

Interventions to reduce distress in adult victims of sexual violence and rape

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**Protocol for the Campbell Collaboration
Systematic Review**

The Campbell Collaboration Social Welfare Group

Title

Interventions to reduce distress in adult victims of sexual violence and rape

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1. Background for the Review

Estimates of the incidence and prevalence of rape and other forms of sexual assault vary depending on how terms are defined, what types of sexual assaults are included, the time frame during which the data are collected, sampling methods used, age and gender of the population studied, and the location of the sample (Acierno, Resnick & Kilpatrick, 1997). Further, as few countries have undertaken studies that comprehensively document the prevalence of rape and sexual assault, worldwide incidence is difficult to determine (British Council, 2006). In the United Kingdom, Painter (1991), reported that 1 in 4 women experienced rape or attempted rape. A national random sample of 6,926 women in Sweden found that 1 in 6, or 16% of the respondents, had experienced sexual violence by a former husband or cohabitant and that 1 in 4, or 25% of the respondents, had been subject to sexual violence by a man outside a relationship (Lundgren, Heimer, Westerstrand & Kalliokoski, 2002). In a similar study in Ghana, Coker-Appiah and Cusack (1999) randomly sampled 2,069 women and adolescent girls and found that 1 in 3, or 33% of the respondents, had been touched against their will and that 1 in 5, or 21% of the respondents, had been raped. In the United States, a population-based study of 1,769 women in Virginia discovered that the lifetime prevalence of sexual assault was 27.6% and the prevalence of rape was 17.8%. In a survey of households in Los Angeles, the lifetime prevalence of sexual assault was 13.2% (16.7% for women and 9.4% for men; Burnham et al., 1988). A similar study in Northeastern United States, reported a lifetime prevalence of sexual assault of 7.3% for women and 1.3% for men (Norris, 1992). A national random sample of women found that 12.7% reported a history of rape and 14.3% reported other forms of sexual assault (Resnick et al., 1993). Other US studies have focused on college populations. Koss, Gidycz and Wisniewski (1987) found in their survey of 6,000 students from 32 colleges, that 50% of the respondents indicated having experienced some form of sexual violence after age 14 and 27.5% reported having been raped (Koss, Gidycz & Wisniewski, 1987). In a subsequent study with 2,700 college women, 15% reported rape and 12% reported attempted rape since age 14 (Koss & Dinero, 1989). Gross and colleagues (2006) reported that 27% of a sample of college women had experienced some form of unwanted sexual contact (ranging from kissing and petting to

intercourse) since entering college. Thus, while estimates vary, sexual assault affects a non-trivial percentage of the population.

Distress often occurs after a person has been exposed to a traumatic event such as sexual assault. Resick (1983) for example found that victims of rape exhibited more depressive symptoms, more fear and anxiety, more problems with social and work adjustment, and more problems with sexual functioning than did a control group of non-victims. The increased prevalence of Post-Traumatic Stress Disorder (PTSD) in victims of rape is well documented. PTSD has been reported to affect between 9 and 15 percent of the general population and almost 50 percent of individuals who have been raped (Treadwell & Foa, 2004).

As the negative effects of sexual assault have become better recognized, there is increasing attention to the possibility that psychosocial interventions may reduce suffering and limit distress. There are now several treatments modalities available for victims of rape and sexual assault including: pharmacology; behavioural techniques such as flooding, systematic desensitization, eye movement desensitization and retraining (EMDR); cognitive behavioural therapy; cognitive therapy; relaxation; rational-emotive therapy; group therapy; hypnosis; family/couple therapy; existential therapy; humanistic approaches; and psychodynamic therapy. A critical review of this literature reveals many articles based on clinical impressions, but few studies measuring outcomes of treatment. Due to the well documented negative consequences of sexual assault such as posttraumatic stress disorder (PTSD), and secondary depression (Resnick, Acierno, Holmes, Kilpatrick, & Jager, 2006), it is imperative that effective and efficient treatment options for these victims are identified (Rothbaum, Astin & Mosteller, 2005).

One of the issues in evaluating post-traumatic stress interventions is the degree to which symptoms spontaneously remit. For instance, Rothbaum, Foa, Riggs, Murdock and Walsh (1992) reported that, while 94% of the 95 rape victims in their study met the criteria for PTSD at one week post-rape, this reduced to 47% at 94 days post-rape. Once the three month marker occurs, it has been suggested that symptoms of PTSD become relatively persistent. While there are hundreds of original reports describing the effectiveness of treatments for individuals who

have been exposed to traumatic events, the vast majority are not empirically based studies (Solomon & Johnson, 2002). Yet, the natural diminishing of symptoms of PTSD requires that controlled studies be considered when discussing efficacy.

Stein, Ipser and Seedat's (2006) systematic review of pharmacotherapy for PTSD is the only systematic review to examine the reduction of distress for victims of rape. The reviewers concluded that while medication treatments can be effective in treating PTSD, there continues to be a need for more effective strategies. However, in this review victims of sexual violence were grouped with other populations of trauma sufferers, and no specific data synthesis was reported regarding those who had been victims of rape. Within the psychotherapy literature, there have been several non-systematic reviews of treatment for rape and sexual assault (Falsetti, 1997; Foa, Rothbaum & Steketee, 1993; Foa & Rothbaum, 1998). Other reviews have examined the reduction of distress in populations experiencing symptomology of PTSD but these reviews were not specific to adult victims of rape and sexual assault. Bisson and Andrew (2007), for example, completed a Cochrane Review of psychological treatments to reduce symptoms of post traumatic stress disorder (PTSD). Although they found evidence that individual Trauma-focused cognitive behavioural therapy/exposure therapy (TFCBT), eye movement desensitisation and reprocessing (EMDR), stress management and group TFCBT were effective in the treatment of PTSD, the authors made no restriction on the basis of severity of PTSD symptoms or type of traumatic event. Instead, their study population included war veterans, female assault (mainly sexual assault) survivors, refugees and police officers, and mixed groups of individuals who had experienced a variety of traumatic events including road traffic accidents, assaults, bereavement and industrial accidents. Likewise, Sherman (1998) completed a meta-analysis of controlled and clinical trials of psychotherapeutic treatments for posttraumatic stress disorder (PTSD) and included samples of combat veterans from the Vietnam and Lebanon Wars, crime-related victims, and severe bereavement sufferers and victims of rape. Sherman examined cognitive, and psychodynamic treatments, in group and individual settings and found the overall impact of psychotherapy on PTSD and psychiatric symptomatology was significant ($d = .52$, $r = .25$) with a non-zero, 95% confidence interval suggesting that the true effect lies between .39 and .68, however no data were available specifically for those who were victims of rape.

It is important to evaluate treatments specifically for victims rape because although there may appear to be similarity of response to different trauma including rape, accidents and disasters (Rothbaum, Ninan & Thomas, 1996), there is evidence that trauma associated with rape may be different than other forms of trauma in part due to the strong element of self-blame, the higher incidence of concurrent depression and the increased risk of suicide (Connor, Jonathan & Davidson, 1997; Kimerling, Ouimette & Wolfe, 2002). Using a representative sample to assess the differential risks of PTSD across types of trauma exposure, Breslau, Davis, Andreski and Peterson (1991) reported that the incidence of PTSD was highest after rape (49%, SE=12.2) followed by other forms of sexual assault (23%, SE=10.8). The incidence of PTSD after being shot or stabbed was 15% (SE=13.7), a serious car accident was 2.3% (SE=1.3), other kinds of serious accidents was 16.8% (SE=6.2) and following natural disaster was 3.8(SE= 3.0). Given the high risk of PTSD following rape and other forms of sexual assault, there have been a growing number of treatment programs that specifically target victims of rape and other forms of sexual assault.

