidance/denial) Some therapies may not be effective as others or evidence-base weak so more reviews needed

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Incest AND intervention	Scopus	Green (1993)	Review	CANNOT GAIN ACCESS TO ARTICLE – PAYMENT ONLY – no response from author	Articles from 1980 to 1993 reviewed	?	<u>More than 100 articles reviewed</u> Some articles consider approaches to intervention	?	?	?	Methodological difficulties in child sexual abuse research include problems with definition, failure to measure severity of the abuse, sampling problems, failure to use standardized or appropriate instruments, problems with validation, and failure to use control groups
Sexual abuse AND treatment	PsychInfo	Harvey & Taylor (2010)	Meta-analysis	Unlike other meta-analyses, included repeated measures designs Children and adolescents up to age 18 Intervention had to meet definition of therapy Treatment outcomes measured after sexual assault, rape, PTSD English language only "Majority" (at least 50%) of child sample experienced sexual assault Reported independent data sets Data must allow for calculation of effect sizes Published and unpublished studies	CENTRAL MEDLINE PsychInfo SSA *Full list not provided Searches took place "through to 2009"	Child sexual abuse Incest Sex offence Treatment Therapy Intervention Outcome	<u>39 studies:</u> All independent samples and 75% of repeated measures studies were American, 20% repeated measures studies were British or Canadian Independent samples design King et al. (2000) Krakow et al. (2001b) McGain et al. (1995) Sullivan et al. (1992) Verleur et al. (1986) Repeated measures design Arnold et al. (2003) Ashby et al. (1987) Baker (1985) Berliner & Saunders (1996) Bryce (1995) Celano et al. (1996)	1,169 children and adolescents "treatment participants" in total across the 39 studies Most were girls (83-90%) of treatment conditions and youth over the age of 6 years (81-100%) Few studies reported ethnicity, education, SES, abuse-related factors	Caregiver outcome Coping/functioning Externalising symptoms Global outcome Internalising symptoms PTSD Self-concept/esteem Sexualised behaviour Social skills/competence	Child CBT CCT EMDR Family CBT Play therapy TF-CBT SC SIT Group and individual therapy	Large effect sizes for global outcomes (g = 1.37) and PTSD (g = 1.12). Moderate effect sizes for internalizing symptoms (g = 0.74), self-appraisal (g = 0.63), externalising symptoms (g = 0.52) and sexualised behaviour (g = 0.49). Small effects for social skills/competence (g = 0.38). Limited data available to fully assess effectiveness of types of interventions. However, cognitive-behavioural (g = 1.25) better than eclectic types of treatment (g = 0.40).

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
				Excluded pharmacological treatments, case reports, treatments to increase knowledge and prevent PTSD			Cohen & Mannarino (1997) Deblinger et al. (1990) Deblinger et al. (1999) Deblinger et al. (2001) Deblinger et al. (2006) Freidrich et al. (1992) Hack et al. (1994) Hiebert-Murphy et al. (1992) Hsu (2003) Jaberghaderi et al. (2004) James (1977) Kruczek et al. (1999) MacKay et al. (1987) May et al. (1996) Nelki et al. (1989) Nolan et al. (2002) Pifalo (2002) Reeker et al. (1998) Reyes (1996) Rust et al. (1991) Scott et al. (2003) Simmer-Dvonch (1998) Sinclair et al. (1995) Stauffer et al. (1996) Tourigny et al. (2007) Trowell et al. (2002) Weist et al. (1993)				Family-based (g = 2.11) and individual therapy (g = 1.31) better for PTSD/trauma symptoms than group therapy (g = 0.89).

Sexual abuse AND therapy	Medline	Hetzel-Riggin, Brausch & Montgomery (2007)	Meta-analysis	Designed to examine the effectiveness of treatment for sexually abused children and adolescents Pre–post design studies Sample size greater than 10 Published in a peer-reviewed journal English-language papers Data must be available to calculate effect sizes	MEDLINE PsychInfo Social Sciences Abstracts Appropriate studies searched from 1975 to 2004, although final studies between 1986 and 2004	Child abuse Child sexual abuse Adult Survivor Treatment Therapy Cognitive-behavioural Play therapy Family therapy Outcome	<u>28 studies:</u> Berliner and Saunders (1996) Celano et al. (1996) Cohen & Mannarino (1996) Cohen & Mannarino (1998) Cohen et al. (2004) Deblinger et al. (1990) Deblinger et al. (1996) Deblinger et al. (2001) DeLuca et al. (1995) Friedrich et al. (1992) Jaberghaderi et al. (2004) Jenson et al. (1996) King et al. (2000) Krakow et al. (2001) Kruczek & Vitanza (1999) Lanktree & Briere (1995) McGain & McKinzey (1995) Meezan & O'Keefe (1998) Nolan et al. (2002) Oates et al. (1994) Reeker et al. (1998) Rust & Troupe (1991) Scott et al. (2003) Sinclair et al. (1995) Stauffer & Deblinger (1996) Sullivan et al. (1992) Trowell et al. (2002)	1,839 participants aged 2 to 14 years Victims of child sexual abuse 11 studies of females only, 1 male only, 14 mixed, 2 not reported 11 studies used untreated group, 17 did not Included studies with parents of sexually abused children	Behavioural problems Distress "Other problems" Self-concept Social functioning Therapy modality	Abuse-specific Cognitive-behavioural SC Play therapy Group and individual	Psychological treatment after childhood or adolescent sexual abuse tended to result in better outcomes than no treatment Play therapy most effective treatment for social functioning Cognitive-behavioural, abuse specific, and supportive therapy in either group or individual formats most effective for behaviour problems Cognitive-behavioural, family, and individual therapy most effective for psychological distress Abuse-specific, cognitive-behavioural, and group therapy appeared to be the most effective for low self-concept Choice of therapy modality should depend on the child's main presenting secondary problem Ethnicity related to treatment outcome

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
							Verleur et al. (1986)				
Incest AND meta-analysis	Medline	de Jong & Gorey (1996)	Meta-analysis	Studies with group work on female victims of CSA Compared short and long-term work	Index Medicus Psychological Abstracts SWA Searched from 1980 to 1996	Sexual abuse Survivor Adult Group work Group therapy	<u>7 studies:</u> Alexander et al. (1989) Apolinsky & Wilcoxon (1991) Carver et al. (1989) Hazzard et al. (1993) * Richter et al. (1995) Roberts & Lie (1989) Threadcraft & Wilcoxon (1993) Six of seven studies were in US, the other in Canada *Long-term intervention. The remainder are short-term	5 of 7 studies reported client data Median age 34, age range 18 to 64 All females 50% abused by father or male parental figure	Affect Depression Distress Self-esteem	Group intervention – either long or short-term	Group work has largely beneficial effects upon female survivors' affect No extant empirical evidence supports the differential effectiveness of either short-term (d = 0.79) or long-term (d = 0.66) groups

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual abuse AND treatment	PsychInfo	Kessler, White & Nelson (2003)	Qualitative literature review	Focused on group treatment of CSA survivors Peer-reviewed published articles only	PsychInfo Five journals searched manually *Journal of Interpersonal Violence* *Journal of Child Sexual Abuse* *Violence and Victims* *Journal of Consulting and Clinical Psychology* *Child Abuse & Neglect* Articles from 1985 to 1999	No search term identified	<u>13 studies:</u> Uncontrolled studies Hazzard et al. (1993) Herman & Schatzow (1984) Roberts & Lie (1989) Sultan & Long (1988) Talbot et al. (1999) Theadcraft & Wilcoxon (1993) Controlled studies Alexander et al. (1989) Carver et al. (1989) Morgan & Cummings (1999) Stalker & Fry (1999) Richter et al. (1997) Westbury & Tutty (1999) Zlotnick et al. (1997)	349 participants in uncontrolled studies and 558 participants in controlled studies Total 907 participants No male participants	Depression Dissociation Locus of control PTSD/trauma Self-esteem Self-perceptions Social relationships Trust	Group therapy	Although studies suffer methodological issues, group treatments are effective for CSA survivors in terms of reducing trauma symptoms than no treatment at all The exact components of group therapy that contribute towards recovery are unknown

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual abuse AND cognitive	PsychInfo	King, Tonge, Mullen, Myerson, Heyne & Ollendick (1999)	Qualitative literature review	For broad range, includes case studies, open clinical trials, multiple baseline design investigations and randomized clinical trials Excluded conference proceedings and dissertations	PsychInfo Articles dated from 1980 to 1999 Search of journals that publish evaluation studies on sexually abused children Child Maltreatment Journal of the American Academy of Child and Adolescent Psychiatry	No search term identified	2 case studies discussed (although acknowledges more) Becker et al. (1982) Kolko (1986) RCTs Berliner & Saunders (1996) Cohen & Mannarino (1996) Cohen & Mannarino (1998) Deblinger et al. (1996) Open clinical trials Deblinger et al. (1990) Stauffer & Deblinger (1996) Multiple baseline design Farrell et al. (1998)	Sexually abused children. No other details provided.	Anxiety Fear Parental distress Parental interactions with children PTSD/trauma Sexualised behaviours	Cognitive-behavioural Individual and group therapy	Sexually abused children and caregivers benefit from CBT More replications needed

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual abuse AND review	Campbell Systematic Reviews	MacDonald et al. (2012) * *First published in 2006 and then updated	Systematic review	Randomised or quasi-randomised controlled trials of CBT Children and adolescents up to age 18 years who had experienced being sexually abused Studies had to use control/comparison groups Cognitive-behavioural studies	ClinicalTrials.gov EMBASE CENTRAL CINHAL ICTRP LILACS MEDLINE OpenGrey PsychInfo Searches took place up to end of 2011	Extensive list provided for each database searched	<u>10 studies:</u> Berliner & Saunders (1996) Burke (1988) Celano et al. (1996) Cohen & Mannarino (1996) Cohen & Mannarino (1998) Cohen et al. (2004) Deblinger et al. (1996) Deblinger et al. (2001) Dominguez (2001) King et al. (2000)	847 sexually abused children under age 18 Majority White and female	<u>Primary outcome</u>: Anxiety Child behaviour Depression PTSD <u>Secondary outcome:</u> Parental skills/knowledge Recidivism	Cognitive-behavioural	CBT may have positive impact, but most results not statistically significant. Strongest evidence for positive effects of CBT appears to be in reducing PTSD and anxiety symptoms.
N/A	Later review (Finklehor & Berliner, 1995)	O'Donohoue & Elliot (1992)	Qualitative literature review	None set, although evaluated on following criteria: Adequacy of description of study Adequacy of design Adequacy of measurement Assessment of clinical and statistical significance Treatment protocols faithfully implemented Inclusion of follow-up information Generalisability of results	States they used computerised databases, but none identified or dates provided Contacted researchers Examined reference lists to identify other studies	No search terms identified	<u>11 studies:</u> Single subject/case study design Becker et al. (1982) Hoier & Shawchuck (1987) Kolko (1986) McNeill & Todd (1986) Individual therapy group design Deblinger et al. (1990) Downing & Fisher (1988) Group therapy Burke (1988) Corder et al. (1990) Hoier et al. (1988) Verleur et al. (1986) Field study Tufts (1984)	Sexually abused children under age 18 Number of participants: 5 – case study 41 – individual 81 – group 156 – field TOTAL *N*: 238 Mixed gender, majority female. Not all studies broke down by gender	Anxiety* Depression* Sexual behaviour *Main focus	Cognitive-behavioural Coping skills Group therapy Operational reinforcement Psychodynamic Token economy Individual and group therapies	This was one of the first reviews of treatment efficacy, and no study sampled demonstrated the efficacy of any particular method. Calls for evaluations of specific types of therapy. Early evidence suggests cognitive-behavioural most effective, although more research needed. Calls for assessment of other treatment targets other than anxiety and depression, such as aggression, social withdrawal, eating disorders, sexualised behaviour, trauma symptoms.

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual abuse	Cochrane Library	Parker & Turner (2013)	Systematic review	Children/adolescents who had been sexually abused up to age 18 and were symptomatic at time of study Inclusion of RCTs, quasi-randomised RCTs Psychodynamic therapies compared to waiting list, control, treatment as usual NOT against other therapies EXCEPT if secondary to medication Not restricted by language, publication type, location or date	ASSIA CENTRAL CINAHL ClinicalTrials.gov CPCI DAI EMBASE LILACS MEDLINE mCRT PsychInfo SSCI Sociological Abstracts WHO ICTRP WorldCat Three trial registers, contacted experts Initial searches ran in November/December 2009 then updated May 2012 and May 2013 No time limit on articles	Extensive list provided for each database searched	No studies met criteria for the review	N/A	<u>Primary outcome:</u> PTSD Depression Sexualised behaviour Aggression/conduct problems Self-harm Suicide <u>Secondary outcome:</u> Psychiatric diagnoses Defence mechanisms Relationship to therapist Transference Level of functioning Psychosocial factors Service use Views of treatment Attachment	Psychoanalytic or psychodynamic therapies Groups and individual therapies, no restrictions on duration of treatment	Lack of evidence and more high quality studies needed
Sexual assault AND therapy	Scopus	Parscacepe, Martin, Pollock & García-Moreno (2015)	Systematic review	Published English, Spanish or French Adult female survivors of sexual assault Must have comparison group Excluded studies focused on child sexual abuse survivors only	CINAHL EMBASE MEDLINE PsychInfo Articles from January 1985 to December 2012 *Full list not provided	Rape Sexual assault Sexual violence Counselling Therapy Psychotherapy	<u>9 studies:</u> 8 studies US-based, 1 from Spain Anderson et al. (2010) Echeburúa et al. (1996) Foa et al. (1991) Resick et al. (1988) Resick et al. (1992) Resick et al. (2002) Resick et al. (2012) Rothbaum (1997) Rothbaum et al. (2005)	623 adult female survivors of attempted or complete sexual abuse, rape and CSA	PTSD Depression Anxiety Distress-fear	AT CAED CPT EMDR PMR PE SIT SC SP + Information	Cognitive-behavioural, exposure and EMDR interventions most effective for reducing PTSD, anxiety, depression compared to no treatment. No sig. differences between these treatments.

