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Randomized Trial of Cognitive–Behavioral Therapy for Chronic Posttraumatic Stress Disorder in Adult Female Survivors of Childhood Sexual Abuse

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The authors conducted a randomized clinical trial of individual psychotherapy for women with posttraumatic stress disorder (PTSD) related to childhood sexual abuse (n = 74), comparing cognitive–behavioral therapy (CBT) with a problem-solving therapy (present-centered therapy; PCT) and to a wait-list (WL). The authors hypothesized that CBT would be more effective than PCT and WL in decreasing PTSD and related symptoms. CBT participants were significantly more likely than PCT participants to no longer meet criteria for a PTSD diagnosis at follow-up assessments. CBT and PCT were superior to WL in decreasing PTSD symptoms and secondary measures. CBT had a significantly greater dropout rate than PCT and WL. Both CBT and PCT were associated with sustained symptom reduction in this sample.

Keywords: posttraumatic stress disorder, childhood sexual abuse, psychotherapy, randomized clinical trial

Positive results of several controlled trials have demonstrated the efficacy of individual cognitive–behavioral therapy (CBT) for men with combat-related posttraumatic stress disorder (PTSD; Boudewyns & Hyer, 1990; Cooper & Clum, 1989; Keane, Fairbank, Caddell, & Zimering, 1989), women with PTSD secondary to rape (Foa et al., 1999; Foa, Rothbaum, Riggs, & Murdock, 1991; Resick et al., 2002; Resick & Schnicke, 1992), women with PTSD related to sexual and nonsexual assaults (Foa et al., 1999),

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and men and women with PTSD related to various traumas (Blanchard et al., 2003; Marks, Lovell, Noshirvani, Livanou, & Sian, 1998; Tarrier, Pilgrim, et al., 1999; Tarrier, Sommerfield, Pilgrim, & Humphreys, 1999). Despite a rich clinical literature (e.g., Briere & Runtz, 1986, 1993; Briere, Woo, McRae, Foltz, & Sitzman, 1997; Courtois, 2000; Herman, 1981, 1992), the evidence base regarding the treatment of survivors of childhood sexual abuse (CSA) with PTSD is quite limited. Nevertheless, CSA is a common occurrence that is strongly associated with the development of PTSD (e.g., Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Lawrence, Cozolino, & Foy, 1995; Saunders, Villeponteaux, Lipovsky, Kilpatrick, & Veronen, 1992). Among adult, female CSA survivors, one randomized trial that used wait-list (WL) controls has provided preliminary evidence of efficacy for imaginal exposure preceded by affect-regulation and interpersonal-effectiveness skills training (Cloitre, Koenen, Cohen, & Han, 2002).

To our knowledge, this is the first report of a randomized clinical trial with a sample of women with PTSD secondary to CSA (PTSD–CSA) in which individual CBT (involving prolonged imaginal exposure [PE], in vivo exposure, and cognitive restructuring [CR]) was compared with a present-centered therapy (PCT)—which specifically excluded CBT interventions while focusing on here-and-now problem solving—and a WL control group. We chose to use the problem-solving, present-centered approach as our comparison condition for several reasons. First, we wanted a treatment that did not include exposure to trauma reminders, because that was a key component of the CBT. However, we did want the condition to provide active treatment of current life problems, not a nonspecific supportive counseling. We felt it was important that both treatments have a reasonable rationale that both therapists and clients could endorse. Problem-solving therapy has demonstrated efficacy in samples of depressed people (D'Zurilla & Nezu, 1982; Nezu, 1986, 1987; Nezu, Nezu, & Perri, 1989; Nezu & Perri, 1989), and we expected that it might be of some help to people with PTSD who frequently have difficulty with coping and problem-solving (Amir et al., 1997; Briere & Elliott, 1994; Elhai, Frueh, Gold, Gold, & Hamner, 2000; Johnson, Sheahan, & Chard, 2003; Nezu & Carnevale, 1987; Spaccarelli, 1994). However, because such a present-centered approach does not focus specifically on the trauma history or the PTSD symptoms and does not have an evidence base for effectiveness in PTSD, we hypothesized that CBT would be more effective than both PCT and WL in (a) reducing interviewer-rated PTSD symptoms; (b) reducing self-reported depressive, anxiety, dissociative, and anger symptoms, as well as cognitive distortions; and (c) improving quality of life.[1]