While treatment modalities may not be explicitly feminist, due to the gendered nature of a majority of sexual assault their implementation is often influenced by feminist frameworks and feminist theory. Feminist frameworks pay heed to re-establishing appropriate boundaries in relationships, beginning with the therapeutic relationship, promoting self-determination in the victimized person, and empowerment of the victim to move from victim to survivor. Feminist informed approaches view sexual victimization as a crime against the self and highlight the contributions of a society that condones violence (Bass & Davies, 1992; Myers Avis, 1992; Solomon, 1992). Feminist therapeutic approaches emphasize integrating the social causes of rape into the client's world-view and reducing self-blame and guilt following sexual assault (Enns, 1993 ; Koss & Harvey, 1991). The goal of such analysis is to help the victim understand that such violence is a societal problem, not an individual problem (Enns, 1993). Although elements of feminist theories may underpin different models of treatment there is a lack of clarity in defining a “feminist treatment model” precluding its inclusion in this systematic review as a distinct and separate modality.

The Current State of Research

Models of therapy used to assist victims in recovery from sexual assault and rape are predominantly based on two theoretical frameworks: the psychodynamic model and the cognitive behavioral model.

A. Psychodynamic Approaches to Intervention

From the psychodynamic perspective, traumatic events call into question basic human relationships and breached attachments to family, friends and the community. They shatter the construction of self that is formed and sustained in relation to others and force a survivor to relive earlier struggles over autonomy, identity and intimacy. Recovery requires re-establishment of a sense of self and relationships with others (Herman, 1992, 1997; van der Kolk, 1994; van der Kolk, McFarlane & Weisaeth, 1996).

Psychodynamic approaches are perhaps the oldest method for dealing with trauma in various forms including, sexual assault and rape. This is the area, however, in which there is the least available empirical research. Rather, the literature focuses on theoretical papers (Bohleber, 2007; Boulanger, 2002; Evans, 1978; Rose, 1991; Straker, Watson & Robinson, 2002), case studies (Barnett, 2001; Fosha, 2006; Friedberg, 1997; Pole & Bloomberg-Fretter, 2006; Wren, 2003) and clinical reflections (Schootenbauer, Arnfoff, Glass & Gray, 2006).

Cognitive-Behavioural Models of Treatment

Cognitive therapists concentrate on how traumatic events confront and challenge an individual's conceptualization of themselves and the world. When this occurs, customary problem solving mechanisms become overwhelmed and the individual is unable to process and integrate the experience. Treatment and healing thus focus on mastery of intrusive and disturbing images (Resick & Schnicke, 1993; McCann & Pearlman, 1990). Cognitive-behavioural models of treatment cover a range of specific approaches including Exposure Therapy or Prolonged Exposure (ET/PE), Stress Inoculation Training (SIT), Cognitive Processing Therapy (CPT), and Eye Movement De-Sensitization and Reprocessing (EMDR). These models are based on the premise that cognitive factors play a significant role in the onset, severity and outcomes of PTSD

symptoms after sexual assault (Foa & Meadows, 1997; Foa, Steketee & Rothbaum, 1989; Koss & Figuerdo, 2004; Jaycox, Zoellner & Foa, 2002). Cognitive therapies therefore focus on the modification of affective and cognitive responses associated with the traumatic memory which will ultimately lead to decreased autonomic arousal and decreased intrusive imagery. In general these approaches involve systematic exposure to traumatic memories and cognitive reinterpretation of these events (Foa, Riggs, & Gershuny, 1995) and didactic and behavioral therapy techniques, including educating survivors about rape myths and trauma, and teaching them anxiety reduction techniques (Foa, Hearst-Ikeda & Perry, 1995; Foa & Rothbaum, 1998; Lubin, Loris, Burt & Johnson, 1998).

Of all treatments for victims of rape and sexual assault, cognitive-behavioural models (CBT) have been most rigorously evaluated. Compared with other types of therapies such as supportive psychotherapy, psychodynamic psychotherapy, or supportive counselling hypnotherapy, CBT has been found to be effective in reducing symptoms of PTSD (Foa, Rothbaum, Riggs, Tamara & Murdock, 1991; Follette, Ruzek and Abueg, 1998; Harvey, Bryant and Tarrier, 2003; Resick & Schnicke, 1992; Rothbaum and Foa, 1996). Subsequent research has focused on differentiating which models of CBT treatment might be more effective than others.

Foa and colleagues (1991), for instance, compared SIT and PE treatment approaches. They found that while SIT was the most effective treatment in reducing PTSD symptomatology immediately after treatment, PE was found to be most effective treatment at 3-month follow-up. Neither SIT nor PE was superior to supportive counseling or a waiting list in terms of other measures of fear, anxiety, or depression. It was, therefore, hypothesized that combining such approaches might enhance treatment benefit by providing ways to manage stress and anxiety while confronting the feared memories and cues (Foa et al., 1991). However, the evidence to support this combination has been generally mixed. For instance, Foa et al. (1999) compared PE, SIT, and a combination of PE and SIT with a wait-list control, and found that all three therapies significantly reduced symptoms of PTSD and depression relative to the control condition. PE appeared to improve general anxiety better than SIT or SIT-PE, whereas the results for PTSD and depression were similar for the three groups across a 1-year follow-up. Moreover, larger

effect sizes for the reduction in PTSD severity and depression were reported for the PE treatment. The combined treatment, however, was delivered in the same number and length of sessions, meaning that clients in this condition received less imaginal exposure than the PE group and the SIT group (Foa et al., 1999). The authors conjectured that this provides a possible explanation as to why the combined approach did not outperform the single procedures treatments.

Cognitive processing therapy consists of two integrated components: cognitive therapy and exposure in the form of writing and reading about the traumatic event (Resick et al., 1993; Resick & Schnicke, 1992). Resick et al. (1992) argued that an approach that elicits memories of the events, and directly confronts conflicts and maladaptive beliefs might be more effective in alleviating PTSD symptoms than prolonged exposure alone. Prolonged exposure activates the memory structure, but does not provide direct corrective information regarding misattributes, which are common among rape victims (Resick & Schnicke, 1992). To test the effectiveness of CPT, the authors examined CPT in a group format in the treatment of rape-induced PTSD (Resick & Schnicke, 1992). The findings indicated that CPT was effective in improving symptoms in a large majority of participants in comparison to the naturally occurring wait-list. Furthermore, CPT resulted in statistically significant improvement in both PTSD and depressive symptomatology compared to the wait-list when implemented in a 12-session group format.

Resick et al. (2002) conducted a controlled trial, comparing CPT with PE and a minimal attention wait-list condition among victims of rape with regard to symptoms of PTSD and depression. The authors made great efforts not to introduce “causal cognitive therapy” in the PE protocol or to conduct prolonged imaginal or behavioural exposures in the CPT protocol (Resick et al. 2002). The authors’ findings indicated that CPT and PE were highly successful in treating PTSD in this sample of chronically distressed rape victims compared to the waiting list conditions. Both therapies were also found to be effective in treating depressive symptoms; however, CPT was found to be superior to PE in remediating guilt cognitions.

Eye-movement desensitization and reprocessing (EMDR) therapy, has received considerable attention amongst researchers; however, the findings have been mixed and have been a lack of comparison groups to assess its efficacy (Deville & Spence, 1999; Ironson, Freund, Strauss & Greenwald, 2002; Lee et al., 2002; Taylor et al., 2003). Most studies have been methodologically weak with small sample sizes, and very few studies have been tested with the victims of sexual assault. Although several researchers state that the theoretical foundation has not been well developed (Rothbaum, Astin & Morsteller, 2005), EMDR shares similar traits to CBT exposure therapies (Rothbaum, 1997). For instance, during treatment, the client is to think of past/present traumatic experiences while concurrently focusing on a stimulus, such as auditory tones, tactile stimulation, and/ or visual cues (Rothbaum, 1997, 2005). As previously stated, it has been suggested that PTSD is due to an inability to adequately process the trauma and EMDR may be useful in this reprocessing (Foa, Steketee, & Rothbaum, 1989; Rothbaum, 1997, 2005). Rothbaum et al. (2005) reported that PE and EMDR had equally led to clinically and statistically significant improvements in rape victims with PTSD symptomatology immediately following treatment and at six-month follow-up compared to the wait-list control condition. Due to the non-random assignment utilized in this study, pretreatment differences on certain measures were present and possibly influenced findings.