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual abuse AND systematic review	Medline	Passarela, Mendes & Mari (2010)	Systematic review	RCT trials of CBT treatment either alone or combined with pharmacotherapy Sexually abused children and adolescents with PTSD Patients met diagnostic criteria for PTSD and aged up to 18 years old Use of comparison groups with objective methods of assessment RCT trials that scored at least 2 points on the Jadad scale Studies excluded if they had 30% of greater dropout rate	CENTRAL Cochrane Depression, Anxiety and Neurosis Group Database of Trials EMBASE LILACS MEDLINE PILOTS PsychLIT PsychInfo SciSearch 1980 to 1 February 2006 Study authors contacted for clarification No restrictions on language, date or location of publication	Posttraumatic stress disorder Stress disorder Treatment Psychotherapy Pharmacology Drug therapy Combined treatment Associated treatment Children Adolescents Randomised trials Clinical trials	<u>3 studies:</u> Cohen et al. (2004) Deblinger et al. (1996) King et al. (2000)	329 participants (260 girls and 69 boys) aged 5 to 17 years 2 U.S. based studies, 1 conducted in Australia 64% sample White – although one study did not report ethnicity	PTSD symptoms	CBT	CBT effective for sexually abused children and adolescents, compared to waiting list and no treatment

N/A	Via Taylor & Harvey (2010)	Peleikis & Dahl (2005)	Systematic review	Adult females with CSA history Pre/posttreatment follow-up measures with defined instruments Description of treatment given	CENTRAL EMBASE MEDLINE PsychInfo Sociological Abstracts Searches from 1966 to 2003 Papers in English, German and Scandinavian languages Searched last 10 volumes of: *British Journal of Psychiatry* *American Journal of Psychiatry* *Journal of Consulting and Clinical Psychology* *Child Abuse & Neglect*	Child sexual abuse Psychotherapy Treatment	<u>24 studies:</u> Studies with control group: Alexander et al. (1989) Apolinsky & Wilcoxon (1991)/Threadcraft & Wilcoxon (1993) Bagley & Young (1998) Classen et al. (2001) Cloitre & Koenen (2001) Freedman & Enright (1996) Morgan & Cummings (1999) Paivio & Nieuwenhuis (2001) Richter et al. (1997) Rieckert & Moller (2000) Saxe & Johnson (1999) Westbury et al. (1999) Zlotnick et al. (1997) Studies without control group: Carver et al. (1989) Fisher et al. (1993) Hazzard et al. (1993) Jehu (1989) Longstreth et al. (1998) Lundqvist & Ojehagen (2001) Paddison et al. (1993) Roberts & Lie (1989) Stalker & Fry (1999) Talbot et al. (1999)	1,087 females "Majority" of participants in mid-30s Mean of 13.7 years of education 40% married or cohabiting	Anxiety Depression Self-esteem Trauma Individual and group therapies	Psychotherapy	All studies examined treatment effectiveness, and they mostly had a low quality of design. For posttreatment gains, mean total effect size was .63 in controlled studies. Effect sizes for non-controlled studies were somewhat higher. Minimal changes from posttreatment to follow-up were observed

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
							Vaa (2002)				
Child sexual abuse AND psychotherapy	PsychInfo	Price, Hilsenroth, Petetric-Jackson & Bonge (2001)	Systematic review	The study had to report pre and post tests Research had to include studies of clinical samples Outcome data needed for individual psychotherapy (as opposed to group psychotherapy only) Case studies excluded unless clear pre and post treatment assessments conducted	PsychInfo PsychLIT Searches of articles from 1989 to 1999 Journals also reviewed British Journal of Medical Psychology British Medical Journal Canadian Journal of Psychiatry Child Abuse and Neglect Journal of Child Sexual Abuse Journal of Consulting and Clinical Psychology Journal of Interpersonal Violence Journal of Social Work and Human Sexuality Psychotherapy and Psychotherapy Research	Child(hood) sexual abuse Treatment Therapy Outcome	<u>8 studies:</u> CBT Chard et al. (1997) Jehu et al. (1986) Experiential Paivio et al. (1998) Paivio et al. (1999) Paivio et al. (2001) Smith et al. (1995) Psychodynamic Clarke & Llwelyan (1994) Supportive Stalker & Fry (1999)	36 participants for cognitive-behavioural Psychodynamic – 7 65 – supportive 288 adult survivors of CSA (36 – cog/behavioural; 180 – experiential; 7 – psychodynamic; 65 – supportive)	Depression Dissociation Global functioning PTSD/trauma	4 broad themes considered Cognitive-behavioural Experiential Psychodynamic and interpersonal Supportive	Individual psychotherapy effective method for CSA Generally larger effect sizes for experiential methods in reducing specific symptoms, although limited data for comparison CBT more effective for reducing trauma symptoms (d = 0.82 – 1.27), experiential varies across studies Weaker effects for supportive (d = 0.44 – 1.15) Comments on methodological limitations and missing information
Sexual abuse	MEDLINE	Putnam (2003)	Qualitative literature review	English language articles pertaining to CSA	MEDLINE PsychInfo Searches from 1989 to 2003	No search terms identified	Multiple studies, but seminal references on CSA treatment were: Cohen & Mannarino (1998) King et al. (2000)	Survivors of CSA. No other details.	Depression and sexualised behaviours are best documented outcomes	CBT	Preliminary research indicates that CBT of the child and non-offending parent is most effective for some symptoms, but longitudinal follow-up and large-scale "effectiveness" studies are needed.

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual abuse	ThScopus	Ramchandri & Jones (2003)	Systematic review	RCT of sexually abused children and families Intervention had to address psychological and behavioural effects of sexual abuse Outcome measures used that "reflected this"	CENTRAL CINAHL MEDLINE PsychLIT Searches from 1997 to 2002 Also hand-searched: *Journal of the American Academy of Child & Adolescent Psychiatry* *Journal of Child Psychiatry and Psychology* *Child Abuse Review* *British Journal of Psychiatry* *Child Abuse and Neglect* Authors contacted	Includes: Child* Sexual* Abuse Therap* Treat*	<u>12 studies:</u> Baker (1987) Berliner & Saunders (1996) Burke (1988) Celano et al. (1996) Cohen & Mannarino (1996) Cohen & Mannarino (1998) Deblinger et al. (1996/1999) Deblinger et al. (2001) Dominguez (2002) King et al. (2000) Monck et al. (2004) Trowell et al. (2002)	743 sexually abused children	Anxiety Depression PTSD/trauma Self-concept Sexualised behaviour	CBT Family therapy PE SIT SC Individual/group delivery	Cognitive-behavioural approaches most beneficial for treatment, especially in young children More directive approaches beneficial Involving non-abusing parent in therapy associated with improved outcomes for child

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
N/A	Referenced in later review	Reeker, Ensing & Elliot (1997)	Meta-analysis	Studies should include group therapies for children/adolescents Results based on empirical measures Data for effect sizes must be available – pre/post measures Published (13) and unpublished (2) studies	PsychInfo Articles from 1967 to 1996	Sexual abuse Treatment	15 studies: Ashby et al. (1987) DeLuca et al. (1993) Friedrich et al. (1992) Hack et al. (1994) Hall-Marley & Damon (1993) Hiebert-Murphy et al. (1992) Hoier et al. (1988) Kitchur & Bell (1989) MacKay et al. (1987) McGain & McKinzey (1995) Nelki & Watters (1988) Perez (1988) Rust & Troupe (1991) Stauffer & Deblinger (1996) Verleur et al. (1986)	220 participants Mixed male/female, aged between 2 and 18	Anxiety Depression Externalising Fear General distress Internalising Self-esteem Sexualised behaviour	Cognitive-behavioural Integrated (combination of psychoeducation and expressive therapies such as art, play)	Group treatments for sexually abused children and adolescents do exist Lack of differences between gender compositions, however trend towards larger effect sizes for groups comprised only of females Could not tell which therapies most effective due to methodological limitations and lack of suitable studies, however, mean effect sizes appear higher for integrated therapies than CBT

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Rape	Campbell Library	Regehr, Alaggia, Dennis, Pitts, & Saini (2013)	Systematic review	Random allocation of participants to experimental or control groups Male/female adult victims of sexual assault/rape as adults Victims of sexual assault/rape – NOT sole victims of child sexual abuse Single-group and subject designs excluded No restrictions on language, date and location of studies; searches took place in June 2009 and April 2011	ASSIA CDSR CENTRAL CINAHL Contemporary Women's Issues DAI EBM EMBASE ERIC Gender Studies Database MEDLINE PsychInfo SSA SSCI SWA VAA <u>7 journals hand-searched:</u> American Journal of Psychiatry British Journal of Psychiatry Journal of Interpersonal Violence Journal of Traumatic Stress Trauma, Abuse and Violence Violence Against Women Victims and Offenders Grey literature – e.g. conference proceedings, government reports, policy documents, dissertations	Extensive list provided for each database searched	<u>Six studies:</u> Foa et al. (1991) Resick et al. (1988) Resick et al. (1992) Resick et al. (2002) Rothbaum (1997) Rothbaum et al. (2005)	405 eligible participants with complete data for 358 Adult defined as age 19+ All studies sampled used female victims only Mean age = 32.2 years 75% White	<u>Primary outcome:</u> PTSD symptoms <u>Secondary outcome:</u> Depression Anxiety Guilt Fear	AT CPT EMDR PE SIT SC/SP	All six interventions had statistically sig. effect on PTSD and depression outcomes compared to control Four studies included anxiety with significant improvements Guilt improved following CPT, and dissociation improved following EMDR
Child abuse AND meta-analysis	PsychInfo	Sánchez-Meca, Rosa-Alcazar & Lopez-Soler (2011)	Meta-analysis	Apply a psychological treatment to a sample of child/adolescent victim of CSA	MEDLINE PsychInfo Searches from 1970 to 2006	Abuse Sexual trauma Malltreament Adolescent Child Young	<u>33 studies:</u> Ashby et al. (1987) Bagley & LaChance (2000) Berliner & Saunders (1996)	1,141 sexually abused children aged 4 to 17 Majority of the studies were carried	Anxiety/stress Behaviour problems Depression "Other" variables Self-esteem Sexualised behaviour	Humanistic Play therapy Psychodynamic Supportive TF-CBT	Largest effect sizes for cognitive-behavioural interventions (d = .63) and supportive therapy (d = .67) across the outcome measures, although

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
				Treatment had to include the child or adolescent CSA had to be detected by children's services Include pre and post assessments for effect sizes Articles in English, Spanish, French, Italian, or Portuguese Published between 1970 & 2006		Treatment Intervention Post-traumatic stress disorder Posttraumatic stress disorder Post traumatic stress disorder PTSD	Celano et al. (1996) Cohen et al. (2004)/ Deblinger et al. (2006) Cohen & Mannarino (1996/1997) Cohen et al. (1998/2005) Deblinger et al. (1996/1999) Deblinger et al. (1990) Deblinger et al. (2001) DeLuca et al. (1993) DeLuca et al. (1995) Friedrich et al. (1992) Hack et al. (1994) Hall-Marley & Damon (1993) Hiebert-Murphy et al. (1992) Jaberghaderi et al. (2004) King et al. (2000) Kruczek & Vitanza (1999) Lanktree & Briere (1995) MacKay et al. (1987) McGain & McKinzey (1995) Nelki & Watters (1989) Nolan et al. (2002) Reeker & Ensing (1998) Rust & Troupe (1991) Scott et al. (2003) Sinclair et al. (1995) Stauffer & Deblinger (1996) Sullivan et al. (1992)	out in North America (41 of the 51 groups in the 33 studies), followed by Europe (5 groups), Oceania (3 groups), and Asia (2 groups) 44 treatment groups and 7 control groups	Parent, clinician and child self-report		this varied considerably In general, trauma-focused cognitive-behavioural treatments combined with supportive therapy and a psychodynamic element *(e.g.,* play therapy) showed the best results Significant differences emerged between sexualised behaviours, global outcomes and behaviour problems

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
							Thun et al. (2002) Trowell et al. (2002) Verleur et al. (1986)				
N/A	Via later review (Sánchez-Meca et al. 2011)	Saywitz, Mannarino, Berliner & Cohen (2000)	Qualitative review	None noted. Focus on research that considers treatment efficacy for sexually abused children and adolescents	None noted. No time limit specified on articles.	No search terms identified	<u>Many studies highlighted, although the below discussed in detail:</u> Baker (1987) Berliner & Saunders (1996) Celano et al. (1996) Cohen & Mannarino (1996) Cohen & Mannarino (1997) Cohen & Mannarino (1998a) Cohen & Mannarino (1998b) Cohen & Mannarino (2000) Deblinger et al. (1990) Deblinger et al. (1996) Hyde et al. (1995) Lanktree & Briere (1995) Mannarino & Cohen (2000) Perez (1988)	None provided, although focus on sexually abused children and adolescents	Anxiety Depression PTSD/trauma	Short-term (8 to 16 sessions) and long-term interventions Abuse-specific CBT with parental involvement Psychoeducation	Trauma/abuse-specific CBT shown to be efficacious (or probably efficacious) for treating anxiety, depression, and behavior problems in children and adolescents generally More research needed as traditionally based on flawed designs

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
N/A	Later review (Finklehor & Berliner, 1995)	Silvosky & Hembree-Kigin (1994)	Qualitative literature review	None noted. "Both empirical and anecdotal evidence will be examined"	None or not specified. No time limit identified.	No search terms identified	6 studies considered in detail, although multiple others briefly noted: Burke (1988) Corder et al. (1990) Friedrich et al. (1992) Grammer & Shannon (1992) Hiebert-Murphy et al. (1992) Sturkie (1983)	Sexually abused children – no other details specified	Anxiety Depression Self-esteem	Group therapy	Limited well-designed studies so more rigorous designs needed Studies need to assess treatment impact (e.g. guilt, fear, anger) as recidivism is a poor measure Provides guidelines for family and group therapy for sexually abused children
Sexual assault AND therapy	MEDLINE	Steketee & Foa (1987)	Qualitative review	Literature on short and long-term effects of sexual abuse reviewed. Also drew attention to treatment paradigms No specific inclusion criteria given	None noted. No restrictions on date of studies.	No search terms identified	Multiple	Rape victims, predominately female Lack of information regarding gender, ethnicity etc.	Anxiety Depression Fear Phobias PTSD/trauma Social adjustment	BBIP Behavioural CBT Desensitisation PE SIT	Several cognitive/behavioral procedures and combinations of procedures have been found effective, including desensitization, cognitive therapy. and stress inoculation training. Flooding appears to be a promising treament for rape victims. but has not yet been evaluated in a controlled study.
N/A	Via later review (Sánchez-Meca et al. 2011)	Stevenson (1999)	Qualitative review	None specified. General literature on long-term consequences of child abuse and review efficacy of treatments	PsychLit SSCI Articles from 1981 to 1999 No attempt was made to trace studies that were not in the public domain, i.e. that were referenced as unpublished manuscripts or as internal reports	No search terms identified	33 studies on sexual abuse Repeated measures design Ashby et al. (1987) Clendenon-Wallen (1991) Deblinger et al. (1990) DeLuca et al. (1993) Friedrich et al. (1992) Furniss et al. (1988) Hack et al. (1994)	Not provided, although consists of sexually and physically abused children However, data separated for sexually abused children	Anxiety Depression PTSD Self-esteem/self-confidence Sexualised behaviour Sleep Self-report and parental report of behaviours	CBT Crisis intervention Drama therapy Psychodynamic SC Individual and group therapy Or combination of the above	Group therapy for sexually abused children, appears to be as effective for children whose problems arise from other causes. Studies have also shown that abusive parenting can be changed by training Few well-conducted studies of children

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
					Used reference lists from previous reviews		Hall-Marley & Damon (1993) Hiebert-Murphy et al. (1992) Hoier et al. (1987) Kitchur & Bell (1989) Lanktree & Briere (1995) Larzelere et al. (1993) Lindon & Nourse (1994) Mackay et al. (1987) Nelki & Waters (1988) Richardson (1994) Rust & Troupe (1991) Sinclair et al. (1995) Stauffer & Deblinger (1993) Non-randomised designs Downing et al. (1988) Gomez-Schwartz et al. (1990) Goodman et al. (1992) Oates et al. (1994) Sullivan et al. (1992) Randomised designs Baker (1987) Berliner & Saunders (1993) Burke (1988) Cohen & Mannarino (1996) McGain & McKinzey (1995) Monck et al. (1994) Perez (1988)				