Method

Participants

Participants were 74 women with histories of CSA who met *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM–IV*; American Psychiatric Association, 1994) criteria for PTSD as assessed by the Clinician Administered PTSD Scale (CAPS; Weathers, Keane, & Davidson, 2001). CSA was defined as meeting one of the following definitions: any sexual contact (including caressing, fondling, or stimulating the genitalia of a child; having the child stimulate the perpetrator's genitalia; and/or oral, anal, or vaginal rape) occurring with anyone 5 or more years older when the study participant was under the age of 16 years (modified from Briere's, 1984, study). To be included in the study, at least some of the participants' intrusive and avoidance symptoms of PTSD had to be clearly related to the history of CSA. In addition, all women had to have at least one clear, detailed memory of the CSA that could later be used during exposure sessions in the event of assignment to CBT.

Exclusion criteria for the study were as follows: (a) use of medication with significant autonomic nervous system effects (e.g., clonidine, beta blockers, or calcium-channel blockers); (b) pregnancy; (c) known cardiovascular disease; (d) hypertension severe enough to require medication; (e) current diagnosis of mania, hypomania, schizophrenia, schizoaffective disorder, schizophreniform disorder, brief reactive psychosis, psychotic disorder not otherwise specified, dissociative identity disorder, any organic psychiatric disorder, depression severe enough to require acute psychiatric treatment, bipolar depression, or depression accompanied by delusions, hallucinations, or bizarre behavior; (f) current alcohol or drug abuse; (g) withdrawal from benzodiazepines, alcohol, heroin, or other opiates any time during the 3 months prior to consideration for entry into the study; (h) presence of active suicidality or a history of two or more suicide gestures or attempts in the preceding year; and (i) presence of a relationship with an abusive partner. No personality disorder was an exclusion criteria, and 10.8% of the sample met criteria for borderline personality disorder (13.8% of the CBT group, 9.1% of the PCT group, 8.7% of the WL group). All of the 4 women with borderline personality disorder randomized to CBT subsequently dropped out of treatment, whereas none of the 4 women randomized to the other two groups did so. Eligibility for the study was determined after a screening interview, followed by evaluation with the Structured Clinical Interview for *DSM–IV* (SCID; Spitzer, Williams, Gibbon, & First, 1994), the Evaluation of Lifetime Stressors (ELS; Krinsley et al., 1994), and the CAPS (Weathers et al., 2001).

Of the 248 women who were screened, 74 gave informed consent and were randomized to one of the three study groups. The remaining 174 women who received extensive information about the study and were screened were not randomized to treatment for the following reasons: (a) did not meet PTSD criteria (n = 14); (b) did not meet CSA criteria (n = 21); (c) did not want to suspend current therapy (n = 21); (d) were unable or unwilling to participate because of time, logistic problems, or current stressors (n = 62); (e) met exclusion criteria that were psychiatric diagnoses (i.e., mania, hypomania, severe depression, dissociative identity disorder, psychotic disorder, or an organic psychiatric disorder; n = 17); and (f) met other exclusion criteria (i.e., substance abuse [n = 2]; used benzodiazepines [n = 2]; were experiencing domestic violence [n = 4]; were either pregnant or planning a pregnancy [n = 7]; were medicated for significant cardiovascular problems [n = 7]; or were lost to follow-up [n = 17]).

Table 1 contains demographic information and trauma history characteristics of the final randomized sample. On average, the study participants were middle-aged, well-educated, employed, and exposed to multiple traumas in both childhood and adulthood. There were no differences among the three groups on any study measures or demographic characteristics ($ps > .05$).

Measures

Interview measures. The CAPS (Weathers et al., 2001) provides a standardized method for making current and lifetime *DSM–IV* diagnosis of PTSD. The scale also measures the intensity and frequency of the 17 individual PTSD symptoms. Frequency ratings range from 0 (*never*) to 4 (*daily or almost every day*), and intensity scores range from 0 (*none*) to 4

[1] We also collected neurobiological and psychophysiological measures known to be correlates of PTSD at each assessment point. Hypotheses, procedures, and results related to those measures are described in separate reports.