In summary, some researchers have provided evidence that exposure therapy in combination with stress inoculation training or cognitive therapy yields the most positive results (Hembree & Foa, 2003), others have provided evidence that inoculation does not necessarily enhance other cognitive methods and provided alone, they are equally effective (Harvey, Bryant & Tarrier, 2003; Tarrier et al., 1999a,b). It is important to note that exposure methods tend to have higher drop-out rates and as indicated above those who drop out have been found to have higher rates of trauma symptoms. This may be due to the fact that in PE treatment, trauma reduction occurs through the process of first reactivating the fear memory and secondarily providing new information that is incompatible with the fear structure in order form a new memory (Resick & Schnicke, 1993; Rothbaum, Meadows, Resick & Foy, 2000). It is possible, that those with higher levels of symptoms are unable to tolerate the treatment and therefore discontinue. From a treatment standpoint, exposure methods are more selective in the criteria for inclusion and it is

suggested that this model of treatment should be used only when a sound therapeutic alliance has been formed and a thorough assessment has been completed (Calhoun & Atkeson, 1991). Individuals in this type of treatment are assessed as having the capacity to tolerate high anxiety arousal, have no active suicidal ideation, no comorbid substance abuse, and, most importantly, no current life crises (Foy et al., 2000). Thus, if they are equally effective, CBT methods without exposure may yield a lower risk of iatrogenic effects. From a research perspective, these findings support the necessity to systematically review outcomes of distress post interventions for rape and sexual assault and they highlight the specific importance of evaluating the impact of selection bias and attrition on these results.

Summary

In short, there are few treatment options for sexually assaulted individuals that have been rigorously tested, and therefore, no certainty as to which intervention is superior in addressing PTSD symptoms and post-traumatic depression. It is important to note that the presented research has been conducted primarily with middle class white Anglo-Saxon women in the USA; it is unknown how these therapeutic approaches work for individuals from other cultures. Similarly, it is not known how these treatment options respond to the needs of victims of varying social classes, sexual orientations, psychological functioning and levels of ability/disability. It is not clear as well at this time about the possible variations by type of sexual assault (e.g., single vs. repeated assaults, known vs. unknown perpetrators, assaults under “normal” living conditions vs. those that happen during other traumatic events such as war). Thus, the therapeutic approaches reviewed to date may not be as effective for all types of adult sexual assault survivors. Further research is needed to understand which forms of treatment are indeed effective, and for whom.

Contribution of this review

Although the literature suggests there may be effective treatments for trauma and PTSD in general, there remains a substantial gap in the empirical evidence related to the effectiveness of various modalities to treat rape and other forms of sexual assault. By systematically reviewing the current state of interventions to reduce distress post rape and/or sexual assault, this review

will contribute to a research agenda that develops evidence-based guidelines for the treatment of distress.

2. Objectives of the Review

There is no clear consensus among therapists and researchers on the best way to treat victims of sexual assault. In addition, most research has tested behavioural, cognitive or cognitive behavioral therapies. Therefore, the objective of this systematic review will be to complete an exhaustive and comprehensive search of controlled and clinical trials of psychotherapies for adult victims of sexual assault, and to synthesize the results of these studies to assess treatment effects on outcomes related to distress and trauma.

Specifically, we will:

- Estimate absolute and relative effects of the combined group of psychotherapies on distress and trauma symptoms among adult victims of sexual assault
- Estimate absolute and relative effects of psychodynamic and cognitive-behavioral separately on distress and trauma symptoms among adult victims of sexual assault
- Assess variations in effects by type of treatment, duration of treatment, type of assault, and circumstances of assault

3. Methodology

Criteria for considering studies for this review

Types of studies

This review will include experimental and parallel cohort quasi-experimental evaluations of psychological intervention programs to reduce distress in adult victims of sexual assault. Studies will be eligible for the review if they 1) used random assignment to create treatment and comparison or control groups or 2) used parallel cohort designs in which groups were assessed at the same points in time. Single-group designs and single-subject designs will be excluded. The studies will vary in the method of constructing comparison/control groups and will also vary in their use of statistical controls to reduce the threat of selection bias. Only studies using parallel

cohort design in constructing a comparison/control group will be included in the review. All studies will be included regardless of date. Electronic databases will be searched and key serials will be hand-searched.

Types of participants

Study participants include adults, 18 years of age and older, who have been victims of sexual assault (including rape) as adults. Males and females are included. Sexual assault is defined to encompass rape; attempted rape; forced oral sex, anal sex, penetration with objects, touching of intimate parts; and other types of threats or coercion in which unwanted sexual contact is attempted or occurs between the victim and offender. Rape refers to forced or attempted sexual intercourse with a male or female, by any offender.

Types of intervention

Relevant interventions are psychological or psychosocial in nature and will be compared with “other treatment”, “no treatment” and “treatment as usual”. Although we expect to find more controlled trials of cognitive behavioural therapy, a comprehensive search will be conducted to uncover all controlled investigations of effects of interventions to treat sexual assault victims. These interventions will include: behavioural techniques such as flooding, systematic desensitization, eye movement desensitization and reprocessing [reprogramming] (EMDR); cognitive behavioural therapy; cognitive therapy; relaxation; rational-emotive therapy; group therapy; hypnosis; family/couple therapy; existential therapy; humanistic approaches; and psychodynamic therapy. We will also identify “other” categories of interventions to ensure we remain flexible in the retrieval process of this review.

Since the main objective of this review is to compare psychosocial interventions to reduce distress, interventions that are exclusively based on pharmacology will be excluded. Studies that compare psychosocial treatments to pharmacological treatment and studies that combine psychosocial treatments with pharmacological treatments will be considered.

Types of outcome measures

The primary outcome is a decrease in trauma symptoms (PTSD). Secondary outcomes are: decreased levels of depression, anxiety, and guilt; and increases in positive functioning (e.g., social support, peer relations, locus of control, self-efficacy). In addition, analyses of outcomes will include any adverse negative affect of treatment (increased distress following treatment).

The primary outcome will be assessed in terms of the independent rating of severity of traumatic stress symptoms using a standardized measure such as the clinician administered PTSD Symptom Scale (Blake 1995) and severity of self-reported traumatic stress symptoms using a standardized measure such as the Impact of Event Scale (Horowitz 1979).

Secondary outcome measures will include: 1) severity of depressive symptoms using scales such as the Beck Depression Inventory (Beck 1961); 2) severity of anxiety symptoms using scales such as the Spielberger State Trait Anxiety Inventory (Spielberger 1973).

Search strategy for identification of relevant studies

Both published and unpublished work will be considered eligible for the review. A Trial Search Coordinator will be responsible for coordinating this activity. Currently we have the capacity to review English articles; we would appreciate any help from the Campbell Collaboration in extending the search to other languages.