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
							Verleur et al. (1986) Also included maltreatment studies (not included here)				
Sexual abuse AND therapy	Scopus	Taylor & Harvey (2010)	Meta-analysis	Unlike other meta-analyses, included repeated measures designs Intervention had to meet definition of therapy Treatment outcomes measured after sexual abuse in childhood English language only Over 50% of adults in study sample experienced sexual abuse in childhood Reported independent data sets Data must allow for calculation of effect sizes Published and unpublished studies Excluded pharmacological treatments, case reports, treatments to increase knowledge and prevent PTSD	CENTRAL MEDLINE PsychInfo SSA *Full list not provided Searches took place "through to 2009"	No search terms identified	<u>44 studies:</u> Independent samples design Alexander et al. (1989) Batten et al. (2002) Chard (2005) Cloitre & Koenen (2001) Cloitre et al. (2002) Cole et al. (2007) Edmond et al. (1999) Freedman & Enright (1996) Hebert & Bergeron (2007) Lundqvist et al. (2006) McDonagh et al. (2001) Morgan & Cummings (1999) Paivio & Nieuwenhuis (2001) Richter et al. (1997) Rieckert & Moller (2000) Sikkema et al. (2007) Stalker et al. (2005) Westbury & Tutty (1999) Zlotnick et al. (1997) Repeated measures design	1,841 treatment participants with history of sexual abuse in childhood N = 757 in independent samples, N = 1084 in repeated measures studies 432 control participants 88-92% female 77-96% aged between 31 and 45 years Infrequent reporting of ethnicity, education, marital status, SES and sexual abuse history	Externalising Global symptoms Internalising Interpersonal functioning PTSD/trauma Self-esteem	Individual and group therapy CAT CPT EMDR Person-centred Psychodynamic TF-CBT	Psychotherapeutic approaches for the treatment of the psychological effects of child sexual abuse are beneficial for adults, and these effects are maintained for at least six months following treatment Factors likely to influence outcome include aspects of the treatment, area of domain measured and client characteristics/abuse history Did not conduct analysis across different types of treatment

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
							Bautz (1997) Clarke & Llewelyn (1994) Dodds (1996) Hazzard et al. (1993) Kreidler (2005) Lau & Kristensen (2007) Longstrenth et al. (1998) Lubin et al. (1998) Lundqvist & Ojehagen (2001) MacIntosh & Johnson (2008) Owens et al. (2001) Price et al. (2004) Resick et al. (2008) Roberts & Lie (1989) Ryan et al. (2005) Saxe & Johnson (1999) Sharpe et al. (2001) Sikkema et al. (2004) Smith et al. (1995) Stalker & Fry (1999) Talbot et al. (1999) Threadcroft & Wilcoxon (1993) Weiner (1997) Wilson (2006) Wright et al. (2003) Zeper (1996)				

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual assault AND therapy	Scopus	Taylor & Harvey (2009)	Meta-analysis	Unlike other meta-analyses, included repeated measures designs Intervention had to meet definition of therapy Treatment outcomes measured after sexual assault, rape, PTSD English language only "Majority" of sample experienced sexual assault Reported independent data sets Data must allow for calculation of effect sizes Published and unpublished studies Excluded pharmacological treatments, case reports, treatments to increase knowledge and prevent PTSD	CENTRAL MEDLINE PsychInfo SSA *Full list not provided Searches took place up to April 2007	Sexual assault Incest Sexual Sex offences Rape Treatment Therapy Intervention Outcome PTSD Posttraumatic stress disorder	<u>15 studies:</u> All independent samples trials from U.S. 75% repeated measures trials from U.S., 25% from Western Europe Independent samples design Foa et al. (1991) Foa et al. (1995) Foa et al. (1999) Foa et al. (2005) Krakow et al. (2001a) Resick et al. (1992) Resick et al. (2002) Rothbaum (1997) Repeated measures design Echeburúa et al. (1996) Foa et al. (1995) Frank et al. (1988) Resick et al. (1988) Resick et al. (2003) Resick et al. (1992) Roth et al. (1988)	654 participants overall (383 in independent measures and 271 in repeated measures studies). Mean age 33.7 years for independent studies, 27.5 for repeated-measures studies. Majority of participants White females with undergraduate education Inconsistent reporting of abuse history and index assault details	PTSD Rape trauma Various other moderator analysis in respect of timing, duration, frequency, relationship to therapy	AT BBIP CBT CPT CR EMDR IRT PE PMR SC SD SIT Individual & group therapy	Most treatments effective. Largest effect sizes for EMDR (g = 2.02), CR (g = 2.28), CPT (g = 0.42 – 1.62) and PE. SC had smallest effect size (g = .15). Better outcomes were achieved with individual therapy compared to group approaches. The use of semi-structured approaches and homework techniques were positively related to the magnitude of effect size. Intense therapy over a short period of time (2 sessions over 10-16 weeks) beneficial for PTS, anxiety, depression.
Child abuse AND treatment AND meta-analysis	MEDLINE	Trask, Walshm & DiLilo (2011)	Meta-analysis	Focused on evaluating the effects of a treatment for the sequelae of CSA experienced by victims under 18 years of age Written in English	CDSR DAI ERIC MEDLINE ProQuest Dissertations/Thesis PsychInfo SSCI Sociological Abstracts	Child abuse Sexual abuse Maltreatment Treatment Intervention Therapy	<u>35 studies:</u> Arnold et al. (2003) Bagley & LaChance (2000) Baker (1985) Brown (2007) Burke (1988) Celano et al. (1996)	Sexually abused children aged 2 to 17 Mixed gender, ethnicity	Externalising (e.g. ADHD, aggression, Conduct Disorder, sexualised behaviour) Internalising (e.g. anxiety, depression)	Individual and group therapy CBT Family therapy "Other" Or combination	Cognitive behavioral interventions have greater benefits than treatments based on other theoretical models Studies with older children and those with a greater proportion of

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
				Assessed the effectiveness of an intervention using either PTSD symptoms, externalizing problems, or internalizing problems as outcome measures Between-group study must have included a no-treatment or attention-placebo comparison group Published and unpublished studies	Explored reference lists and journals relevant to CSA *Journal of Child Sexual Abuse* *Child Abuse and Neglect* *Child Maltreatment* *Journal of Interpersonal Violence* Studies published between 1960 and December 2009		Cohen & Mannarino (1997) Cohen & Mannarino (1998) Cohen et al. (2004) Costas (1988) Deblinger et al. (1990) Deblinger et al. (1996) Deblinger et al. (2001) DeLuca & Hanzen (1993) Duffany & Panos (2009) Friedrich et al. (1992) Hack et al. (1994) Hall-Marley & Damon (1993) Hiebert-Murphy et al. (1992) Hsu (2003) Humberson (1998) Hyde et al. (1995) King et al. (2000) Lanktree & Briere (1995) McGain & McKinzey (1995) MacKay et al. (1987) Monck (1997) Reeker & Ensing (1998) Silveria (1994) Simmer-Dvonch (1998) Sinclair et al. (1995) Stauffer & Deblinger (1996) Sullivan et al. (1992) Touringy et al. (2005)		Psychological outcomes (e.g. PTSD)		male participants revealed larger treatment effects Longer interventions are associated with greater treatment gains while group and individual treatments are equally effective Larger effect sizes for published rather than unpublished studies

Search terms used	Source	Study	Study type	Inclusion criteria	Databases reviewed	Search terms used	Studies reviewed	Sample	Outcomes noted	Interventions considered	Summary of findings
Sexual abuse AND therapy	Scopus	Vickerman & Margolin (2009)	Systematic review	Need outcome measurement Adolescent and adult sexual assault victims Adequate sample size to detect effect sizes Did not exclude studies on methodological limitation due to limited literature base Excluded case studies, therapist subjective views Included studies with diverse traumas but excluded those that did not report on effectiveness for sexual assault victims	PsychInfo Web of Science Keyword searches for authors in the field. No restrictions identified on date or location of articles	No search terms identified	<u>17 studies:</u> Cryer et al. (1980) David et al. (2006) Echeburúa et al. (1996) Foa et al. (1995) Foa et al. (2006) Frank et al. (1988) Lindsay (1995) Resick et al. (1988) Resick et al. (1992) Resick et al. (1993a) Resick et al. (1993b) Resick et al. (2002) Rothbaum (1997) Rothbaum et al. (1996) Veronen et al. (1982a) Veronen et al. (1982b) Veronen et al. (1983)	590 participants, all female Majority White, although smaller minorities represented	Anxiety* Blame Depression* Fear Global distress Hopelessness Paranoia Psychoticism PTSD* Social adjustment *Most popular	AT BBIP CPT EMDR PE SC SD SIT Individual & group therapies	CPT, PE, EMDR show most efficacy. Cognitive-behavioural more effective than supportive counselling in terms of reducing PTSD outcomes.

Appendix IV: Effect sizes for 13 reviews

Callahan et al. (2004) – Effect size for pre/post-treatment changes across studies and measures

	Specific symptoms					Interpersonal/Social			
	Depression	Anxiety	PTSD	Fear	Anger In	Anger Out	Anger Exp	Assertion	Control
Alexander et al. (1989) Interpersonal vs. process	0.72			0.47					
Alexander et al. (1989) Interpersonal vs. transaction	1.16			0.87					
Carver et al. (1989)									
Cloitre & Koenen (2001) PTSD no BPD	0.96	2.07	0.94		0.63	0.55	0.60	0.60	0.39
Cloitre & Koenen (2001) PTSD and BPD	0.21	-0.10	0.17		-0.62	-0.51	-0.68	-0.30	-0.18
Lundqvist & Oejehagen (2001)									
Sharpe et al. (2001)	0.86	0.96							
Weighted M	0.78	1.03	0.58	0.65	0.40	0.50	-0.10	0.30	0.12
Unweighted M	0.78	0.98	0.56	0.67	0.20	0.20	-0.40	0.29	0.11

Effect sizes for treatment vs. wait list conditions across studies and measures

	Global severity index	Depression	Fear	Social adjustment	PTSD	Anxiety	Assertiveness
Alexander et al. (1989) Interpersonal vs. process	0.80	0.14	-0.24	0.40			
Alexander et al. (1989) Interpersonal vs. transaction	0.55	0.60	0.04	0.26			
Carver et al. (1989)							
Cloitre & Koenen (2001) PTSD no BPD	0.57	0.85			0.67	1.05	0.17
Cloitre & Koenen (2001) PTSD and BPD	0.91	0.40			0.18	-0.20	-0.76
Lundqvist & Oejehagen (2001)							
Sharpe et al. (2001)							
Weighted M	0.50	0.49	-0.12	0.34	0.44	0.46	-0.27
Unweighted M	0.53	0.50	-0.10	0.33	0.43	0.44	-0.30

Corcoran and Pillai (2008)

	Effect sizes (Hedge's d) for internalising outcomes at post-test						Effect sizes for externalising outcomes at post-test					
	Post-test			Follow-up			Post-test			Follow-up		
	Effect	Variance	Probability	Effect	Variance	Probability	Effect	Variance	Probability	Effect	Variance	Probability
King et al. (2000)	0.61	0.22	0.18	0.47	0.22	0.29	0.16	0.21	0.71	0.35	0.20	0.43
Deblinger et al. (1996)	0.21	0.09	0.48				0.43	0.09	0.14	0.03	0.10	0.92
Cohen & Mannarino (1998)	0.28	0.09	0.33				0.10	0.09	0.74			
Celano et al. (1996)	0.09	0.13	0.79				0.70	0.13	0.05			
Cohen & Mannarino (1996)	0.74	0.07	0.00	0.30	0.10	0.34	0.38	0.06	0.13	0.26	0.10	0.41
Cohen et al. (2004)	0.42	0.02	0.01				0.29	0.02	0.05			

	Effect sizes for PTSD outcomes					
	Post-test			Follow-up		
	Effect	Variance	Probability	Effect	Variance	Probability
King et al. (2000)	0.36	0.21	0.43	0.25	0.20	0.57
Deblinger et al. (1996)	0.04	0.08	0.90	0.14	0.01	0.64
Deblinger et al. (2001)	0.06	0.09	0.83	0.34	0.09	0.25
Celano et al. (1996)	0.40	0.14	0.28			
Cohen et al. (2004)	0.53	0.01	0.00			

	Effect sizes for sexualised behaviours outcomes					
	Post-test			Follow-up		
	Effect	Variance	Probability	Effect	Variance	Probability
Deblinger et al. (2001)	0.38	0.09	0.20			
Cohen & Mannarino (1998)	0.23	0.08	0.43			
Cohen & Mannarino (1996)	0.55	0.06	0.03	0.45	0.02	0.00
Cohen et al. (2004)	0.23	0.02	0.13			

	Mean effect size			
		95% CI		
	Type	Point Estimate	Lower	Upper	Probability
Internalising (posttest)	Fixed	0.41	0.21	0.61	0.00
	Random	0.41	0.21	0.61	0.00
Interalising (follow up)	Fixed	0.36	-0.15	0.86	0.17
	Random	0.36	-0.15	0.86	0.17
Externalising (posttest)	Fixed	0.32	0.13	0.52	0.00
	Random	0.32	0.13	0.52	0.00
Externalising (follow up)	Fixed	0.19	-0.21	0.58	0.35
	Random	0.19	-0.21	0.58	0.35
Sexual behaviours (posttest only)	Fixed	0.31	0.10	0.52	0.01
	Random	0.31	0.10	0.52	0.01
PTSD (posttest)	Fixed	0.37	0.14	0.55	0.00
	Random	0.37	0.14	0.55	0.00
PTSD (follow up)	Fixed	0.25	-0.13	0.63	0.20
	Random	0.25	-0.13	0.63	0.20

de Jong and Gorey (1996)

	Comparison of short-term vs. long-term group work		
	Short-term		Long-term
Alexander et al. (1989)	0.30	Hazzard et al. (1993)	0.66
Apolinsky & Wilcoxon (1991)	1.08		
Carver et al. (1989)	0.60		
Richter et al. (1995)	0.60		
Roberts & Lie (1999)	0.75		
Threadcraft & Wilcoxon (1993)	1.38		
Mean	0.79		0.66
SD	0.39		0.00
Cohen's U3	78.5%		74.5%

Harvey and Taylor (2010)

Effect sizes (g) for each outcome domain across study type										
Outcome	Independent samples studies					Repeated samples designs				
				95% CI					95% CI	
	Number of measures	g	SE	Lower	Upper	Number of measures	g	SE	Lower	Upper
PTSD/trauma	5	0.77	0.21	0.37	1.17	33	1.13	0.16	0.82	1.44
Internalising symptoms	22	0.80	0.13	0.56	1.05	185	0.61	0.04	0.53	0.69
Externalising symptoms	15	1.39	0.21	0.98	1.81	70	0.60	0.06	0.48	0.72
Sexualised behaviours	1	0.49	0.36	-0.22	1.20	33	0.48	0.07	0.34	0.62
Self-concept/esteem	1	1.15	0.39	0.39	1.90	57	0.49	0.07	0.36	0.62
Social skills/competence	3	1.07	0.20	0.68	1.47	40	0.32	0.07	0.19	0.45
Coping functioning	3	0.39	0.26	-0.12	0.90	9	0.42	0.14	0.15	0.69
Global outcome	2	0.99	0.33	0.34	1.64	8	1.37	0.36	0.67	1.07
Caregiver outcome	-					46	0.45	0.09	0.26	0.63

Overall effect sizes for each outcome domain					
			95% CI		Number of treatment conditions
	g	SE	Lower	Upper	
PTSD/trauma	1.12	0.19	0.76	1.49	26
Internalising symptoms	0.74	0.10	0.55	0.94	43
Externalising symptoms	0.52	0.08	0.37	0.67	35
Sexualised behaviours	0.49	0.07	0.35	0.63	23
Self-concept/esteem	0.63	0.13	0.37	0.89	26
Social skills/competence	0.39	0.10	0.19	0.58	23
Coping functioning	0.44	0.12	0.20	0.67	7
Global outcome	1.37	0.30	0.78	1.95	10
Caregiver outcome	0.43	0.12	0.02	0.19	15

Overall effect size estimates from treatment conditions with follow-up results					
	g	SE	95% CI		n
Follow-up			Lower	Upper	
Post-treatment	0.76	0.09	0.59	0.93	54
1-3 months	0.50	0.12	0.26	0.73	7
4-6 months	0.79	0.13	0.55	1.04	9
6+ months	0.95	0.16	0.63	1.27	18
Time					
Post-treatment	0.76	0.09	0.59	0.93	54
First follow-up	0.86	0.15	0.56	1.15	20
Second follow-up	0.74	0.11	0.52	0.95	11
Third follow-up	1.01	0.23	0.56	1.46	3