Table 1
Demographic and Trauma History Characteristics After Randomization

Variable	CBT	PCT	WL
Group size	29	22	23
Age (*M, SD*)	39.8(9.9)	39.6(9.6)	42(9.8)
Race (%)			
White	90.0	95.0	96.0
African American	0.0	5.0	0.0
Native American	10.0	0.0	0.0
Other	0.0	0.0	4.0
Married (%)	59.0	41.0	52.0
Employed (%)	76.0	91.0	83.0
Annual income = $20,000 or higher (%)	58.0	50.0	70.0
High school diploma or higher (%)	79.3	90.9	69.6
In therapy	17.0	23.0	0.0
Trauma history			
Childhood physical abuse (%)	82.8	81.8	73.9
Adult physical abuse (%)	58.6	68.2	60.9
Adult sexual trauma (%)	44.8	63.6	43.5
Number of trauma types (*M, SD*)	3.3(1.0)	3.1(1.3)	3.4(0.9)
CSA characteristics			
Experienced life threat (%)	34.5	5.0	26.1
Injured (%)	41.4	31.8	27.3
Penetrated (%)	72.4	59.1	56.5
Age of onset (*M, SD*)	6.1(2.0)	7.6(2.8)	6.1(2.9)
Perpetrator—worst CSA event (%)			
Father or stepfather	24.1	31.8	43.5
Other male relative	41.4	40.9	21.7
Known male	34.5	22.7	34.8
Male stranger	0.0	4.5	0.0

Note. CBT = cognitive–behavioral therapy; PCT = present-centered therapy; WL = wait-list; CSA = childhood sexual abuse.

(*extreme distress*). The index trauma for assessment of PTSD was a CSA experience. For making the categorical diagnosis of PTSD, a symptom was considered present if the frequency score was at least 1 and intensity score was at least 2. For a total severity score, all frequency and intensity ratings were added. In addition to ensuring that referrals met diagnostic criteria for PTSD at intake, the CAPS was the primary outcome measure for this study. Total scores ranged from 0 to 136. Interrater reliability for CAPS PTSD diagnosis was good (κ = .66), and the interrater reliability for PTSD severity score was excellent (intraclass correlation = .98), on the basis of the review of 56.4% of the interviews by Julian Ford.

The SCID (Spitzer et al., 1994), which is a semistructured interview, was used to diagnose coexisting Axis I disorders—some of which were exclusion criteria—and coexisting Axis II disorders. The SCID also includes a measure of global functioning. The CAPS replaced the PTSD module of the SCID.

We used the interview version of the ELS (Krinsley et al., 1994) to assess trauma history. The ELS covers a wide range of traumatic experiences, both in childhood and adulthood, and is particularly sensitive to the problems of assessment concerning sexual and physical abuse. Specifically, it asks questions and gives examples of each type of trauma, rather than simply asking whether the interviewee ever experienced a category of trauma. For example, for adult physical abuse, questions are associated with being choked, hit, punched, burned, and so forth. Test–retest reliability, construct validity, and convergent validity are satisfactory (Corcoran, Green, Goodman, & Krinsley, 2000).

Self-report measures. The Beck Depression Inventory (Beck, Steer, & Garbing, 1988) is a 21-item measure of depression. Each item is rated from 0 (*least*) to 3 (*most*) to indicate intensity, and item scores are added to give a severity score, with totals ranging from 0 to 63.

The Spielberger State–Trait Anxiety Inventory (STAI; Spielberger, Gorusch, & Lushene, 1970) contains 40 items: 20 for state anxiety and 20 for trait anxiety. We only measured state anxiety, because we did not expect a stable characteristic like trait anxiety to respond to a brief intervention. A 4-point Likert scale ranging from 1 (*almost never*) to 4 (*almost always*) is used to measure anxiety symptoms; thus, scores range from 20 to 80 on each subscale.

The Traumatic Stress Institute Beliefs Scale (TSI; Pearlman, 2001) is a 90-item measure of disruptions in beliefs about self and others that arise from psychological trauma. The participant uses a 6-point Likert scale ranging from 1 (*disagree strongly*) to 6 (*agree strongly*) to endorse the degree to which she agrees with each statement. Scores obtained include a total score (a higher score indicating more disruption) and 10 subscale scores (item averages) indicating relative disruptions in the five need–schema areas both in terms of self and of others. These areas are safety, trust, esteem, intimacy, and control.

The Dissociative Experiences Scale (Carlson et al., 1993) assesses the presence of dissociative symptomatology. The scale consists of a series of 28 statements about dissociative behavior, with a visual analog scale to indicate the percentage of time that each item is experienced. The score is a mean of the percentages endorsed.