Bibliographic Databases:

1. Cochrane Central Register of Controlled Trials (CENTRAL)
2. Cochrane Database of Systematic Reviews
3. MEDLINE
4. EMBASE
5. EMBASE Classic
6. All EBM Reviews
7. PsycINFO
8. ASSIA (applied social sciences)
9. ERIC
10. Social Sciences Abstracts
11. Social Services Abstracts
12. Social Sciences Citation Index
13. Criminal Justice Abstracts

14. Violence and Abuse Abstracts
15. Social Work Abstracts
16. Dissertation Abstracts International (DAI)
17. CINAHL
18. Gender Studies Database
19. Contemporary Women's Issues

MEDLINE

1. Rape/
2. Sex Offenses/
3. (sex\$ adj2 (abus\$ or offens\$ or attack\$ or viol\$ or assault\$ or victim\$ or surviv\$ or unwanted or unlawful or forc\$ or coerc\$)).tw.
4. (rape or raped or rapist or raping).tw.
5. or/1-4

6. anxiety/
7. exp anxiety disorders/
8. anx\$.tw.
9. ((post trauma\$ or posttrauma\$ or post-trauma\$) adj (stress or neuros#s)).tw.
10. ptsd.tw.
11. exp mood disorders/
12. Depression/
13. depress\$.tw.
14. traum\$.tw.
15. distress\$.tw.
16. or/6-15

17. exp Psychotherapy/
18. (psychotherap\$ or psychoeducat\$ or psychodynam\$ or psychoanaly\$ or psychosocial or psycho-social).tw.
19. ((behavio\$ or cognit\$ or general or social or supporti\$ or interpersonal or group or individual or brief or psycho\$ or dialectic\$ or mindful\$ or exposure or hypno\$ or wilderness or emotion-focus\$ or emotion focus\$ or solution-focus\$ or solution focus\$ or narrative\$) adj2 (counsel\$ or support\$ or intervention\$ or program\$ or treatment\$)).tw.
20. relaxation.tw.
21. (eye movement\$ or emdr).tw.
22. desensitiz\$.tw.
23. cbt\$.tw.
24. dbt\$.tw.
25. therap\$.tw
26. or/17-25
27. 26 and 16 and 5

PsycINFO

((DE=(Rape)) or(DE=(Sex Offenses)) or(TI=(sex* within 2 (abus* or offens* or attack* or viol* or assault* or victim* or surviv* or unwanted or unlawful or forc* or coerc*))) or(AB=(sex* within 2 (abus* or offens* or attack* or viol* or assault* or victim* or surviv* or unwanted or unlawful or forced or coerc*)))or(TI=(rape or raped or rapist or raping)) or(AB=(rape or raped or rapist or raping)))

and((DE=(Anxiety)) or(DE=(Anxiety Disorders)) or(TI=(anxi*)) or(AB=(anxi*)) or(TI=((post trauma* or posttrauma* or post-trauma*) within 1 (stress or neuroses or neurosis))) or(AB=((post trauma* or posttrauma* or post-trauma*) within 1 (stress or neuroses or neurosis))) or(TI=(ptsd)) or(AB=(ptsd)) or(DE=(Affective Disorders)) or(DE=(Depression)) or(TI=(depress*)) or(AB=(depress*)) or(TI=(traum*)) or(AB=(traum*)) or(TI=(distress*)) or(AB=(distress*)))

and((DE=(Psychotherapy)) or(TI=(psychotherap* or psychoeducat* or psychodynam* or psychoanaly* or psychosocial or psycho-social)) or(AB=(psychotherap* or psychoeducat* or psychodynam* or psychoanaly* or psychosocial or psycho-social)) or(TI=(behavio* or cognit* or general or social or supporti* or interpersonal or group or individual or brief or psycho* or dialectic* or mindful* or exposure or hypno* or wilderness or emotion-focus* or emotion focus* or solution-focus* or solution focus* or narrative*) within 2 (counsel* or support* or intervention* or program* or treatment*)) or(AB=(behavio* or cognit* or general or social or supporti* or interpersonal or group or individual or brief or psycho* or dialectic* or mindful* or exposure or hypno* or wilderness or emotion-focus* or emotion focus* or solution-focus* or solution focus* or narrative*) within 2 (counsel* or support* or intervention* or program* or treatment*)) or(TI=(relaxation)) or(AB=(relaxation)) or(TI=(eye movement* or emdr)) or(AB=(eye movement* or emdr)) or(TI=(desensitiz*)) or(AB=(desensitiz*)) or(TI=(cbt*)) or(AB=(cbt*)) or(TI=(dbt*)) or(AB=(dbt*)) or(TI=(therap*)) or(AB=(therap*)))

The SIRC will allow for replication of the search strategy because each search will be recorded. Furthermore, the search strategy will be saved and “copied and pasted” into the review to avoid editing errors.

In addition to CENTRAL and other bibliographic databases noted above, the following sources will also be searched for relevant studies:

Reference lists

Reviewers will check the reference lists of all relevant articles that are obtained, including those from previously published reviews. Potentially relevant articles that are identified will be retrieved and assessed for possible inclusion in the review.

Personal communication

Face-to-face discussions at meetings, emails, requests on list-serves, and formal letters of request for information from authors, presenters and experts will be solicited to assist the review team to locate relevant studies. A list of the inclusion criteria for the review, along with a sample of relevant articles, will be sent to these key informants along with the request for studies. The list of experts to be contact will include principle investigators of eligible studies, program developers, and authors of previous reviews of relevant literature such as Edna Foa, Barbara Rothbaum, Ann Burgess and Patricia Resick

Handsearching journals

Journals relevant to the sexual assault / rape / sexual violence will be hand-searched by researchers who will be trained to conduct handsearching to uncover relevant studies not found by electronic database searches. Specifically, we will hand-search Journal of Traumatic Stress; Journal of Interpersonal Violence; Victims and Offenders; Trauma Abuse and Violence; Violence Against Women; American Journal of Psychiatry; and British Journal of Psychiatry

Grey Literature

Special attention will be made to search and collect relevant studies captured in the grey literature. Specifically, the review will include the following strategies to locate articles: 1) Conference Proceedings; 2) Research Reports; 3) Government Reports; 4) Book Chapters; 5) Dissertations; 6) Policy Documents; 7) Personal Networks; 8) Research Organizations' Web Sites; and 9) National Rape Crisis umbrella organizations. Grey Literature web-based sites will be searched to uncover this unpublished literature, such as Grey.Net (<http://www.greynet.org/index.html>) and GrayLit Network (<http://graylit.osti.gov/>).

Description of methods used in primary research.

Selection of studies

Titles and abstracts of studies yielded by the searches will be screened by two independent reviewers to determine their eligibility for inclusion in the review. To facilitate this screening,

we will use TrialStat's Systematic Review System (SRS) version 3.0, which is an online tool designed to facilitate and accelerate the execution of systematic reviews. This tool, which is being used by several Evidence-based Practice Centres in Canada and the United States, enables rapid generation of forms, virtual collaborative communities, automated management of the progression of studies, and real-time data monitoring and reporting [<http://www.trialstat.com/srs.htm>]. TrialStat! has the advantage of being web-based, where each member of the review team has a secure login and password to enter the program. This allows reviewers to access the program on the world wide web, thus facilitating the ongoing collaboration between C2 Canadian and Nordic partners.

The screening of the studies will be carried out by a three-stage procedure. The screening points will be established in 'level' format whereby each level consists of increasing scrutiny of the studies based on the inclusion and exclusion criteria of the review.

1) Initial Screening (level 1)

The first stage will consist of an initial screening to quickly determine whether a study might be appropriate for the review based on the study's title and abstract. If there is not enough information in the title and abstract to make such decisions, then full text articles will be retrieved. Any disagreements will be resolved by retrieving the full text. The purpose of this initial screen will be to include all possible relevant studies related to the objectives of the systematic review and the inclusion and exclusion criteria. Level one screening will consist of the following questions:

- Does the population consist of adults who have experienced rape and or sexual assault as adults? Yes / No
- Is there an intervention related to rape and or sexual assault experienced by the population included in the study? Yes / No
- Is there a parallel cohort (comparison or control group)?
- Are the outcomes related to distress? Yes / No

2) Strict Screening (level 2)

The second stage will consist of a strict screening process where two reviewers will independently review full copies of articles to determine whether studies should remain in the review based on the inclusion and exclusion criteria. Specific reasons for exclusion at this stage will be documented for each study. Any disagreements will be resolved by a third reviewer.

Level two screening will consist of the following questions:

- Did the study evaluate the intervention administered to adults, 18 years of age or older? Yes / No
- Did the incident(s) of rape or sexual assault occur when the population was 18 years of age or older? Yes / No
- Did the evaluation use an experimental or parallel cohort research design? Yes / No
- Did the study utilize a comparison group which included a no treatment, minimal treatment, alternative treatment, or usual services? Yes / No

3) Data extraction and management (level 3)

The third stage consists of a data extraction form to record data from the articles that have made it past the two previous screenings. The study details will be extracted, using a data extraction sheet, by two independent reviewers (see Appendix 2). Differences between coders will be identified and resolved to ensure consistent extraction and management of the data and to establish inter-rater reliability. Any discrepancies will subsequently be resolved by referral back to the source of the material and conflicts will be resolved by a third reviewer based on the original source. If necessary, we will seek additional information from the original investigators.