Effect sizes for each outcome domains with follow-up results																
		1-3 months					4-6 months					More than 6 months				
	g	g	SE	Lower	Upper	n	g	SE	Lower	Upper	n	g	SE	Lower	Upper	n
PTSD/trauma	1.12	0.71	0.12	0.48	0.93	6	1.39	0.43	0.54	2.24	5	2.18	0.44	1.31	3.05	10
Internalising symptoms	0.74	0.46	0.10	0.27	0.66	15	0.82	0.09	0.65	1.00	35	0.67	0.06	0.55	0.79	88
Externalising symptoms	0.52	0.35	0.18	-0.01	0.70	3	0.64	0.15	0.35	0.92	16	0.55	0.08	0.39	0.71	23
Sexualised behaviours	0.49	0.57	0.13	0.32	0.82	5	0.32	0.14	0.05	0.58	5	0.44	0.09	0.27	0.62	9
Self-concept/esteem	0.63	0.54	0.15	0.25	0.83	4	0.69	0.07	0.56	0.82	6	0.82	0.07	0.69	0.95	6
Social skills/competence	0.39	0.21	0.14	-0.06	0.48	5	0.03	0.17	-0.31	0.36	4	-0.12	0.11	-0.32	0.10	8
Coping functioning	0.44	1.14	0.38	0.40	1.89	1										
Global outcome	1.37	0.54	0.18	0.19	0.89	3						3.02	0.25	2.53	3.51	2
Caregiver outcome	0.43	0.20	0.13	-0.05	0.45	9	0.57	0.31	-0.04	1.17	6	0.55	0.20	0.15	0.94	12

Possible moderators of PTSD/trauma symptoms					
	g	SE	95% CI		n
Study design			Lower	Upper	
Experimental	1.53	0.33	0.88	2.19	15
Quasi-experimental	0.42	0.33	-0.22	1.06	10
Uncontrolled	0.94	0.61	-0.25	2.13	1
Sample size					
<50	0.91	0.26	0.40	1.42	16
50+	1.59	0.42	0.77	2.40	10
Source of information					
Self	1.25	0.21	0.84	1.65	25
Parent/caregiver	0.64	0.11	0.43	0.85	11
Professional	1.64	0.37	0.91	2.37	2
Abuse length					
<1 year	1.09	0.41	0.30	1.89	5
>3 years	0.31	0.22	-0.12	0.74	1
None >50%	0.60	0.17	0.27	0.93	4
Not reported	1.34	0.29	0.78	1.90	16
Abuse number					
2-5	0.66	0.22	0.23	1.08	2
6-10	1.59	0.20	1.19	1.98	5
>10	2.49	1.27	0.01	4.97	3
None >50%	0.26	0.16	-0.04	0.57	2
Not reported	0.86	0.17	0.53	1.19	14
Therapy					
Cognitive-behavioural	1.37	0.27	0.85	1.90	9
Insight-oriented	1.25	0.39	0.49	2.01	10
Eclectic	0.40	0.17	0.07	0.73	3
Other	0.74	0.31	0.14	1.35	4
Setting					
Community	1.21	0.20	0.82	1.60	24
Inpatient/prison	0.22	0.20	-0.17	0.60	2
Modality					
Individual	1.31	0.34	0.65	1.97	10
Family	2.11	0.34	1.44	2.77	3
Group	0.89	0.30	0.31	1.47	10
Mixed	0.49	0.22	0.07	0.92	3
Number of sessions					
<10	0.68	0.17	0.34	1.02	6
10-20	1.37	0.30	0.79	1.95	12
>20	1.20	0.62	-0.01	2.42	6
Not reported	0.56	0.30	-0.02	1.14	2

Session length					
<60 minutes	1.78	0.53	0.74	2.81	8
61+ minutes	0.82	0.18	0.46	1.18	12
Not reported	0.87	0.29	0.30	1.44	6
Therapist experience					
Students only	-0.17	0.45	-1.06	0.71	1
Mix	1.69	0.44	0.84	2.55	9
Practitioners only	0.87	0.18	0.52	1.22	11
Not reported	0.81	0.32	0.18	1.44	5
Family					
No use of family	0.67	0.17	0.33	1.00	10
Some use of family	1.44	0.28	0.88	1.99	16
Context					
Clinic only	0.90	0.16	0.58	1.22	17
Clinic plus homework	1.53	0.49	0.58	2.49	9
Structure					
Manualised	1.41	0.28	0.86	1.96	17
Semi-structured	0.65	0.28	0.11	1.19	5
Unstructued	0.64	0.18	0.29	1.00	4

Possible moderators of internalising symptoms					
	g	SE	95% CI		n
Target			Lower	Upper	
New treatment	0.85	0.11	0.63	1.07	35
Treatment as usual	0.29	0.11	0.08	0.50	8
Treatment location					
Research (uni)	0.75	0.11	0.54	0.96	17
Agency	0.81	0.17	0.47	1.14	19
Government	1.01	0.64	-0.24	2.26	3
Combination	0.25	0.14	-0.01	0.52	4
Treatment duration					
<10 weeks	0.61	0.20	0.21	1.00	6
10-20 weeks	0.66	0.12	0.43	0.89	23
>20 weeks	1.39	0.34	0.73	2.04	7
Not reported	0.48	0.16	0.18	0.79	7
Session length					
<60 minutes	1.09	0.32	0.46	1.72	10
61+ minutes	0.60	0.09	0.42	0.78	22
Not reported	0.73	0.20	0.35	1.12	11
Context					
Clinic only	0.58	0.09	0.41	0.76	32
Clinic + homework	1.20	0.23	0.75	1.66	11

Possible moderators of externalising symptoms					
	g	SE	95% CI		n
Study design			Lower	Upper	
Experimental	0.43	0.09	0.26	0.60	19
Quasi-experimental	0.66	0.15	0.37	0.94	14
Uncontrolled	0.26	0.21	-0.14	0.66	2
Assignment conditions					
Random	0.37	0.06	0.25	0.50	18
Non-random	0.71	0.17	0.38	1.03	9
Other	1.97	0.26	1.46	2.49	1
Not reported	0.40	0.12	0.17	0.63	7
Abuse description					
>50% penetrative	0.44	0.08	0.29	0.59	10
>50% non-penetrative	0.52	0.12	0.28	0.76	5
Other (mixed/multiple)	0.38	0.09	0.20	0.55	14
Not reported	0.82	0.42	-0.01	1.65	6
Therapy					
Cognitive-behavioural	0.56	0.17	0.23	0.89	12
Insight-oriented	0.38	0.08	0.22	0.54	11
Eclectic	0.70	0.23	0.24	1.15	7
Other	0.52	0.17	0.19	0.84	5
Target					
New treatment	0.58	0.09	0.39	0.76	26
Treatment as usual	0.26	0.12	0.04	0.49	7
Not reported	0.86	0.35	0.18	1.55	2
Setting					
Community	0.45	0.06	0.34	0.56	33
Inpatient/prison	1.09	0.88	-0.64	2.81	2
Treatment location					
Research (uni)	0.44	0.08	0.29	0.60	13
Agency	0.52	0.09	0.35	0.69	17
Government	1.97	0.26	1.46	2.49	1
Combination	0.15	0.13	-0.11	0.41	14
Modality					
Individual	0.34	0.07	0.21	0.48	13
Family	0.60	0.16	0.29	0.90	5
Group	0.46	0.11	0.24	0.68	12
Mixed	1.06	0.33	0.42	1.70	5

Treatment duration					
<10 weeks	0.45	0.32	-0.18	1.08	3
10-20 weeks	0.38	0.06	0.26	0.51	17
>20 weeks	1.06	0.38	0.31	1.81	5
Not reported	0.45	0.10	0.25	0.64	10
Number of sessions					
<10	0.57	0.18	0.21	0.93	6
10-20	0.38	0.06	0.27	0.50	19
>20	0.93	0.29	0.36	1.50	8
Not reported	0.43	0.26	-0.08	0.93	2
Session length					
<60 minutes	0.72	0.14	0.45	0.99	9
61+ minutes	0.32	0.07	0.19	0.46	14
Not reported	0.68	0.17	0.34	1.01	12
Structure					
Manualised	0.39	0.06	0.26	0.51	18
Semi-structured	0.56	0.23	0.12	1.01	9
Unstructued	0.75	0.18	0.40	1.11	8

Possible moderators of sexualised behaviours					
	g	SE	95% CI		n
Study design			Lower	Upper	
Experimental	0.36	0.07	0.23	0.50	11
Quasi-experimental	0.67	0.13	0.42	0.92	12
Assignment conditions					
Random	0.36	0.07	0.23	0.50	11
Non-random	0.73	0.20	0.35	1.12	8
Not reported	0.61	0.16	0.30	0.92	4
Age					
50% <6 years	0.93	0.29	0.36	1.49	5
50% 7-12 years	0.37	0.07	0.24	0.50	11
50% 13-19 years	0.57	0.14	0.29	0.86	6
Not reported	0.24	0.38	-0.51	0.99	1
Gender					
>50% boys	1.19	0.51	0.19	2.20	3
>50% girls	0.41	0.06	0.30	0.53	20
Abuse description					
>50% penetrative	0.44	0.09	0.27	0.61	7
>50% non-penetrative	0.56	0.11	0.34	0.77	7
Other (mixed/multiple)	0.25	0.11	0.04	0.47	5
Not reported	0.96	0.40	0.17	1.75	4
Abuse number					
2-5	0.46	0.10	0.28	0.65	4
>10	0.25	0.16	-0.05	0.56	3
None >50%	0.29	0.14	0.01	0.58	3
Not reported	0.61	0.12	0.37	0.86	13
Therapy					
Cognitive-behavioural	0.50	0.10	0.31	0.69	5
Insight-oriented	0.39	0.08	0.24	0.54	12
Eclectic	0.88	0.40	0.10	1.67	4
Other	0.28	0.25	-0.20	0.76	2
Target					
New treatment	0.56	0.09	0.38	0.73	17
Treatment as usual	0.28	0.12	0.05	0.52	6

Treatment duration					
10-20 weeks	0.44	0.07	0.31	0.57	14
>20 weeks	0.99	0.34	0.33	1.66	4
Not reported	0.29	0.12	0.05	0.53	5
Number of sessions					
<10	0.50	0.16	0.18	0.81	4
10-20	0.39	0.07	0.26	0.52	12
>20	0.81	0.26	0.29	1.32	6
Not reported	0.57	0.31	-0.04	1.17	1
Therapist experience					
Students only	0.69	0.46	-0.22	1.60	1
Mix	0.72	0.25	0.22	1.21	6
Practitioners only	0.42	0.07	0.28	0.56	11
Not reported	0.41	0.12	0.17	0.64	5
Family					
No use of family	0.72	0.19	0.35	1.08	9
Some use of family	0.40	0.06	0.28	0.52	14
Structure					
Manualised	0.38	0.07	0.25	0.51	12
Semi-structured	0.95	0.31	0.35	1.55	5
Unstructued	0.51	0.13	0.25	0.77	6

Possible moderators of self-concept/self-esteem					
	g	SE	95% CI		n
Study design			Lower	Upper	
Experimental	0.85	0.28	0.31	1.40	4
Quasi-experimental	0.55	0.17	0.21	0.89	20
Uncontrolled	0.77	0.43	-0.06	1.61	2
Assignment to conditions					
Random	0.85	0.28	0.31	1.40	4
Non-random	0.41	0.16	0.09	0.73	13
Other	1.52	0.92	-0.29	3.33	2
Not reported	0.60	0.23	0.15	1.04	7
Age					
50% <6 years	0.57	0.41	-0.23	1.37	2
50% 7-12 years	0.30	0.11	0.09	0.51	10
50% 13-19 years	0.93	0.21	0.51	1.35	14
Description of abuse					
>50% penetrative	0.35	0.12	0.12	0.58	8
>50% non-penetrative	0.51	0.21	0.10	0.91	8
Not reported	1.03	0.25	0.54	1.53	10
Abuse number					
2-5	0.47	0.11	0.26	0.68	2
>10	-0.37	0.75	-1.83	1.10	2
Not reported	0.72	0.16	0.41	1.03	22
Setting					
Community	0.58	0.11	0.36	0.79	21
Inpatient/prison	0.75	0.58	-0.38	1.18	5
Modality					
Individual	0.41	0.09	0.24	0.58	6
Group	0.59	0.18	0.24	0.94	15
Mixed	1.07	0.50	0.09	2.05	5
Duration of treatment					
<10 weeks	0.26	0.77	-1.25	1.78	4
10-20 weeks	0.50	0.10	0.31	0.69	13
>20 weeks	1.01	0.34	0.34	1.68	7
Not reported	0.32	0.31	-0.30	0.93	2

Number of sessions					
<10	0.26	0.77	-1.25	1.78	4
10-20	0.46	0.08	0.31	0.61	11
>20	0.96	0.30	0.37	1.54	9
Not reported	0.31	0.20	-0.07	0.70	2
Frequency of sessions					
Once per week	0.75	0.16	0.43	1.07	19
Twice per week	0.14	0.20	-0.25	0.53	3
Not reported	0.30	0.16	-0.01	0.61	4
Education components					
Instructional	1.10	0.40	0.32	1.88	6
Dialogue-based	0.50	0.11	0.28	0.72	20

Possible moderators of social skills/competencies					
	g	SE	95% CI		n
Study design			Lower	Upper	
Experimental	0.19	0.07	0.06	0.33	11
Quasi-experimental	0.70	0.24	0.22	1.18	10
Uncontrolled	0.60	0.26	0.10	1.11	2
Assignment to conditions					
Random	0.19	0.07	0.06	0.33	11
Non-random	0.74	0.32	0.11	1.36	8
Not reported	0.54	0.16	0.23	0.85	4
Total sample size					
<50	0.49	0.15	0.19	0.79	16
50+	0.23	0.08	0.06	0.39	7
Source of information					
Self	0.43	0.13	0.17	0.68	22
Parent/caregiver	0.23	0.06	0.12	0.35	18
Professional	0.52	0.54	-0.55	1.58	1
Other	0.66	0.20	0.27	1.06	2
Assessment type					
Paper and pen	0.27	0.05	0.18	0.36	40
Task/ability	1.52	0.72	0.12	2.92	3
Age					
50% <6 years	0.79	0.46	-0.12	1.70	5
50% 7-12 years	0.20	0.08	0.05	0.35	8
50% 13-19 years	0.49	0.12	0.25	0.72	10

Gender					
>50% boys	0.94	0.62	-0.26	2.15	4
>50% girls	0.29	0.07	0.17	0.42	19
Abuse number					
2-5	0.19	0.10	0.01	0.38	4
>10	0.00	0.18	-0.35	0.35	3
None >50%	0.25	0.13	-0.01	0.49	4
Not reported	0.69	0.20	0.30	1.07	12
Therapy					
Cognitive-behavioural	0.20	0.10	0.01	0.39	5
Insight-oriented	0.34	0.11	0.13	0.54	12
Eclectic	0.93	0.45	0.04	1.82	5
Other	0.52	0.54	-0.55	1.58	1
Setting					
Community	0.34	0.10	0.14	0.53	20
Inpatient/prison	0.71	0.33	0.07	1.35	3
Duration of treatment					
<10 weeks	0.88	0.22	0.44	1.32	3
10-20 weeks	0.18	0.08	0.03	0.32	11
>20 weeks	1.04	0.42	0.22	1.86	5
Not reported	0.25	0.13	-0.01	0.49	4
Number of sessions					
<10	0.41	0.25	-0.08	0.90	5
10-20	0.20	0.07	0.07	0.34	10
>20	0.75	0.28	0.19	1.31	8
Therapist experience					
Students only	-0.08	0.45	-0.96	0.80	1
Mix	1.40	0.99	-0.53	3.33	3
Practitioners only	0.28	0.07	0.13	0.42	12
Not reported	0.32	0.14	0.04	0.60	7
Therapist involvement					
Partial contact	0.57	0.26	0.07	1.07	10
Main contact	0.27	0.07	0.14	0.40	13
Family					
No use of family	0.67	0.24	0.21	1.13	11
Some use of family	0.22	0.07	0.09	0.35	12
Structure					
Manualised	0.18	0.07	0.05	0.32	10
Semi-structured	0.75	0.36	0.05	1.45	7
Unstructued	0.51	0.14	0.24	0.78	6

Education components					
Instructional	0.77	0.36	0.07	1.48	6
Dialogue-based	0.27	0.07	0.14	0.40	17

Possible moderators of global outcomes					
	g	SE	95% CI		n
Study design			Lower	Upper	
Experimental	1.53	0.33	0.88	2.19	8
Quasi-experimental	0.42	0.33	-0.22	1.06	1
Uncontrolled	0.94	0.61	-0.25	2.13	1
Total sample size					
<50	0.91	0.26	0.40	1.42	4
50+	1.59	0.42	0.77	2.40	6
Source of information					
Self	0.91	0.26	0.40	1.42	4
Parent/caregiver	1.59	0.42	0.77	2.40	6
Age					
50% <6 years	0.52	0.18	0.17	0.87	3
50% 7-12 years	1.91	0.29	1.35	2.47	6
50% 13-19 years	0.94	0.61	-0.25	2.13	1
Abuse number					
2-5	0.57	0.22	0.15	0.98	2
6-10	1.35	0.36	0.65	2.04	2
>10	2.69	0.23	2.24	3.14	2
Not reported	1.08	0.30	0.49	1.67	4
Therapy					
Cognitive-behavioural	0.82	0.23	0.38	1.26	4
Insight-oriented	1.72	0.64	0.47	2.97	4
Other	1.50	0.28	0.96	2.05	2
Treatment location					
Research (uni)	0.71	0.18	0.36	1.06	5
Agency	2.13	0.34	1.46	2.80	4
Combination	0.94	0.61	-0.25	2.13	1
Number of sessions					
<10	0.97	0.23	0.52	1.42	5
10-20	1.58	1.16	-0.69	3.85	2
>20	1.85	0.49	0.89	2.80	3

Session length					
<60 minutes	2.11	0.37	1.38	2.84	4
61+ minutes	0.56	0.17	0.22	0.89	4
Not reported	1.50	0.28	0.96	2.05	2
Therapist experience					
Mix	1.77	0.46	0.87	2.66	5
Practitioners only	1.25	0.31	0.64	1.85	3
Not reported	0.57	0.21	0.15	0.98	2
Context					
Clinic only	0.65	0.16	0.33	0.97	5
Clinic + homework	1.98	0.32	1.35	2.61	5

Possible moderators of caregiver outcomes					
	g	SE	95% CI		n
Abuse number			Lower	Upper	
2-5	0.51	0.18	0.16	0.86	4
6-10	0.34	0.28	-0.21	0.88	3
Not reported	0.40	0.21	-0.02	0.81	8
Therapy					
Cognitive-behavioural	0.65	0.21	0.24	1.06	7
Insight-oriented	0.23	0.11	0.02	0.44	5
Eclectic	0.08	0.25	-0.40	0.57	1
Other	0.36	0.26	-0.14	0.86	2
Duration of treatment					
<10 weeks	0.11	0.57	-1.02	1.23	1
10-20 weeks	0.38	0.12	0.14	0.62	9
>20 weeks	0.64	0.49	-0.31	1.59	3
Not reported	0.36	0.26	-0.14	0.86	2
Family					
No use of family	0.70	0.52	-0.31	1.71	3
Some use of family	0.36	0.10	0.16	0.56	12
Educational components					
Instructional	0.79	0.46	-0.10	1.69	3
Dialogue-based	0.34	0.10	0.14	0.54	12

Hetzel-Riggin et al. (2007)

		Secondary problem outcome (d)					
Treatment modality	n	Behaviour	Other problem	Psychological distress	Self-concept	Social functioning	Total
Cognitive-behavioural	17	0.87	1.00	1.41	0.79	0.54	0.88
Play	5	0.59	2.51	0.78	0.25	0.72	0.88
Supportive	13	1.46	2.01	0.77	0.52	0.44	0.87
Group	16	1.44	2.03	0.56	1.00	0.54	0.85
Abuse-specific	15	1.48	2.16	1.02	0.67	0.46	0.81
Individual	17	0.75	0.47	1.23	0.57	0.44	0.68
Family	9	0.58	0.46	1.06	0.57	0.42	0.62
No treatment	10	1.02	0.20	0.30	1.08	-	0.46
Other	2	0.27	0.36	0.51	-	0.32	0.32
Total	104	1.60	1.49	1.05	0.71	0.48	0.72

Mean effect sizes (d) for each study and study subsample				
Study	Modality	n	Subsample d	Study d
Berliner & Saunders (1996)	Cognitive behavioural, group	48	0.23	0.28
	Abuse-specific, group	32	0.34	
Celano et al. (1996)	Cognitive behavioural, individual	15	0.59	0.63
	Family, abuse-specific, individual	17	0.66	
Cohen & Mannarino (1996)	Cognitive-behavioural, family, abuse-specific, supportive, individual	39	0.98	0.66
	Family, supportive, individual	28	0.34	
Cohen & Mannarino (1998)	Cognitive-behavioural, abuse-specific, individual	30	0.45	0.37
	Supportive, individual	19	0.29	
Cohen et al. (2004)	Cognitive-behavioural, family, abuse-specific, supportive, individual	92	0.82	0.69
	Family, supportive, individual	92	0.57	
Deblinger et al. (1996)	No treatment	21	0.41	0.73
	Cognitive-behavioural, individual	22	0.82	
	Cognitive-behavioural, individual	24	0.72	
	Cognitive, behavioural, family, individual	22	0.97	
Deblinger et al. (1990)	No treatment	19	0.06	0.95
	Cognitive-behavioural, individual	19	1.51	
Deblinger et al. (2001)	Cognitive-behavioural, group	21	0.76	0.59
	Supportive, group	23	0.41	
DeLuca et al. (1995)	Abuse-specific, supportive, group	33	0.86	0.86
Friedrich et al. (1992)	Play, family, supportive, individual, group	33	0.52	0.52
Jaberghaderi et al. (2004)	Cognitive-behavioural, abuse-specific, individual	7	1.13	1.49
	Abuse-specific, other (EMDR), individual	7	1.70	
Jenson et al. (1996)	Abuse-specific, other, individual	294	0.26	0.26
King et al. (2000)	No treatment	12	0.29	0.77
	Cognitive-behavioural, individual	12	0.94	
	Cognitive-behavioural, family, individual	12	1.06	
Krakow et al. (2001)	No treatment	10	0.16	0.53
	Cognitive-behavioural, group	9	0.90	
Kruczek & Vitanza (1999)	Cognitive-behavioural, group	41	0.81	0.81
Lanktree & Briere (1995)	Family, abuse-specific, individual, group	56	0.69	0.52
	Family, abuse-specific, individual, group	26	0.64	
	Family, abuse-specific, individual, group	23	0.28	
	Family, abuse-specific, individual, group	15	0.48	
McGain & McKinzey (1995)	No treatment	15	0.05	1.07
	Abuse-specific, supportive, group	15	2.08	
Meezan & O'Keefe (1998)	Family, supportive, other, individual	39	0.17	0.24
	Family, supportive, other, group	42	0.32	
Nolan et al. (2002)	Abuse-specific, supportive, individual	20	0.55	0.58
	Abuse-specific, supportive, individual, group	18	0.61	
Oates et al. (1994)	No treatment	84	0.93	0.75
	Cognitive-behavioural, supportive, individual	84	0.57	
Reeker & Ensing (1998)	Play, abuse-specific, supportive, group	19	1.65	1.65
Rust & Troupe (1991)	No treatment	25	0.02	0.44
	Play, supportive, group	25	0.85	
Scott et al. (2003)	Play, individual	26	0.43	0.43
Sinclair et al. (1995)	Cognitive-behavioural, abuse-specific, group	43	0.21	0.21
Stauffer & Deblinger (1996)	No treatment	19	-.0.20	0.15
	Cognitive-behavioural, family, abuse-specific, group	19	0.51	
Sullivan et al. (1992)	No treatment	30	-0.03	0.70
	No treatment	7	-0.18	
	Cognitive-behavioural, abuse-specific, supportive, individual	21	1.78	
	Cognitive-behavioural, abuse-specific, supportive, individual	14	1.22	
Trowell et al. (2002)	Play, individual	35	1.08	0.88
	Play, group	36	0.69	
Verleur et al. (1986)	No treatment	14	0.61	1.10
	Cognitive-behavioural, group	16	1.59	

Peleikis and Dahl (2005)

Citation - controlled studies	Effect name	N - Treatment	N - control	Effect	Lower	Upper
Alexander et al. (1989)	Interpersonal, depression	16	21	0.62	-0.07	1.31
Alexander et al. (1989)	Interpersonal, global severity	16	21	0.57	-0.12	1.26
Alexander et al. (1989)	Process, anxiety	20	21	-0.24	-0.87	0.39
Alexander et al. (1989)	Process, depression	20	21	0.14	-0.49	0.77
Alexander et al. (1989)	Process, global severity	20	21	0.08	-0.55	0.71
Alexander et al. (1989)	Interpersonal, anxiety	16	21	0.04	-0.63	0.71
Apolinsky (1991)	Symbolic, depression	15	15	0.34	-0.42	1.09
Apolinsky (1991)	Symbolic, self-esteem	15	15	0.73	-0.04	1.50
Classen (2001)	Group, depression	93	33	0.02	-0.38	0.43
Classen (2001)	Group, trauma	93	33	0.27	-0.13	0.68
Classen (2001)	Group, anxiety	93	33	0.26	-0.14	0.66
Cloitre (2001)	Interpersonal, BPD-, trauma	18	15	0.67	-0.06	1.40
Cloitre (2001)	Interpersonal, BPD+, trauma	16	15	0.40	-0.34	1.14
Cloitre (2001)	Interpersonal, BPD+, trauma	16	15	0.18	-0.56	0.92
Cloitre (2001)	Interpersonal, BPD+, GSI	16	15	0.91	0.14	1.68
Cloitre (2001)	Interpersonal, BPD-, anxiety	18	15	1.05	0.29	1.81
Cloitre (2001)	Interpersonal, BPD-, dep.	18	15	0.85	0.11	1.59
Cloitre (2001)	Interpersonal, BPD-, GSI	18	15	0.57	-0.16	1.30
Cloitre (2001)	Interpersonal, BPD+, anxiety	16	15	-0.20	-0.94	0.54
Freedman (1996)	Forgiveness, depression	6	6	1.20	-0.20	2.60
Freedman (1996)	Forgiveness, self-esteem	6	6	1.34	-0.08	2.76
Freedman (1996)	Forgiveness, anxiety	6	6	2.40	0.71	4.09
Morgan (1999)	Feminist group, depression	40	40	0.43	-0.02	0.88
Morgan (1999)	Feminist group, self-esteem	40	40	0.24	-0.21	0.69
Morgan (1999)	Feminist group, trauma	40	40	0.18	-0.27	0.63
Paivio (2001)	Indiv. Emotional, GSI	19	19	0.43	-0.24	1.10
Paivio (2001)	Indiv. Emotional, trauma	19	19	1.29	0.57	2.01
Richter (1997)	Problem-solving, depression	78	80	0.60	0.28	0.92
Richter (1997)	Problem-solving, self-esteem	78	80	0.59	0.27	0.91
Rieckert (2000)	Rational-emotive, anxiety	28	14	1.96	1.17	2.75
Rieckert (2000)	Rational-emotive, depression	28	14	2.56	1.69	3.43
Rieckert (2000)	Rational-emotive, self-esteem	28	14	1.46	0.72	2.20
Saxe (1999)	Victim to survivor, dep.	32	31	1.52	0.95	2.09
Saxe (1999)	Victim to survivor, GSI	32	31	1.40	0.84	1.96
Saxe (1999)	Victim to survivor, self-esteem	32	31	1.25	0.70	1.80
Saxe (1999)	Victim to survivor, trauma	32	31	0.50	-0.01	1.01
Westbury (1999)	Body feminist, depression	22	10	0.98	0.16	1.80
Westbury (1999)	Body feminist, self-esteem	22	10	0.77	-0.03	1.57
Westbury (1999)	Body feminist, trauma	22	10	0.03	-0.75	0.81
Zlotnick (1997)	Affect management, trauma	16	17	0.85	0.11	1.59
COMBINED (40)	-	1179	924	0.63	0.54	0.72

Mean effect sizes (d) for controlled studies			
Study	Mean effect size	Lower 95% CI	Upper 95% CI
Alexander (1989)	0.19	-0.07	0.45
Apolinsky (1991)	0.53	0.02	1.05
Classen (2001)	0.19	-0.04	0.42
Cloitre (2001)	0.56	0.31	0.81
Freedman (1996)	1.65	0.97	2.32
Morgan (1999)	0.28	0.03	0.54
Paivio (2001)	0.86	0.40	1.32
Richter (1997)	0.59	0.37	0.82
Rieckert (2000)	1.99	1.62	2.37
Saxe (1999)	1.17	0.92	1.42
Westbury (1999)	0.59	0.16	1.03
Zlotnick (1997)	0.85	0.14	1.56

Summarised effects for various measures in controlled studies							
Measure	No. treatment groups	N	N - Treated	N - Controls	d	Lower	Upper
Depression	12	685	384	301	0.69	0.53	0.84
Anxiety	7	322	197	125	0.51	0.28	0.74
GSI symptoms	6	243	121	122	0.72	0.47	0.98
Trauma	8	436	256	180	0.44	0.25	0.64
Self-esteem	7	417	221	196	0.75	0.55	0.94
Total	40	2,103	1179	924	0.63	0.54	0.72

Pre to post-treatment effect sizes (d) for non-controlled studies						
Study	n	Depression	Anxiety	Symptoms	Self-esteem	Trauma
Hazzard	102			0.44	0.36	0.46
Jehu	21	1.57			1.13	
Longstreth	19			0.98		
Lundqvist	22			0.50		
Roberts	20	0.89				
Talbot:-						
Safety programme	20	0.81	0.93	1.03		
Treatment as usual	20	0.82	0.67	0.65		
Vaa	54			1.47		

Studies reporting follow-up examinations, and effect sizes (d) in relation to post-treatment					
Study	Depression	Anxiety	Global Severity Index	Self-esteem	Trauma
Alexander	0.07	-0.18	-0.35		
Interpersonal process	-0.02	-0.12	0.11		
Bagley					
Freedman					
Jehu					
Longstreth			0.04		
Morgan	-0.09			0.04	0.06
Paivio			0.09		0.14
Richter					0.00
Rieckert	0.08				
Roberts					
Saxe	0.05			0.02	0.28
Stalker	0.12				
Talbot					
Safety	0.14	0.28	0.07		
Treatment as usual	0.09	0.14	0.14		
Vaa			-0.21		

Price et al. (2001)