Details to be extracted will include:

- 1) Study: information regarding the author(s); year of publication; source; country; and language
- 2) Characteristics of Setting and Participants: eligibility criteria for participants; explanation of recruitment procedures, setting (country, location, clinical/non clinical); demographic features of the sample

- 3) Sampling: sample sizes for treatment and control; whether power analysis was used to determine sample size; allocation to the treatment and control; explanation of method used to generate the allocation
- 4) Research Design: nature of research design
- 5) Intervention Data: nature of interventions (for treatment and comparison/control groups); aim of intervention; length of intervention, whether manuals were used, whether fidelity checks were included, information on possible contamination reported
- 6) Outcome Data: primary and secondary outcomes, measures used, information on reliability/validity of measures
- 7) Results: attrition at post intervention and follow-up; number excluded from the analysis; length of follow-up; statistical methods; type of data effect size is based on; data needed for effect size calculations.

Quality assessment

Two reviewers will independently assign each selected study to quality categories. The assessment of the methodological quality of each study will be based on criteria established in the Cochrane Collaboration Handbook (Higgins, 2005) and will focus on the generation of allocation sequence, degree of allocation concealment, intention to treat, blinding of assessors, attrition, and reporting of the data (see data extraction form).

Criteria for determination of independent findings

The determination of independent findings will be completed using the following procedures: First, studies may have included more than one measure of the distress (i.e., trauma symptoms, post traumatic stress disorder, depression, stress, anxiety); therefore, to ensure statistical independence of study findings, each measure of distress will be analyzed separately. In addition, when different scales and measurement procedures are used to measure sub-classifications of distress such as PTSD, the results of each scale and measurement procedure will be analyzed separately before exploring the possibility of combining the effect sizes as a standardized mean difference (SMD).

Multiple independent effect sizes within a study will only be included only if 1) effect sizes are reported separately by gender; 2) separate effect sizes are available across different study sites within a study.

Multiple outcomes for dependent or overlapping samples (i.e., multiple treatments compared against one control group) will be coded separately. We will randomly select only one effect size for inclusion in the meta-analysis.

For studies that include multiple follow-ups, these will be divided into separate intervals (i.e. effects within 6 months, 6-12, 12-24, more than 24 months) and we will do separate meta-analyses for each separate interval.

All available reports and data will be used in this review. Authors will be requested to provide all reports and the internet will be searched for additional reports (i.e. google). Any discrepancies will be investigated with authors.

Statistical procedures and conventions:

Missing data

In cases where data (e.g., subgroup means and standard deviations, valid Ns) are missing, we will contact the author(s) of the primary studies and try to obtain missing information. Data on excluded subgroups (e.g., program drop-outs) will be sought as well.

Data synthesis

Data synthesis will be conducted using RevMan 4.2.8 and with Comprehensive Meta-analysis 2.0.

For binary outcome data, effect sizes will be calculated as odds ratios (OR) with 95% confidence intervals. Continuous data will be converted into standardized mean differences (SMDs) and presented with 95% confidence intervals. When necessary, we will use formulas suggested by Lipsey and Wilson (2001) to convert correlation coefficients, F ratios, t-values, and chi-square

values into SMDs. Hedges' g will be used to correct for small sample bias. If there are binary and continuous measures of the same outcomes (within or across studies), we will use procedures recommended by Sanchez-Meca and colleagues to convert odds ratios (OR) to d . We will also inspect the data to ensure there is no clear evidence of skewness in the distribution.

We will use unadjusted means whenever possible, unless there is evidence of baseline differences or selection bias. If primary studies only report adjusted results (i.e. regression coefficients or analysis of covariance), we will obtain advice from the C2 methods group on options for handling these effect sizes.

Meta-analysis

The random effects model will be used for pooling results. We assume that there will be unexplained sources of heterogeneity across studies; hence assumptions of the fixed effect model (that all studies provide estimates of a single population effect size) are untenable. Results for randomized experiments and quasi-experimental designs will be pooled and reported separately. As well, results for conceptually-distinct outcomes will be reported separately. If a study reports two separate measures of the same outcome, an average of two or more measures of the same outcome will be utilized. An average score for each group across measures will be computed, pooled sd for each group across measures will be computed, and average scores between groups will be computed. Results of each outcome measure will be reported in a table, but average scores will be reported in the Forest plots.

As indicated in this protocol, two main types of treatment that will be reviewed are psychodynamic psychotherapies and cognitive behavioural approaches. The research literature on the use of psychodynamic and psychotherapy for the treatment of sexual assault and rape is relatively sparse and thus pending a review of the method of treatment utilized, these approaches will be combined in the analysis. Cognitive-behavioural approaches to treatment post-rape and sexual assault have been more widely researched. There is some evidence that a distinction exists between those approaches that incorporate exposure elements and those that do not. That is, those which incorporate exposure have greater exclusion criteria and higher drop out rates

when compared to those using CBT without exposure. Thus, CBT models will be divided on this criteria.

“Sub-group analyses of the effects of the different types of intervention (CBT, psychodynamic) will be conducted with a sufficient number of studies (2 or more) per category. If a study reports more than one modality as part of the intervention, it will be categorized as the most predominant intervention type. In the case of overlapping intervention types (i.e. CBT plus psychodynamic), further sub-group analyses will be conducted. For example, we will look at doing subgroup analyses with the following types of intervention: 1) CBT, 2) psychodynamic, 3) CBT plus psychodynamic.”

We will keep analyses of absolute effects and relative effects separate. Analyses of absolute effects include studies that use no-treatment or wait-list controls. Analyses of relative effects include studies that compare two different treatments. Results will never be pooled across these two types of studies.

Assessment of heterogeneity

Statistical heterogeneity in the outcome measures will be assessed using the Q-statistic and the associated p-value for each analysis and the I² statistic (Higgins, 2002). The I² statistic will determine the percentage of variability that is due to heterogeneity where a value greater than 50% suggests moderate heterogeneity.

Moderator analysis

To the extent possible, methodological and clinical heterogeneity among studies will be explored in terms of variations associated with overall study design (experimental and quasi-experimental designs), participant recruitment (i.e. medical clinics, shelter homes, counselling agencies), baseline characteristics (i.e. age, gender, culture, education, SES), intervention types (psychodynamic, CBT), duration of intervention, setting, country, comparison condition, duration of follow-up, and outcome measures (i.e., different measures of a single outcome). If possible, we will also examine effects of interventions with different subpopulations (by gender, types of victimization, length of victimization). Moderator analysis will be performed using the

ANOVA analog (for categorical moderators) and/or meta-regression (for continuous moderators).

If reported in sufficient studies (i.e. two or more) moderator analyses will be conducted to examine the impact of the following variables as potential moderators on the effectiveness of the intervention: victim sexual orientation, single vs. multiple attackers, additional vulnerabilities (i.e. disability, elderly, health risks), prior history of victimization, combat/military context, and victim demographics (i.e. age, ethnicity, socioeconomic status).

Sensitivity Analysis

Sensitivity analysis will be performed to assess the robustness of conclusions to quality of data and approaches to analysis. Sensitivity analysis will be performed by reanalysis, excluding studies with poor quality indicators (e.g., high attrition, differential attrition, lack of intent-to-treat analysis, lack of controls for baseline differences). Publication and small sample bias will be assessed with graphical inspection of funnel plots, and "trim and fill" methods that estimate treatment effect by adjusting for the number and outcomes of missing studies (Sutton, Duval, Tweedie, Abrams, & Jones, 2000)

Treatment of qualitative research

Qualitative research will not be included in this systematic review.