Effect sizes (d) for pre to post-treatment changes across studies and measures			Specific symptoms						
Treatment approach	Study	n	Depression	Distorted beliefs	Unresolved business' resolution	Self-esteem	Dissociation	Delusions	Discomfort
CBT	Jehu et al. (1996)	11	0.89	1.39					
	Chard et al. (1997)	15	0.64						
Experiential	Smith et al. (1995)	92						1.58	
	Paivio & Bahr (1998)	33							
	Paivio & Patterson (1999)	33			1.86				
	Paivio & Nieuwenhuis (2001)	19			2.64				5.71
Psychodynamic / Interpersonal	Clarke & Llewelyn (1994)	7	1.55	1.64		2.44			
Psychoeducational / Supportive	Stalker & Fry (1999)	65					0.18		
Weighted mean			0.92	1.49	2.03				
Unweighted mean			1.03	1.52	2.03	2.44	0.18	1.58	5.71

Interpersonal problems		
Interpersonal problems	Introjection	Activity Distress
		0.95
	0.45	
	1.07	
1.62	1.67	
	0.98	
1.62	1.06	0.95

Effect sizes (d) for pre to post-treatment changes across studies and measures			Trauma symptoms					
Treatment approach	Study	n	CAPS - PTSD	Responsibility	Shame	Acceptance	Impact of Events Scale	Modified PTSD Scale
CBT	Jehu et al. (1996)	11						
	Chard et al. (1997)	15	0.82					1.21
Experiential	Smith et al. (1995)	92						
	Paivio & Bahr (1998)	33						
	Paivio & Patterson (1999)	33					1.09	
	Paivio & Nieuwenhuis (2001)	19					1.37	
Psychodynamic/Interpersonal	Clarke & Llewelyn (1994)	7						
Psychoeducation/Supportive	Stalker & Fry (1999)	65		0.95	1.15	0.95		
Weighted mean							1.19	
Unweighted mean			0.82	0.95	1.15	0.95	1.22	1.21

			Global Symptoms/Functioning		
Posttraumatic Stress Scale	Trauma Symptom Checklist	Unfinished Business Resolution	Global Assessment Scale	General Health	Symptom Checklist
					1.27
		1.50		2.34	
					0.80
					0.89
					1.03
					1.02
0.44	0.51		0.88		0.47
					0.80
0.44	0.51	1.50	0.88	2.34	0.96

Reeker et al. (1997)

Summary information and mean effect sizes (d)				
Study	Type of treatment	Type of measure	Measure effect size (d)	Mean effect size
Ashby et al. (1987)	Intergrated	Self-esteem	1.00	1.00
De Luca et al. (1993)	Intergrated	Internalising	1.32	1.19
		Externalising	1.29	
		Anxiety	1.48	
		Loneliness	0.00	
		Self-esteem	1.88	
Freidrich et al. (1992)	Group/Individual	Internalising	0.87	0.44
		Externalising	0.57	
		Sexual behaviour	0.61	
		Depression	0.38	
		Self-esteem	0.20	
		Self-concept	0.03	
		Social competence	0.44	
Hack et al. (1994)	Intergrated	Internalising	0.00	0.15
		Externalising	0.00	
		Depression	0.74	
		Anxiety	0.00	
		Self-esteem	0.00	
Hall-Marley & Damon (1993)	Integrated	Internalising + Externalising total	0.92	0.92
		Sexual behaviour	0.92	
Hiebert-Murphy et al. (1992)	Integrated	Anxiety	0.00	0.00
		Loneliness	0.00	
		Self-esteem	0.00	
Hoier et al. (1988)	Cognitive-behavioural	Internalising	0.66	0.50
		Externalising	0.00	
		Depression	0.66	
		Fear	0.66	
Kitchur & Bell (1989)	Integrated	Self-esteem	1.63	1.63
MacKay et al. (1987)	Drama therapy	General symptoms	0.66	0.72
		Depression	0.67	
		Self-esteem	0.82	
McGain & McKinzey (1995)	Integrated	Conduct problems	0.74	1.26
		Socialised aggression	1.13	
		Anxiety/withdrawal	1.34	
		Eyberg child behaviour inventory	1.46	
Nelki & Watters (1988)	Integrated	Sexual abuse symptoms	1.00	1.00
Perez (1988)	Play therapy	Self-concept	0.61	0.61
		Self-mastery	0.61	
Rust & Troupe (1991)	Integrated	Self-esteem	1.06	0.76
		Reading achievement	0.56	
		Maths achievement	0.68	
		Total achievement	0.73	
Stauffer & Deblinger (1996)	Cognitive-behavioural	Internalising + Externalising total	0.20	0.49
		Sexual behaviour	0.79	
Verleur et al. (1986)	Integrated	Self-esteem	1.54	1.10
		Venereal disease education	1.04	
		Birth control education	0.95	
		Anatomy/physio education	0.82	
		Anatomy education	1.10	

Mean pre-post effect size (d) for outcome variables			
Measure	k	Mean d	SD
Sexual abuse/prevent	1	0.99	0.00
Sexual behaviours	3	0.77	0.15
Self-esteem	10	0.88	0.68
General distress	9	0.73	0.49
Internalising	7	0.64	0.44
Externalising	5	0.56	0.57

Regehr et al. (2013)

All treatments versus waitlist control (RCTs only)		95% CI	
PTSD symptoms (clinician assessed, totals)	Standard Mean Difference (g)	Lower	Upper
Foa et al. (1991)	-0.94	-1.67	-0.21
Resick (2002)	-0.93	-1.28	-0.58
Rothbaum (1997)	-2.68	-4.08	-1.28
Rothbaum (2005)	-3.02	-3.80	-2.25
TOTAL	-1.81	-2.90	-0.72
All treatments versus waitlist control (RCTs only)		95% CI	
PTSD symptoms (self-reported, totals)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-1.30	-1.66	-0.94
Rothbaum (1997)	-3.34	-4.89	-1.80
Rothbaum (2005)	-1.91	-2.55	-1.27
TOTAL	-1.90	-2.73	-1.07
All treatments versus waitlist control (RCTs only)		95% CI	
Depression	Standard Mean Difference (g)	Lower	Upper
Foa et al. (1991)	-0.26	-0.97	0.45
Resick (2002)	-1.01	-1.36	-0.66
Rothbaum (1997)	-1.97	-3.15	-0.79
Rothbaum (2005)	-1.48	-2.08	-0.88
TOTAL	-1.09	-1.65	-0.53
All treatments versus waitlist control (RCTs only)		95% CI	
Anxiety (state)	Standard Mean Difference (g)	Lower	Upper
Foa et al. (1991)	-0.71	-1.43	0.01
Rothbaum (1997)	-1.06	-2.06	-0.05
Rothbaum (2005)	-1.46	-2.06	-0.86
TOTAL	-1.12	-1.60	-0.64
All treatments versus waitlist control (RCTs only)		95% CI	
Anxiety (trait)	Standard Mean Difference (g)	Lower	Upper
Rothbaum (1997)	-1.74	-2.88	-0.61
Rothbaum (2005)	-1.60	-2.21	-0.99
TOTAL	-1.63	-2.17	-1.09
All treatments versus waitlist control (RCTs only)		95% CI	
Guilt (total measure score)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.69	-1.06	-0.32
TOTAL	-0.69	-1.06	-0.32
All treatments versus waitlist control (RCTs only)		95% CI	
Guilt (hindsight subscale)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.62	-0.99	-0.25
TOTAL	-0.62	-0.99	-0.25
All treatments versus waitlist control (RCTs only)		95% CI	
Guilt (wrongdoing subscale)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.71	-1.09	-0.33
TOTAL	-0.71	-1.09	-0.33
All treatments versus waitlist control (RCTs only)		95% CI	
Guilt (lack of justification subscale)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.79	-1.17	-0.41
TOTAL	-0.79	-1.17	-0.41
All treatments versus waitlist control (RCTs only)		95% CI	
Dissociation symptoms	Standard Mean Difference (g)	Lower	Upper
Rothbaum (1997)	-0.72	-1.69	0.25
Rothbaum (2005)	-1.02	-1.02	-0.45
TOTAL	-0.94	-1.43	-0.45

All treatments versus waitlist control (**quasi-RCT**s only)		95% CI	
PTSD (self-report only)	Standard Mean Difference (g)	Lower	Upper
Resick (1988)	-0.48	-1.12	0.16
Resick (1992)	-0.62	-1.27	0.04
TOTAL	-0.55	-1.00	-0.09
All treatments versus waitlist control (**quasi-RCT**s only)		95% CI	
Depression	Standard Mean Difference (g)	Lower	Upper
Resick (1988)	-0.35	-0.99	0.29
Resick (1992)	-0.62	-1.27	0.04
TOTAL	-0.48	-0.94	-0.02

Prolonged exposure versus waitlist control (RCTs only)		95% CI	
PTSD symptoms (clinician assessed)	Standard Mean Difference (g)	Lower	Upper
Foa et al. (1991)	-0.42	-1.31	0.47
Resick (2002)	-0.80	-1.29	-0.31
Rothbaum (2005)	-1.94	-2.87	-1.02
TOTAL	-1.02	-1.78	-0.25
Prolonged exposure versus waitlist control (RCTs only)		95% CI	
PTSD symptoms (self-report)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.81	-1.29	-0.32
Rothbaum (2005)	-1.87	-2.79	-0.96
TOTAL	-1.27	-2.30	-0.23
Prolonged exposure versus waitlist control (RCTs only)		95% CI	
Depression	Standard Mean Difference (g)	Lower	Upper
Foa et al. (1991)	-0.34	-1.22	0.55
Resick (2002)	-0.63	-1.11	-0.15
Rothbaum (2005)	-2.35	-3.34	-1.36
TOTAL	-1.05	-2.10	-0.01
Prolonged exposure versus waitlist control (RCTs only)		95% CI	
Anxiety (state)	Standard Mean Difference (g)	Lower	Upper
Foa et al. (1991)	-0.58	-1.48	0.32
Rothbaum (2005)	-1.59	-2.47	-0.72
TOTAL	-1.09	-2.08	-0.10
Prolonged exposure versus waitlist control (RCTs only)		95% CI	
Anxiety (trait)	Standard Mean Difference (g)	Lower	Upper
Rothbaum (2005)	-1.65	-2.27	-1.03
TOTAL	-1.65	-2.27	-1.03
Prolonged exposure versus waitlist control (RCTs only)		95% CI	
Guilt (total score)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.51	-1.02	0.00
TOTAL	-0.51	-1.02	0.00
Prolonged exposure versus waitlist control (RCTs only)		95% CI	
Guilt (hindsight subscale)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.39	-0.90	0.12
TOTAL	-0.39	-0.90	0.12
Prolonged exposure versus waitlist control (RCTs only)		95% CI	
Guilt (wrongdoing subscale)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.34	-0.88	0.19
TOTAL	-0.34	-0.88	0.19
Prolonged exposure versus waitlist control (RCTs only)		95% CI	
Guilt (lack of justification subscale)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.33	-0.86	0.20
TOTAL	-0.33	-0.86	0.20
Prolonged exposure versus waitlist control (RCTs only)		95% CI	
Dissociation	Standard Mean Difference (g)	Lower	Upper
Rothbaum (2005)	-1.19	-2.01	-0.36
TOTAL	-1.19	-2.01	-0.36

EMDR versus waitlist control (RCTs only)		95% CI	
PTSD symptoms (clinician assessed)	Standard Mean Difference (g)	Lower	Upper
Rothbaum (1997)	-2.68	-4.08	-1.28
Rothbaum (2005)	-1.35	-2.20	-0.51
TOTAL	-1.89	-1.89	-0.62
EMDR versus waitlist control (RCTs only)		95% CI	
PTSD symptoms (self-reported)	Standard Mean Difference (g)	Lower	Upper
Rothbaum (1997)	-3.34	-4.89	-1.80
Rothbaum (2005)	-1.38	-2.22	-0.53
TOTAL	-2.25	-4.16	-0.34
EMDR versus waitlist control (RCTs only)		95% CI	
Anxiety (State)	Standard Mean Difference (g)	Lower	Upper
Rothbaum (1997)	-1.06	-2.06	-0.05
Rothbaum (2005)	-1.29	-2.13	-0.46
TOTAL	-1.20	-1.84	-0.55
EMDR versus waitlist control (RCTs only)		95% CI	
Anxiety (Trait)	Standard Mean Difference (g)	Lower	Upper
Rothbaum (1997)	-1.74	-2.88	-0.61
Rothbaum (2005)	-0.89	-1.69	-0.09
TOTAL	-1.22	-2.03	-0.41
EMDR versus waitlist control (RCTs only)		95% CI	
Dissociation	Standard Mean Difference (g)	Lower	Upper
Rothbaum (1997)	-0.72	-1.69	0.25
Rothbaum (2005)	-0.51	-1.28	0.27
TOTAL	-0.59	-1.19	0.01

CPT versus waitlist control (RCTs only)		95% CI	
PTSD symptoms (clinician assessed)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-1.06	-1.56	-0.56
TOTAL	-1.06	-1.56	-0.56
CPT versus waitlist control (RCTs only)		95% CI	
PTSD symptoms (self-reported)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-1.35	-1.87	-0.84
TOTAL	-1.35	-1.87	-0.84
CPT versus waitlist control (RCTs only)		95% CI	
Depression	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.93	-1.43	-0.44
TOTAL	-0.93	-1.43	-0.44
CPT versus waitlist control (RCTs only)		95% CI	
Guilt (total for measure)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.88	-1.41	-0.36
TOTAL	-0.88	-1.41	-0.36
CPT versus waitlist control (RCTs only)		95% CI	
Guilt (hindsight bias subscale)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.87	-1.39	-0.35
TOTAL	-0.87	-1.39	-0.35
CPT versus waitlist control (RCTs only)		95% CI	
Guilt (wrongdoing subscale)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.71	-1.25	-0.17
TOTAL	-0.71	-1.25	-0.17
CPT versus waitlist control (RCTs only)		95% CI	
Guilt (lack of justification subscale)	Standard Mean Difference (g)	Lower	Upper
Resick (2002)	-0.84	-1.38	-0.30
TOTAL	-0.84	-1.38	-0.30

Sánchez-Meca et al. (2011)

Weighted mean effect sizes for outcome measures & measurements post-test								
Outcome measure	Treatment groups				Control groups			
	k	d	Lower	Upper		d	Lower	Upper
Sexualised behaviour								
Self-reports	22	0.41	0.28	0.54	1	-0.08	-0.71	0.55
Parents	16	0.41	0.27	0.53	1	0.18	-0.45	0.81
Clinicians	4	1.36	0.46	2.26	1	0.54	-0.14	1.23
Global	27	0.45	0.35	0.56	1	0.21	-0.42	0.85
Anxiety/stress								
Self-reports	19	0.49	0.37	0.60	2	0.13	-0.34	0.60
Parents	1	0.83	0.42	1.24				
Clinicians	1	1.91	0.92	2.89	1	0.44	-0.14	1.02
Global	21	0.53	0.40	0.66	3	0.25	-0.11	0.62
Depression								
Self-reports	20	0.40	0.32	0.49	3	-0.00	-0.30	0.29
Parents	1	0.67	0.27	1.06				
Global	20	0.41	0.32	0.50	3	-0.00	-0.30	0.29
Self-esteem	14	0.61	0.37	0.86	3	0.10	-0.39	0.60
Behaviour problems								
Self-reports	7	0.82	0.39	1.24	2	-0.16	-0.48	0.16
Parents	30	0.53	0.41	0.65	4	0.19	-0.11	0.48
Clinicians	6	1.03	0.76	1.29				
Global	35	0.66	0.54	0.79	5	0.02	-0.21	0.25
Other variables								
Self-reports	10	0.43	0.17	0.69	2	0.40	-0.23	0.16
Parents	1	1.36	-0.34	3.07				
Clinicians	8	1.48	1.07	1.88	2	0.37	-0.48	0.48
Global	18	0.93	0.60	1.25	4	0.35	-0.06	0.25
All of the variables								
Self-reports	37	0.52	0.41	0.62	5	0.05	-0.21	0.30
Parents	34	0.53	0.42	0.65	4	0.17	-0.13	0.46
Clinicians	16	1.34	1.05	1.64	3	0.45	0.07	0.84
Global	44	0.64	0.54	0.75	7	0.08	-0.13	0.29

Mixed-effects of the type of treatment on effect sizes obtained for outcomes				
Outcome measure	k	d	Lower	Upper
Outcome: global				
CBT	17	0.63	0.49	0.77
Play therapy	2	0.34	-0.12	0.81
Supportive therapy (ST)	8	0.67	0.42	0.93
Psychodynamic therapy (P)	4	0.76	0.40	1.11
Humanistic therapy	4	0.47	0.24	0.70
CBT + ST	1	1.74	0.72	2.76
CBT + P	4	0.62	0.29	0.96
CBT + Play + ST	2	1.34	0.85	1.84
CBT + Play + P	1	0.42	-0.03	0.86
CBT + ST + P	1	0.56	-0.33	1.45
Control groups	7	0.10	-0.14	0.35
Outcome: sexualised behaviours				
CBT	13	0.48	0.33	0.62
Play therapy	1	0.64	-0.44	1.72
Supportive therapy (ST)	3	0.38	0.08	0.68
Psychodynamic therapy (P)	2	0.62	0.27	0.97
Humanistic therapy	3	0.29	0.06	0.52
CBT + P	3	0.35	0.04	0.66
CBT + Play + ST	1	1.92	1.03	2.81
CBT + Play + P	1	0.38	-0.03	0.79
Control groups	1	0.21	-0.47	0.90
Outcome: anxiety				
CBT	9	0.51	0.31	0.70
Supportive therapy (ST)	6	0.80	0.45	1.15
Psychodynamic therapy (P)	1	0.41	-0.99	1.81
Humanistic therapy	2	0.37	0.04	-0.71
CBT + P	2	0.53	0.00	1.05
CBT + Play + P	1	0.54	0.03	1.04
Control groups	3	0.25	-0.18	0.68
Outcome: depression				
CBT	10	0.43	0.31	0.54
Supportive therapy (ST)	3	0.52	0.17	0.87
Psychodynamic therapy (P)	1	0.89	-0.80	2.58
Humanistic therapy	3	0.33	0.17	0.50
CBT + P	2	0.47	0.04	0.90
CBT + Play + P	1	0.45	0.13	0.77
Control groups	3	-0.00	-0.30	0.29
Outcome: self-esteem				
CBT	21	0.65	0.04	1.26
Play therapy	1	0.23	-0.58	1.03
Supportive therapy (ST)	5	0.42	-0.06	0.89
Humanistic therapy	1	0.82	-0.95	2.60
CBT + ST	1	0.75	-0.08	1.57
CBT + Psychodynamic	1	0.33	-1.63	2.93
CBT + Play + ST	2	1.17	0.52	1.81
CBT + ST + Psychodynamic	1	0.56	-0.53	1.65
Control groups	3	0.11	-0.42	0.65

Outcome: behaviour problems				
CBT	15	0.59	0.42	0.76
Play therapy	2	0.38	-0.13	0.90
Supportive therapy (ST)	7	0.84	0.54	1.14
Psychodynamic therapy (P)	3	0.89	0.48	1.30
Humanistic therapy	4	0.46	0.19	0.74
CBT + ST	1	1.74	0.69	2.79
CBT + P	2	0.71	0.16	1.27
CBT + Play + ST	1	0.94	0.21	1.66
Control groups	5	0.05	-0.25	0.36
Outcome: other measures				
CBT	9	1.14	0.63	1.65
Supportive therapy (ST)	4	0.83	-0.05	1.71
Psychodynamic therapy (P)	1	0.36	-1.54	2.25
Humanistic therapy	2	0.68	-0.30	1.66
CBT + P	1	1.10	-0.31	2.51
CBT + Play + P	1	0.29	-1.10	1.68
Control groups	4	0.41	-0.35	1.17

Analyses of the treatment, participant, and moderator variables on effect sizes for global outcome measure

Outcome measure	k	d	Lower	Upper
Outcome: self-esteem				
CBT	21	0.65	0.04	1.26
Play therapy	1	0.23	-0.58	1.03
Supportive therapy (ST)	5	0.42	-0.06	0.89
Humanistic therapy	1	0.82	-0.95	2.60
CBT + ST	1	0.75	-0.08	1.57
CBT + Psychodynamic	1	0.33	-1.63	2.93
CBT + Play + ST	2	1.17	0.52	1.81
CBT + ST + Psychodynamic	1	0.56	-0.53	1.65
Control groups	3	0.11	-0.42	0.65
Outcome: behaviour problems				
CBT	15	0.59	0.42	0.76
Play therapy	2	0.38	-0.13	0.90
Supportive therapy (ST)	7	0.84	0.54	1.14
Psychodynamic therapy (P)	3	0.89	0.48	1.30
Humanistic therapy	4	0.46	0.19	0.74
CBT + ST	1	1.74	0.69	2.79
CBT + P	2	0.71	0.16	1.27
CBT + Play + ST	1	0.94	0.21	1.66
Control groups	5	0.05	-0.25	0.36
Outcome: other measures				
CBT	9	1.14	0.63	1.65
Supportive therapy (ST)	4	0.83	-0.05	1.71
Psychodynamic therapy (P)	1	0.36	-1.54	2.25
Humanistic therapy	2	0.68	-0.30	1.66
CBT + P	1	1.10	-0.31	2.51
CBT + Play + P	1	0.29	-1.10	1.68
Control groups	4	0.41	-0.35	1.17

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Effect sizes (g) for independent-samples studies						
Study	Treatment modality	g	Lower CI	Upper CI	Treatment n	Treatment n
Krakow et al. (2001)	Imagery rehearsal	0.31	-0.00	0.62	88	80
Resick et al. (2002)	Prolonged exposure (PE)	1.21	0.72	1.71	37	37
Foa et al. (2005)	PE + Cognitive restructuring (CR)	1.14	0.59	1.69	43	23
Foa et al. (2005)	PE	1.22	0.67	1.78	45	23
Resick et al. (2002)	Cognitive processing therapy (CPT)	1.99	1.43	2.55	37	37
Resick & Schnicke (1992)	CPT	0.48	-0.18	1.14	15	20
Foa et al. (1999)	PE + Stress Innoculation Therapy	0.91	0.23	1.60	22	15
Foa et al. (1999)	SIT	1.11	0.39	1.83	19	15
Foa et al. (1999)	PE	1.62	0.88	2.35	23	15
Foa et al. (1991)	PE	0.42	-0.37	1.22	14	10
Foa et al. (1991)	Supportive counselling	0.15	-0.68	0.97	11	10
Foa et al. (1995)	Brief CBT	1.02	0.12	1.92	10	10
Foa et al. (1991)	SIT	0.93	0.03	1.83	10	10
Rothbaum (1997)	EMDR	2.02	0.88	3.16	10	8
TOTAL		0.91	0.75	1.08	383	311

Effect sizes (g) for repeated-samples studies					
Study	Treatment modality	g	Lower CI	Upper CI	n
Resick et al. (2003)	CPT or Prolonged Exposure	1.04	0.71	1.37	81
Frank et al. (1988)	Systematic desensitisation	0.96	0.59	1.34	60
Frank et al. (1988)	CBT	0.97	0.38	1.57	24
Resick & Schnicke (1992)	CPT	0.83	0.15	1.51	18
Resick et al. (1988)	Assertion training	0.11	-0.64	0.86	13
Resick et al. (1988)	SIT	0.03	-0.73	0.79	12
Resick et al. (1988)	Supportive counselling	0.19	-0.58	0.95	12
Foa et al. (1995)	Exposure	1.58	0.74	2.42	14
Echeburura et al. (1996)	Progressive muscle relaxation	1.56	0.57	2.54	10
Roth et al. (1988)	Psychotherapy	0.52	-0.48	1.52	7
Echeburura et al. (1996)	Cognitive restructuring	2.28	1.15	3.42	10
TOTAL		0.90	0.72	1.08	271

Study	Modality	Pre-post g	Follow-up period											
			1-3 months				4-6 months				9-12 months			
			n	g	Lower CI	Upper CI	n	g	Lower CI	Upper CI	n	g	Lower CI	Upper CI
Resick et al. (2002)	PE	1.21	35	1.52	1.01	2.03					25	1.60	1.02	2.18
Foa et al. (2005)	PE + CR	1.14	40	1.56	1.03	2.08	40	1.57	1.04	2.09	40	1.54	1.02	2.06
Foa et al. (2005)	PE	1.22	45	2.04	1.51	2.58	45	1.85	1.33	2.36	45	1.95	1.43	2.47
Resick et al. (2002)	CPT	1.99	37	2.09	1.54	2.64					24	1.32	0.76	1.88
Foa et al. (1999)	PE + SIT	0.91	20	0.98	0.32	1.63	18	1.09	0.41	1.76	16	1.01	0.31	1.71
Foa et al. (1999)	PE	1.62	19	1.31	0.65	1.97	19	1.49	0.81	2.18	16	1.34	0.64	2.04
Foa et al. (1999)	SIT	1.11	16	0.80	0.12	1.48	17	0.93	0.25	1.62	14	0.85	0.13	1.57
Resick & Schnicke (1992)	CPT	0.48	16	0.99	0.29	1.69	15	1.03	0.32	1.75				
Resick et al. (1988)	Assertion	0.11	13	0.65	-0.12	1.41	13	0.39	-0.36	1.14				
Resick et al. (1988)	Supportive counselling	0.19	12	0.35	-0.43	1.13	12	0.29	-0.49	1.07				
Resick et al. (1988)	SIT	0.03	12	0.42	-0.36	1.20	12	0.43	-0.35	1.22				
Echeburua et al. (1996)	Progressive muscle relaxation	1.56	10	2.02	0.95	3.09	10	2.54	1.35	3.72	10	2.62	1.42	3.83
Rothbaum (1997)	EMDR	2.02	7	2.06	0.84	3.28								
Echeburua et al. (1996)	CR	2.28	10	2.75	1.50	4.00	10	3.24	1.87	4.60	10	3.55	2.11	4.99
Foa et al. (1991)	Supportive counselling	0.15									9	0.62	-0.25	1.50
Foa et al. (1991)	Prolonged exposure	0.42									9	1.36	0.44	2.29
Foa et al. (1991)	SIT	0.93									9	1.75	0.71	2.78
Resick et al. (2003)	CPT or PE	1.04									81	1.11	0.78	1.44
Roth et al. (1988)	Psychotherapy	0.52					7	0.75	-0.27	1.77				
Foa et al. (1995)	Brief CBT	1.02					9	3.93	2.39	5.46				
TOTAL			292	1.38	1.20	1.56	254	1.27	1,07	1.46	281	1.41	1.22	1.59

Descriptive data for moderator analysis										
Variable	Independent samples					Repeated measures				
	g	SE	Lower CI	Upper CI	n	g	SE	Lower CI	Upper CI	n
Therapy approach										
Other	0.31	0.16	0.00	0.62	1					
SIT	1.04	0.29	0.48	1.60	2	0.03	0.39	-0.73	0.79	1
Relaxation						1.56	0.50	0.57	2.54	1
Exposure	1.17	0.16	0.86	1.47	4					
Cognitive-based	1.37	0.22	0.94	1.79	2	2.28	0.58	1.15	3.42	1
Cognitive-behavioural	1.05	0.20	0.66	1.43	3	1.02	0.11	0.81	1.23	5
Supportive counselling	0.15	0.42	-0.68	0.97	1	0.19	0.39	-0.58	0.95	1
EMDR	2.02	0.58	0.88	3.16	1					
Assertion Training						0.11	0.38	-0.64	0.86	1
Insight/experiential						0.52	0.51	-0.48	1.52	1
Modality										
Individual	1.19	0.10	0.99	1.39	12	1.11	0.11	0.90	1.32	6
Group	0.34	0.14	0.06	0.62	2	0.32	0.19	-0.05	0.69	4
Mixed						0.52	0.51	-0.48	1.52	1
Number of sessions										
<6	0.49	0.15	0.20	0.78	3	0.56	0.19	0.18	0.94	5
7-9	0.89	0.16	0.58	1.21	6					
>10	1.25	0.13	1.00	1.50	5	0.96	0.11	0.75	1.17	5
Frequency of sessions										
Once per week	0.70	0.11	0.49	0.92	6	0.61	0.16	0.30	0.93	7
Twice per week	1.17	0.12	0.93	1.41	8	1.11	0.16	0.80	1.42	2

Session length										
50-60 mins	1.56	0.19	1.18	1.93	2	1.17	0.15	0.87	1.48	3
61-90 mins	0.64	0.19	0.27	1.01	5	1.13	0.27	0.60	1.65	2
91-120 mins	0.68	0.12	0.44	0.91	4	0.17	0.20	-0.23	0.57	4
Structure										
Manual	0.90	0.09	0.72	1.08	10	0.90	0.13	0.65	1.14	6
Semi-structured	1.20	0.21	0.78	1.61	3	1.04	0.15	0.75	1.34	3
Unstructured	0.15	0.42	-0.68	0.97	1	0.31	0.31	-0.30	0.91	2
Context										
Only in clinic	0.67	0.12	0.44	0.90	7	0.84	0.12	0.61	1.07	9
One other location	1.17	0.12	0.94	1.40	7	1.00	0.15	0.70	1.29	2
Therapist involvement										
Minimal	0.31	0.16	0.00	0.62	1	1.58	0.43	0.74	2.42	1
Partial	0.89	0.16	0.58	1.21	6	0.11	0.22	-0.33	0.54	3
Main contact	1.27	0.12	1.03	1.50	7	1.03	0.10	0.83	1.23	7
Therapist experience										
Student	1.39	0.14	1.12	1.67	5					
Mix	0.34	0.14	0.06	0.62	2	0.34	0.18	-0.03	0.69	5
Practitioner	0.98	0.14	0.70	1.26	7	1.11	0.15	0.81	1.40	4

Measurement domain										
PTSD/trauma	0.94	0.04	0.85	1.02	51	1.13	0.05	1.04	1.23	31
Other anxiety	0.95	1.15	0.66	1.23	8	0.66	0.06	0.55	0.77	39
Depression	1.10	0.10	0.91	1.28	13	0.77	0.08	0.62	0.92	13
Social	0.81	0.11	0.59	1.03	7	0.79	0.07	0.66	0.92	16
Self-concept/self-esteem						0.26	0.08	0.11	0.42	15
Overall/other pathology						0.10	0.15	-0.19	0.40	7
Measure source										
Self/paper and pen	0.81	0.04	0.79	0.90	48	0.73	0.03	0.67	0.79	101
Professional/interview	1.21	0.06	1.09	1.33	31	0.96	0.06	0.84	1.08	16
Assignment to conditions										
Random	0.94	0.09	0.78	1.11	13	0.83	0.13	0.58	1.08	6
Non-random	0.48	0.34	-0.18	1.15	1	0.98	0.13	0.71	1.24	5
Type of control group										
Receives nothing						0.93	0.16	0.62	1.23	3
Waiting list	0.91	0.08	0.75	1.07	13	0.72	0.13	0.47	0.96	5
Placebo	1.02	0.46	0.12	1.92	1					