4. Timelines

Activities	Date of completion
Searches for studies	April 2008
Pilot testing of inclusion criteria	May 2008
Pilot testing of study codes and data collection	June 2008

Extraction of data from research reports	June 2009
Statistical Analysis	July 2009
Preparation of report	September 2009

5. Plans for Updating the Review

Cheryl Regehr, Ramona Alaggia and Michael Saini will be responsible for updating this review. We anticipate that this review will be updated as we accumulate new evidence and/or at least every two years.

6. Acknowledgements

We would like to thank Aron Shlonsky and Faye Mishna for their input on this protocol. We would also like to thank April Mazzuca, MSW student for her contributions.

7. Statement Concerning Conflict of Interest

Although the authors of the review have contributed to research on the topic, they have no vested interest in the treatments that are the subject of this review or in the outcome of the review. The authors also do not have any incentives to represent findings in a biased manner.

8. Additional References

Barnette 2001

Barnette, V. (2001). Resolving PTSD through time limited psychotherapy. *Journal of College Student Psychotherapy*. 16, 27-41.

Bass 1988

Bass, E., & Davis, L. (1988) *The Courage to Heal: A Guide for Women Survivors of Child Sexual Abuse*. New York: Harper & Row.

Bisson 2007

Bisson, J., & Andrew, M. (2007). Psychological treatment of post-traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews*, Issue 3 (Status: *Updated*); Retrieved online at <http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD003388/frame.html>

Bohlerber 2007

Bohlerber, W. (2007). Rememberance, trauma and collective memory: The battle for memory in psychoanalysis. *International Journal of Psychoanalysis*. 88, 329-352.

Boulanger 2002

Boulanger, G. (2002). Wounded by reality: The collapse of self in adult onset trauma. *Contemporary Psychoanalysis*. 38, 45-76.

British Council 2006

British Council (2006). Violence against women a briefing document on international issues and responses. Retrieved online on February 19, 2008 at <http://www.britishcouncil.org/waw.pdf>

Breslau, 1991

Breslau N, Davis GC, Andreski P, Peterson E (1991), Traumatic events and posttraumatic stress disorder in an urban population of young adults. *Arch Gen Psychiatry* 48(3):216-222.

Calhoun 1991

Calhoun, K. & Atkeson, B. (1991). *Treatment of Rape Victims: Facilitating Psychosocial Adjustment*. Toronto: Pergamon Press.

Coker-Appiah 1999

Coker-Appiah, D. & Cusack, K. (eds) (1999) *Breaking the Silence and Challenging the Myths of Violence Against Women and Children in Ghana: Report of a National Study on Violence*, Accra, Gender Studies and Human Rights Documentation Centre. In British Council (2006). Violence against women a briefing document on international issues and responses. Retrieved online on February 19, 2008 at <http://www.britishcouncil.org/waw.pdf>

Connor 1997

Connor, K.M. & Davidson, J. T. (1997). Familial Risk Factors in Posttraumatic Stress Disorder. *Annals of the New York Academy of Sciences* 821 (1) , 35–51

Deville 1999

Deville, G. & Spence, S. (1999). The relative efficacy and treatment distress of EMDR and cognitive behavioural treatment protocol in the amelioration of posttraumatic stress disorder. *Journal of Anxiety Disorders*, 13,131-157.

Ekeland 2004

Ekeland E, Heian F, Hagen KB, Abbott J, Nordheim L (2004). Exercise to improve self-esteem in children and young people. *Systematic Review Campbell Collaboration*. Online at http://www.campbellcollaboration.org/doc-pdf/Ekeland_exerimp_rev.pdf

Evans 1978

Evans, H. (1978) Psychotherapy for the rape victim: Some treatment models. *Hospital and Community Psychiatry*. 29, 309-312.

Foa 1999

Foa, E, Dancu, C., Hembree, E., Jaycox, L., Meadows, E. & Street, G. (1999). A comparison of exposure therapy, stress inoculation training, and their combination for reducing posttraumatic stress disorder in female assault victims. *Journal of Consulting and Clinical Psychology*, 67, 194-200.

Foa 1995

Foa, E., Hearst-Ikeda, D., Perry, K. (1995). Evaluation of a brief cognitive-behavioural program for the prevention of chronic PTSD in recent assault victims. *Journal Consultation and Clinical Psychology*, 63, 948-963

Foa 1997

Foa, E. & Meadows, E. (1997). Psychological treatments for posttraumatic stress disorder: A critical review. *Annual Review of Psychology*, 48, 449-481

Foa 1991

Foa, E., Rothbaum, B., Riggs, D., & Mudock, T. (1991). Treatment of posttraumatic stress disorder in rape victims: A comparison between cognitive-behavioural procedures and counseling. *Journal of Consulting and Clinical Psychology*, 59(5), 715-723.

Foa 1989

Foa, E., Steketee & Rothbaum, (1989). Behavioural/cognitive conceptualizations of posttraumatic stress disorder. *Behaviour Therapy*, 20, 155-176.

Follette 1998

Follette, V. M., Ruzek, J. I., & Abueg, F. R. (1998). *Cognitive-behavioral therapies for trauma*. New York: Guilford.

Fosha 2006

Fosha, D. (2006). Quantum transformation in trauma and treatment: Transversing the crisis of healing change. *Journal of Clinical Psychology*. 62, 569-583.

Foy 2000

Foy, D., Glynn, S., Schnurr, P., Jankowski, M., Wattenberg, M., Weiss, D. et al. (2000). Group therapy. In E. Foa, T. Keane, & M. Friedman (Eds.), *Effective treatments for PTSD: Practice guidelines for the international society for traumatic stress studies* (pp. 155 – 175). New York: Guilford Press.

Friedberg 1997

Friedberg, J. (1997). On surviving rape: A clinical vignette. *International Journal of Communicative Psychoanalysis & Psychotherapy*. 12, 56-59.

Harvey 2003

Harvey, A., Bryant, R. & Tarrier, N. (2003). Cognitive behaviour therapy for posttraumatic stress disorder. *Clinical Psychology Review*. 23, 501-522.

Hembree 2003

Hembree, E. & Foa, E. (2003). Interventions for trauma-related emotional disturbances in adult victims of crime. *Journal of Traumatic Stress*. 16, 187-199.

Herman 1997

Herman, J. L. (1997). *Trauma and Recovery*. New York: Basic Books.

Herman 1992

Herman, J. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress*, 5, 377-391.

Herman 1987

Herman, J. & van der Kolk, B. (1987) Traumatic Antecedents to Borderline Personality Disorder. in ed. B. van der Kolk, *Psychological Trauma*. Washington: American Psychiatric Association Press. pp. 111-126.

Higgins 2005

Higgins, J.T.P., Green S., (2005) *Cochrane handbook for systematic reviews (4.2.5 edition)* Chichester, UK: John Wiley & Sons, Ltd.

Ironson 2002

Ironson, G., Freund, B., Strauss, J. & Williams, J. (2002). Comparison for two treatments for traumatic stress: A community-based study of EMDR and prolonged exposure. *Journal of Clinical Psychology*, 58, 113-128.

Jaycox 2002

Jaycox, L., Zoellner, L. & Foa, E. (2002). Cognitive-behavior therapy for PTSD in rape survivors. *Journal of Clinical Psychology*, 58(8), 891-906.

Kimerling 2002

Kimerling, R., Ouimette, P. & Wolfe, J. (2002). *Gender and PTSD*. New York, NY, Guilford Press

Koss 2004

Koss, M., Figuerdo, A. (2004). Change in cognitive mediators of rape's impact on Psychological health across 2 years of recovery. *Journal of Consulting and Clinical Psychology*, 72(6), 1063-1072.

Lipsey 2001

Lipsey, M.S., Wilson, D.B., (2001) *Practical meta-analysis*. Thousand Oaks, CA: Sage Publications

Lubin 1998

Lubin, H., Loris, M., Burt, J., & Read Johnson, D. (1998). Efficacy of psychoeducational group therapy in reducing symptoms of posttraumatic stress disorder among multiply traumatized women. *American Journal of Psychiatry*, 155. 1172-1177.