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Effect size estimates (g) for outcome domains from treatment conditions with follow-up results																	
			1-3 month follow up					4-6 month follow up					More than 6 month follow up				
Outcome domain		g	g	SE	Lower	Upper	n	g	SE	Lower	Upper	n	g	SE	Lower	Upper	n
PTSD/trauma	Independent	0.77	0.77	0.21	0.38	1.18	4	0.98	0.25	0.50	1.47	2	1.04	0.28	0.49	1.59	3
	Repeated	0.72	1.18	0.23	0.73	1.62	7	0.82	0.16	0.51	1.14	4	1.09	0.26	0.58	1.59	5
Internalising	Independent	0.72	0.85	0.18	0.51	1.20	3	0.80	0.24	0.33	1.28	2	1.08	0.29	0.50	1.65	2
	Repeated	0.68	1.04	0.11	0.83	1.25	6	0.76	0.11	0.55	0.97	8	0.94	0.16	0.62	1.26	8
Externalising	Independent	0.53	0.54	0.17	0.21	0.88	3	0.40	0.24	-0.07	0.86	2					
	Repeated	0.41	0.35	0.13	0.09	0.61	3						0.24	0.32	-0.38	0.86	2
Interpersonal	Independent	0.05	0.50	0.25	0.01	0.98	1						0.95	0.34	0.29	1.62	1
	Repeated	0.61	0.83	0.31	0.22	1.43	2	0.27	0.17	-0.07	0.60	3	0.52	0.22	0.08	0.95	2
Self-concept	Independent	0.56															
	Repeated	0.58	1.88	0.73	0.45	3.31	2	0.57	0.16	0.25	0.88	3	0.55	0.22	0.12	0.98	2
Global	Independent	0.57	0.33	0.16	0.03	0.64	3	0.22	0.23	-0.24	0.68	2	2.14	0.40	1.35	2.93	1
	Repeated	0.60	0.89	0.21	0.48	1.31	2	0.78	0.10	0.57	0.98	8	0.74	0.13	0.47	1.00	8

Possible moderators for PTSD/trauma symptoms										
Variable	Independent samples studies					Repeated measures studies				
	g	SE	Lower	Upper	n	g	SE	Lower	Upper	n
Publication type										
Book/chapter	0.15	0.12	-0.09	0.39	3	-	-	-	-	-
Journal article	0.93	0.14	0.66	1.20	14	0.76	0.09	0.58	0.96	15
Thesis/dissertation						0.31	0.26	-0.21	0.82	3
Publication date										
Up to 1999	0.66	0.25	0.18	1.14	5	0.57	0.09	0.40	0.74	9
2000 and beyond	0.81	0.17	0.48	1.15	12	0.90	0.14	0.63	1.17	9
Disciplinary affiliation										
Psychology	0.50	0.37	-0.23	1.23	3	0.92	0.15	0.63	1.21	9
Psychiatry	0.99	0.17	0.67	1.31	9	0.56	0.11	0.35	0.76	5
Social work/counselling	0.96	0.21	0.55	1.37	3	0.65	0.18	0.30	1.00	2
Medicine	0.16	0.13	-0.10	0.41	2	0.54	0.13	0.28	0.80	2
Measure source										
Participant	0.74	0.10	0.55	0.93	31	0.63	0.06	0.52	0.74	39
Professional	1.59	0.28	1.03	2.14	4	0.97	0.09	0.80	1.14	15
Assessment type										
Paper and pen	0.74	0.10	0.55	0.93	31	0.63	0.06	0.52	0.74	39
Interview	1.59	0.28	1.03	2.14	4	0.97	0.09	0.80	1.14	15
Time between pre-post										
Short-term (<10 weeks)	0.85	0.21	0.44	1.26	2	0.74	0.10	0.55	0.93	7
Medium (10-20 weeks)	1.05	0.19	0.68	1.41	9	0.45	0.16	0.15	0.76	3
Long-term (>20 weeks)	0.07	0.37	-0.66	0.80	1	0.50	0.12	0.27	0.73	3

Ethnicity										
>50% white/Caucasian	1.04	0.15	0.74	1.34	10	0.71	0.14	0.44	0.99	10
>50% African American	0.16	0.13	-0.10	0.41	2	0.40	0.26	-0.12	0.91	2
All less than 50%	1.01	0.28	0.46	1.56	2	-				
Annual income										
>50% <$10,000	0.16	0.13	-0.10	0.41	2	0.46	0.16	0.15	0.77	3
>50% $11,000 - 30,000	1.19	0.22	0.76	1.63	5	1.07	0.23	0.62	1.52	4
>50% >$30,000	0.94	0.18	0.58	1.30	3	-				
All less than 50%	1.13	0.22	0.69	1.56	2	-				
Abuse										
Only sexual abuse	0.73	0.17	0.40	1.06	13	0.53	0.07	0.43	0.71	13
Sexual and other abuse	0.90	0.15	0.60	1.19	4	1.07	0.16	0.71	1.35	5
Modality										
Individual	1.17	0.14	0.90	1.45	6	1.04	0.17	0.71	1.36	5
Group	-	-				1.67	0.52	0.66	2.69	1
Couple	0.37	0.10	0.17	0.56	10	0.61	0.08	0.45	0.77	10
Mixed	0.91	0.33	1.27	2.56	1	0.54	0.13	0.28	0.80	2
Treatment setting										
Research (university)	0.90	0.17	0.57	1.24	6	0.53	0.14	0.26	0.79	6
Agency	0.54	0.22	0.11	0.97	7	0.54	0.09	0.35	0.72	7
Government	0.79	0.24	0.33	1.26	2	1.14	0.16	0.82	1.45	4
Treatment duration										
<10 weeks	0.96	0.18	0.61	1.30	4	1.06	0.17	0.73	1.38	5
10-20 weeks	0.76	0.17	0.43	1.09	12	0.52	0.11	0.31	0.73	8
>20 weeks	0.07	0.37	-0.66	0.80	1	0.50	0.12	0.27	0.73	3

Number of sessions										
<10	1.20	0.18	0.85	1.56	4	0.31	0.43	-0.54	1.15	1
10-20	0.53	0.14	0.26	0.80	10	0.79	0.12	0.56	1.02	13
>20	1.00	0.92	-0.81	2.8	2	0.50	0.12	0.27	0.73	3
Frequency of sessions										
Once per week	0.76	0.17	0.42	1.10	10	0.54	0.07	0.40	0.69	13
Twice per week	0.81	0.29	0.23	1.38	6	1.45	0.18	1.10	1.80	2
Three or more per week	0.75	0.26	0.25	1.24	1	0.90	0.13	0.64	1.16	1
Context										
Clinic only	0.60	0.13	0.35	0.86	13	0.64	0.06	0.52	0.77	14
Clinic + homework	1.26	0.27	0.73	1.78	4	1.10	0.23	0.66	1.55	4
Session length										
50-60 mins	1.27	0.32	0.65	1.90	1	1.03	0.18	0.67	1.38	5
61-90 mins	0.70	0.19	0.34	1.07	10	0.44	0.13	0.20	0.69	5
91-120 mins	0.83	0.24	0.37	1.30	5	0.51	0.12	0.26	0.75	4
Therapy process										
Reading/self-directional	0.41	0.25	-0.07	0.90	2	-				
Instructional	1.17	0.17	0.83	1.51	6	0.92	0.16	0.61	1.22	7
Dialogue-based	0.56	0.16	0.24	0.88	9	0.55	0.09	0.38	0.72	10
Structure										
Manualised	1.24	0.13	0.99	1.49	7	1.00	0.23	0.56	1.45	5
Semi-structured	0.51	0.17	0.17	0.84	7	0.66	0.12	0.43	0.88	6
Unstructured	0.25	0.15	-0.04	0.54	3	0.60	0.11	0.38	0.81	6

Possible moderators for internalising symptoms										
Variable	Independent samples studies					Repeated measures studies				
	g	SE	Lower	Upper	n	g	SE	Lower	Upper	n
Disciplinary affiliation										
Psychology	0.43	0.23	-0.02	0.88	7	0.93	0.09	0.75	1.11	14
Psychiatry	0.95	0.27	0.43	1.48	9	0.47	0.10	0.27	0.66	7
Social work/counselling	0.70	0.13	0.45	0.95	4	0.53	0.15	0.23	0.83	5
Medicine						0.54	0.13	0.27	0.80	2
Number of abuse events										
2-5	0.69	0.21	0.29	1.10	6					
6-10						0.96	0.14	0.69	1.23	3
>10	0.93	1.07	-1.17	3.02	2	0.48	0.14	0.21	0.75	2
Therapy type										
Cognitive-behavioural	1.84	0.21	1.43	2.25	3	1.15	0.15	0.85	1.45	5
Insight-oriented	0.44	0.13	0.19	0.68	10	0.64	0.09	0.46	0.82	13
Eclectic	0.97	0.28	0.42	1.52	4	0.47	0.12	0.23	0.70	4
Other	0.40	0.41	-0.39	1.20	3	0.58	0.10	0.38	0.78	6
Frequency of sessions										
Once per week	0.65	0.16	0.34	0.96	13	0.67	0.08	0.51	0.83	21
Twice per week	1.08	0.30	0.49	1.67	6	1.05	0.17	0.72	1.38	2
Three or more per week	-0.13	0.26	-0.64	0.37	1	0.71	0.32	0.09	1.34	1

Context										
Clinic only	0.52	0.14	0.25	0.79	13	0.63	0.08	0.47	0.78	21
Clinic + homework	1.45	0.24	0.98	1.93	5	0.83	0.11	0.61	1.05	6
Therapist involvement										
Minimal contact	-0.13	0.26	-0.64	0.37	1	-				
Partial contact	0.71	0.16	0.40	1.02	14	0.63	0.07	0.49	0.76	17
Main contact	0.95	0.34	0.28	1.61	5	0.79	0.13	0.53	1.05	11
Therapy process										
Reading/self-directional	0.42	0.22	-0.02	0.85	4	-				
Instructional	1.43	0.21	1.03	1.83	6	0.82	0.13	0.57	1.08	11
Dialogue-based	0.41	0.15	0.11	0.70	10	0.61	0.07	0.47	0.75	16

Possible moderators of externalising symptoms										
Variable	Independent samples studies					Repeated measures studies				
	g	SE	Lower	Upper	n	g	SE	Lower	Upper	n
Study design										
Experimental	1.05	0.22	0.62	1.48	6	0.43	0.13	0.17	0.69	3
Quasi-experimental	-0.01	0.20	-0.40	0.38	5	0.39	0.14	0.12	0.66	6
Uncontrolled						0.37	0.30	-0.22	0.96	1
Assignment to conditions										
Random	1.09	0.29	0.53	1.65	5	0.43	0.13	0.17	0.69	3
Non-random	0.14	0.22	-0.30	0.57	6	0.39	0.14	0.12	0.66	6
Session length										
50-60 minutes	0.66	0.55	-0.42	1.74	1	0.41	0.11	0.19	0.64	5
61-90 minutes	0.41	0.38	-0.34	1.16	4	0.15	0.26	-0.36	0.66	2
91-120 minutes	1.03	0.31	0.43	1.63	4	0.64	0.24	0.16	1.11	2
Structure										
Manualised	1.16	0.28	0.62	1.70	2	0.40	0.11	0.19	0.62	6
Semi-structured	0.82	0.27	0.29	1.36	5	0.81	0.41	0.01	1.62	1
Unstructured	-0.16	0.21	-0.57	0.25	4	0.35	0.18	0.01	0.69	3
Amount of work										
No description	-0.23	0.26	-0.73	0.28	2	0.35	0.18	0.01	0.69	3
Moderate description	0.57	0.32	-0.06	1.19	6	0.81	0.41	0.01	1.62	1
High level description	0.99	0.23	0.53	1.44	3	0.40	0.11	0.19	0.62	6

Possible moderators of self-esteem/self-concept										
Variable	Independent samples studies					Repeated measures studies				
	g	SE	Lower	Upper	n	g	SE	Lower	Upper	n
Therapy type										
Cognitive-behavioural	1.17	0.32	0.48	1.86	1	1.32	0.35	0.63	2.01	3
Insight-oriented	0.25	0.20	-0.14	0.64	3	0.52	0.11	0.31	0.73	9
Eclectic	1.32	0.69	-0.03	2.67	1	0.33	0.12	0.10	0.56	4
Other	-0.14	0.53	-1.19	0.90	2	1.34	0.56	0.24	2.44	1
Therapist experience										
Students only	0.18	0.21	-0.22	0.58	2	1.23	0.27	0.70	1.76	4
Students and practitioners						0.56	0.26	0.05	1.06	4
Practitioners only	1.12	0.29	0.55	1.70	3	0.39	0.08	0.23	0.55	8
Structure										
Manualised						0.54	0.40	-0.24	1.32	3
Semi-structured	0.71	0.24	0.23	1.18	6	0.78	0.14	0.50	1.07	10
Unstructured	0.00	0.16	-0.31	0.31	1	0.34	0.10	0.15	0.53	4

Possible moderators for global symptoms/functioning										
Variable	Independent samples studies					Repeated measures studies				
	g	SE	Lower	Upper	n	g	SE	Lower	Upper	n
Country										
United States	0.61	0.23	0.16	1.07	10	0.37	0.14	0.09	0.65	13
Canada	0.92	0.18	0.58	1.26	3	0.79	0.24	0.33	1.25	4
Europe	-0.11	0.26	-0.62	0.40	2	0.86	0.13	0.60	1.13	7
Description of abuse										
>50% penetrative	0.22	0.18	-0.13	0.56	9	0.55	0.17	0.22	0.89	4
>50% non-penetrative	2.51	0.94	0.67	4.34	1	0.17	0.37	-0.55	0.90	4
Mixed, none >50%						1.00	0.16	0.68	1.29	3
Multiple						0.29	0.22	-0.15	0.72	2
Treatment duration										
<10 weeks	0.58	0.64	-0.67	1.83	3	0.35	0.18	0.01	0.69	3
10-20 weeks	0.64	0.18	0.29	0.98	11	0.81	0.10	0.61	1.01	12
>20 weeks	0.11	0.35	-0.58	0.79	1	0.27	0.20	-0.13	0.67	7
Number of sessions										
<10 weeks	0.14	0.41	-0.67	0.94	3	0.35	0.18	0.01	0.69	3
10-20	0.55	0.20	0.26	1.06	9	0.88	0.11	0.68	1.09	12
>20	1.15	1.19	-1.18	3.48	2	0.36	0.23	-0.09	0.81	7
Therapist experience										
Students only	0.47	0.31	-0.14	1.09	6	0.56	0.18	0.21	0.91	4
Students and practitioners	0.91	0.20	0.52	1.30	3	0.53	0.18	0.17	0.89	6
Practitioners only	0.71	0.18	0.37	1.06	5	0.56	0.16	0.26	0.86	13
Therapist involvement										
Minimal contact	-0.57	0.26	-1.08	0.05	1	0.41	0.24	-0.06	0.88	1
Partial contact	0.48	0.14	0.20	0.75	11	0.73	0.11	0.52	0.94	12
Main contact	1.34	0.22	0.90	1.77	3	0.49	0.20	0.10	0.88	11

Trask et al. (2011)

Weighted mean effect sizes by outcome and research design					
Outcome	k	d	SE	Lower CI	Upper CI
Overall					
Pre-post	19	0.54	0.07	0.40	0.68
Between-group designs	16	0.54	0.11	0.33	0.76
PTSD					
Pre-post	5	0.51	0.27	-0.01	1.03
Between-group designs	6	0.63	0.19	0.26	1.00
Externalising					
Pre-post	14	0.47	0.08	0.31	0.64
Between-group designs	12	0.39	0.17	0.06	0.70
Internalising					
Pre-post	16	0.50	0.06	0.39	0.61
Between-group designs	15	0.56	0.12	0.33	0.80