Lunden 1996

Lunden, T. & Lotfi, M. (1996). Post Traumatic Stress Disorder in DSM III-R, DSM-IV and ICD-10: a comparison and evaluation of the respective Diagnostic Criteria, *Nordic Journal of Psychiatry*, 50(1) 11-15.

Lundgren 2002

Lundgren, E., Heimer, G., Westerstrand, J. & Kalliokoski, A. M. (2002) *Captured Queen: Men's Violence Against Women in 'Equal' Sweden: a Prevalence Study*, Stockholm, Fritzes Offentliga Publikationer In British Council (2006). Violence against women a briefing document on international issues and responses. Retrieved online on February 19, 2008 at <http://www.britishcouncil.org/waw.pdf>

Marx 2005

Marx, B. (2005). Lessons learned from the last twenty years of sexual violence research *Journal of Interpersonal violence*, 20 (2), 225-230.

McCann 1990

McCann, L. & Pearlman, L. (1990). *Psychological Trauma and the Adult Survivor: Theory, Therapy and Transformation*. New York: Brunner/Mazel.

Myers 1992

Myers Avis, J. (1992). Current trends on feminist thought and therapy: Perspectives on sexual abuse and violence within families in North America. *Journal of Feminist Family Therapy*, 4, ¾, 87-99.

Nishith 2002

Nishith, P, Resick, P. & Griffin, M. (2002). Pattern of change in prolonged exposure and cognitive-processing therapy for female rape victims with posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*, 70(4), 880-886.

Painter 1991

Painter, K. (1991). Wife rape, marriage and law: Survey report, key findings and recommendation, Manchester, Manchester University, Department of Social Policy and Social Work in British Council (2006). Violence against women a briefing document on international issues and responses. Retrieved online on February 19, 2008 at <http://www.britishcouncil.org/waw.pdf>

Pole 2006

Pole, N. & Bloomer-Freeter, P. (2006) Using control mastery therapy to treat major depression and post-traumatic stress disorder. *Clinical Case Studies*. 5, 53-70.

Rauch 2004

Rauch, S., Foa, E., Furr, J. & Filip, J. (2004). Imagery Vividness and Perceived anxious arousal in prolonged exposure treatment for PTSD. *Journal of Traumatic Stress*, 17(6), 461-465.

Resick 1993

Resick, H., Kilpatrick, D., Dansky, B., Saunders, B., Best, C. (1993). Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of Consultation Clinical Psychology*, 61, 984-981.

Resick 2002

Resick, S., Nishith, P., Weaver, T., Astin, M. & Feuer, C. (2002). A comparison of cognitive-processing therapy with prolonged exposure and a waiting condition for the treatment of chronic posttraumatic stress disorder in female rape victims. *Journal of Consulting and Clinical Psychology*, 70, 4. 867-879.

Resick 1992

Resick, P. & Schnicke, M. (1992). Cognitive processing therapy for sexual assault victims. *Journal of Consulting and Clinical Psychology*, 60(5), 748-756.

Resick 1993

Resick, P., & Schnicke, M. (1993). *Cognitive Processing Therapy for Rape Victims*. Newbury Park: Sage Publications.

Rose 1991

Rose, D. (1991). A model for psychodynamic psychotherapy with the rape victim. *Psychotherapy*. 28, 85-95.

Rothbaum 1997

Rothbaum, B. (1997). A controlled study of eye movement desensitization and reprocessing in the treatment of posttraumatic stress disorder sexual assault victims. *Bulletin of the Menninger Clinic*, 61(3), 317-334.

Rothbaum 1992

Rothbaum, B., Foa, E., Riggs, D., Murdock, T., & Walsh, W. (1992). A Prospective Examination of Posttraumatic Stress Disorder in Rape Victims. *Journal of Traumatic Stress*, 60, 748-756.

Rothbaum 2005

Rothbaum, B., Astin, M & Marsteller, F. (2005). Prolonged exposure versus eye movement desensitization and reprocessing (EMDR) for PTSD rape victims. *Journal of Traumatic Stress*, 18(6), 607-616.

Rothbaum 1996

Rothbaum, B., Ninan, P.T., & Thomas, L. (1996). Sertraline in the treatment of rape victims with posttraumatic stress disorder. *Journal of Traumatic Stress*, 9(4), 865-871.

Schottenbauer 2006

Schottenbauer, M., Arnkoff, D., Glass, D. & Gray, s. (2006). Psychotherapists in the community: Reported prototypical psychodynamic treatments for trauma. *Journal of the American Psychoanalytic Association*. 54, 1347-1353.

Solomon 1992

Solomon, J.C. (1992). Child sexual abuse by family members: A radical feminist perspective. *Sex Roles*, 21 (9/10). 473-485.

Solomon 2002

Solomon, S. & Johnson, D. (2002). Psychosocial treatment of posttraumatic stress disorder: A practice friendly review of outcome research. *Psychotherapy in Practice*. 58, 947-959.

Stein 2006

Stein, D.J., Ipser, J.C. and Seedat, S. 2006. Pharmacotherapy for post-traumatic stress disorder (PTSD). *Cochrane Database of Systematic Reviews*, 1: CD002795.

Straker 2002

Straker, G., Watson, D. & Robinson, T. (2002). Trauma and disconnection: A trans-theoretical approach. *International Journal of Psychotherapy*. 7, 145-158.

Sutton 2000

Sutton, A.J., Duval, S.J., Tweedie, R.L., Abrams, K.R., & Jones, D.R. (2000) Empirical assessment of effect of publication bias on meta-analyses. *BMJ*, 320, 1574-1577

Tarrier 1999a

Tarrier, N., Sommerfield, C., Reynolds, M. & Pilgrim, H. (1999a) Symptom self-monitoring in the treatment of Post traumatic stress disorder. *Behaviour Therapy*. 30, 597-605.

Tarrier 1999b

Tarrier, N., Pilgrim, H., Sommerfield, C., Faragher, B., Reynolds, M., Graham, E. & Barrowclough, C. (1999b). A randomized trial of cognitive therapy and imaginal exposure in the treatment of chronic posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology*. 67, 13-18.

Taylor 2003

Taylor, S., Thordarson, D., Maxfield, L., Fedoroff, I., Lovelle, K. & Ogradniczuk, J. (2003). Comparative efficacy, speed, and adverse effects of three PTSD treatments: Exposure therapy, EMDR, and relaxation training. *Journal of Consulting and Clinical Psychology*, 61, 620-630.

Van der Kolk 1994

Van der Kolk, B.A. (1994). The body keeps score: Memory and the evolving psycho-biology of post traumatic stress. *Harvard Review of Psychiatry*, 1, 253-265.

Van der Kolk 1996

Van der Kolk, A. McFarlane & L. Weisaeth (1996). *Traumatic Stress: The Effects of Overwhelming Experience on Mind, Body and Society*. New York: Guilford Press.

Wren 2003

Wren, L. (2003). Trauma: Conscious and unconscious meaning. *Clinical Social Work Journal*. 31, 123-137.

Appendix A - Systematic Information Retrieval Coding Sheet (SIRC)

Project:

Reviewer:

Date(s) of Search:

Search Method: Electronic Database: Name: _____
 Grey Literature: Name: _____
 Other Name: _____

Language(s):

Date Range:

Description of Search:

Search Terms

Population	Intervention	Outcome	MOLES

Search Term Combinations (including all limiters and expanders)	Results

Appendix B - Data Extraction Coding Log ¹
Study Level

Administration
Reference Number (Study identifier) <i>If multiple documents were used to code this study, indicate the supplemental study ID numbers</i>
Cross reference document identifier
Reviewer:
Date(s) of the Review:

Source
Author(s):
Year of Publication:
Title:
Source: <input type="checkbox"/> Book <input type="checkbox"/> Conference Paper <input type="checkbox"/> Peer Review Journal Article <input type="checkbox"/> Non-Peer Review Journal Article <input type="checkbox"/> Dissertation <input type="checkbox"/> Report <input type="checkbox"/> Government Publication <input type="checkbox"/> Other: _____
Search Method: <input type="checkbox"/> Electronic search: <input type="checkbox"/> Hand search: <input type="checkbox"/> Grey Literature: <input type="checkbox"/> Recommendation: <input type="checkbox"/> Other:

Number of different “modules included in the report _____ Is the same control/comparison group used in different modules (1 = Yes; 0 = No)

¹ Adapted from Mitchell, Wilson & MacKenzie (2005)

Treatment – Comparison Contrast Level

Intervention Description
Intervention Description:
<hr/>
Intervention Type:
1. Behavioural Techniques
a. Flooding
b. Systematic Desensitization
c. Eye Movement Desensitization (EMDR);
2) Cognitive Behavioural Therapy
3) Cognitive Therapy
4) Relaxation
5) Rational-Emotive Therapy
6) Group Therapy
7) Hypnosis
8) Family/Couple Therapy
9) Existential Therapy
10) Humanistic Approach
11) Psychodynamic Therapy
12) Other: _____
13) Other: _____
14) Other: _____
In what format or social setting is the treatment delivered:
1. One-on-one
2. Group setting
3. Family setting
4. Internet-based
5. Mixed (any combination of the above)
6. Unclear
Who delivers the treatment?
1. Mental health professional
2. Academic Educator
3. Nonprofessional
4. Other
Length of treatment type in months:
a. Minimum []
b. Maximum []
c. Mean []
d. Fixed (same for all subjects []
Length of follow-up program component (in weeks) []

Details of the intended treatment type included:

1 = Yes; 0= No

Details on the implementation of the treatment type included:

1 = Yes; 0= No

Manuals used for implementation of the treatment type:

1 = Yes; 0= No

Fidelity checklist used for the implementation of the treatment type:

1 = Yes; 0= No

Describe the program for the comparison group if other than no treatment or treatment as usual:

What happens to the comparison group?

- No treatment
- Waiting list (treatment begins at post)
- Waiting list (treatment begins at follow-up)
- Waiting list (treatment begins after study)
- Minimal treatment
- Alternate treatment

Where is the comparison drawn from:

Methodological Rigor

Use of control variables in statistical analyses to account for initial group differences (1 = Yes; 0= No)

Use of random assignment to conditions (1= Yes; 0= No)

If not random assignment, use of subject level matching (1= Yes; 0= No)

Matching variable(s) appropriate (1=Yes; 0=No)

Measurement of distress (1= Yes; 0= No)

Rating of initial group similarity (7 = highly similar; 1= dissimilar)

Anchors: 7 Randomized design or matching
 5 Nonrandomized design with strong evidence of initial equivalence
 1 Nonrandomized design, comparison group highly likely to be different or known different that are related to distress.

Was attrition discussed in the study reported? (1= Yes; 0= No)

Quality Assessment

a) Concealment of allocation

- ADEQUATE: indicates adequate concealment of the allocation (for example, by telephone randomisation, or use of consecutively numbered, sealed, opaque envelopes)
- UNCLEAR: indicates uncertainty about whether the allocation was adequately concealed (for example, where the method of concealment is not known);
- INADEQUATE: indicates that the allocation was definitely not adequately concealed (for example, open random number lists or quasi-randomization such as alternate days, odd/even date of birth, or hospital number).

b) Outcome assessment

- MET: assessor unaware of the assigned treatment when collecting outcome measures
- UNCLEAR: blinding of assessor not reported and cannot be verified by contacting investigators
- NOT MET: assessor aware of the assigned treatment when collecting outcome measures.

c) Co-intervention

- MET: interventions other than exercise avoided, controlled or used similarly across comparison groups.
- UNCLEAR: use of interventions other than exercise not reported and cannot be verified by contacting the investigators
- NOT MET: dissimilar use of interventions other than exercise across comparison groups, i. e. differences in the care provided to the participants in the comparison groups other than the intervention under investigation.

d) Losses to follow-up

- MET: losses to follow up less than 20% and equally distributed between comparison groups
- UNCLEAR: losses to follow up not reported
- NOT MET: losses to follow up greater than 20%.

e) Intention-to-treat

- MET: intention to treat analysis performed or possible with data provided
- UNCLEAR: intention to treat not reported, and cannot be verified by contacting the investigators
- NOT MET: intention to treat analyses not done and not possible for reviewers to calculate independently.

(Adapted from Ekeland, Heian, Hagen, Abbott, & Nordheim 2004)

Note: Studies will be categorized in one of three groups: 1) low risk of bias (all criteria MET); 2) moderate risk of bias (3-4 criteria MET); 3) and high risk of bias (less than 3 criteria MET) .

Sample Level Coding Sheet

Characteristics of Setting and Participants
Sample Description: Sample description treatment group: Sample description comparison group
Explanation of recruitment procedures:
Are the subjects included in the study clearly defined in terms of demographic features (age, sex, ethnicity, presence/absence of condition for eligibility criteria)? Yes <input type="checkbox"/> No <input type="checkbox"/> Not Clear <input type="checkbox"/>
Population Characteristics: Comment:

Sampling	
Total number of individuals at beginning of the study:	
Treatment Group	N=
Control Group	N=
Total Sample	N=
Use of power analysis to determine sample size:	
Yes <input type="checkbox"/> No <input type="checkbox"/> Not Clear <input type="checkbox"/>	

Outcome Level Code Sheet

Outcome Data
Outcome indicator of distress:
1 Trauma
2 PTSD
3 Depression
4. Anxiety
Outcome measures relevant to goals of intervention
Yes <input type="checkbox"/> No <input type="checkbox"/> Not Clear <input type="checkbox"/>
Explanation of measurement instrument and information regarding reliability and validity
Yes <input type="checkbox"/> No <input type="checkbox"/> Not Clear <input type="checkbox"/>
Outcomes
Outcome: _____
Instrument: _____
Type of measurement scale
(1=Dichotomy; 2= Tricotomy; 3= 4-9 discrete ordinal categories; 4= >9 discrete ordinal categories or continuous
Source of data
(1=self-report; 2= other report (teacher, parent), 3= official report, 4= other, 5=unclear
Is this a valid and reasonable measure of distress? (1 = questionable; 2= acceptable)

Effect Size Level Code Sheet

Data Reported
<p><u>Identifying Information</u></p> <p>Study identifier []</p> <p>Module identifier []</p> <p>Sample identifier []</p> <p>Outcome identifier []</p> <p>Effect size identifier (number each effect size within a study sequentially) []</p> <p>Pages where data are found</p>
<p>Effect Size Information</p> <p>Effect size type</p> <ol style="list-style-type: none">1. Baseline (pretest; prior to start of intervention)2. Post-test (first measurement point post intervention)3. Follow-up (all subsequent measurement points, post intervention) <p>Time frame in months captured by measure</p> <ol style="list-style-type: none">a. Minimum []b. Maximum []c. Mean []d. Fixed [] <p>Effect Size Data</p> <p>Treatment group sample size for this effect size []</p> <p>Comparison group sample size for this effect size []</p> <p>Treatment group mean (indicate decimal points [])</p> <p>Comparison group mean (indicate decimal points [])</p> <p>Are the above means adjusted? (1=Yes; 0=No)</p> <p>Treatment group standard deviation []</p> <p>Comparison group standard deviation []</p>

t-value from an independent t-test or square root of F-value from a one-way analysis of variance with one df in the numerator (only two groups) []

Exact probability for a t-value from an independent t-test or square root of F-value from a one-way analysis of variance with one df in the numerator (only two groups) []

Chi-square value with df = 1 (2 by 2 contingency table) []

Correlation coefficient (point biserial) []

Correlation coefficient (phi) []

Computer Calculated ES []

Hand Calculated ES []

Hand Calculated SE of ES []

Additional Comments