The Cook–Medley Hostility Scale (Cook & Medley, 1954) is a 50-item scale derived from the Minnesota Multiphasic Personality Inventory. Participants are instructed to read each statement and decide whether it is true or false as applied to their situation. Scores are sums of endorsed items.

The State–Trait Anger Expression Inventory (STAXI; Spielberger, 1988) is a 44-item scale that is used to assess state and trait anger with a 4-point Likert scale ranging from 1 (*almost never*) to 4 (*almost always*).

The Quality of Life Inventory (QOLI; Frisch, Cornell, Villanueva, & Retzlaff, 1992) consists of 17 items assessing quality of life in multiple domains. Participants rate each domain for importance on a scale ranging from 0 (*not at all important*) to 2 (*extremely important*), and they rate each domain for satisfaction on a scale ranging from −3 (*very dissatisfied*) to 3 (*very satisfied*). The product of the satisfaction and importance rating for each area is computed, and overall quality of life is obtained by averaging all the weighted scores that are nonzero.

Procedure

Women still interested in and eligible for the study after the initial telephone screening came for an interview during which they completed an informed consent discussion with one of the three female clinician investigators, all of whom were experienced in working with trauma survivors. The women who consented to participate then completed an in-depth screening interview that covered all inclusion and exclusion criteria. Those still eligible after this screening interview were scheduled for assessment with the CAPS, SCID I and II, and ELS, respectively, in three separate appointments. All of these interviews were tape-recorded. The participants completed the self-report questionnaires at the time of the CAPS interview.

The SCID and ELS interviews were conducted by one of the three female clinician investigators who was also responsible for conducting the in-depth screening interviews. A separate group of female clinicians, who were blind to treatment condition and who had no other role in the study conducted the four CAPS interviews.

Following the initial laboratory evaluation, women were randomly assigned to one of the following three conditions for 14 weeks: CBT, PCT, or WL. When it became clear that the dropout rate was greater for CBT, we changed the random assignment process to increase the chance of assignment to CBT. If assigned to WL, then the participant was encouraged to call as needed, and a study clinician routinely made contact with participants within a few days of randomization. WL participants were encouraged to seek additional phone contact as needed during the 14 weeks, and we also offered to help them seek treatment as usual in the community, but none requested such help.

Reassessment occurred immediately following the end of treatment, then again at 3-month and 6-month posttherapy. For the WL, only pre-WL and post-WL data were obtained. All WL participants were given their choice of CBT or PCT treatment provided by study therapists, following the WL period. All participants were paid $50.00 for the pretreament, posttreatment, and 6-month follow-up assessments. They were only paid $25.00 for the 3-month follow-up assessment, because this session did not involve a psychophysiological assessment.

Treatment

Both the CBT and PCT treatments were operationalized in manuals and conducted in 14 individual sessions, the first 7 of which were 2 hr long, and the final 7 of which were 1.5 hr long. Longer than 1-hr sessions were used because we wanted to have adequate time for attenuation of anxiety during exposure sessions. Because that often takes longer early in treatment compared with later, later sessions can be shorter. PCT sessions were made the same length to have equal doses of therapy time in both conditions. The sessions occurred approximately once a week but sometimes less frequently. The average number of weeks for completion of CBT was 17.5 (SD = 3.2) and for completion of PCT was 19.5 (SD = 3.8). After extensive training and with ongoing supervision, separate pools of therapists provided CBT or PCT treatment. All therapists were female clinicians experienced in conducting therapy with trauma survivors. Three psychologists, all of whom had prior training in CBT, received training on implementation of the CBT manual from Edna Foa and members of her staff. Three clinical social workers with master's degrees received PCT training from the authors of that manual (Annmarie McDonagh, Christine Carney Demment, and Julian Ford). All therapy sessions were recorded and later reviewed by an expert in the treatment (Christine Carney Demment for PCT; Kim Mueser and Elizabeth Hembree for CBT) who provided weekly group supervision. At the start of the study, therapists in the CBT condition had 1, 3, and 5, years, respectively, of experience providing individual psychotherapy to trauma survivors, and all had delivered manualized treatments previously. The therapists in the PCT condition had 1, 8, and 21 years of experience, respectively, and none had delivered protocol treatments previously.

CBT. CBT was a modified version of the treatment developed by Foa et al., 1999. Its primary components were PE, in vivo exposure, and CR. Imaginal exposure began in Session 4 and involved (a) calling to mind the traumatic event with as much vividness as possible, (b) recounting the memory in the present tense to the therapist, preferably with eyes closed, and (c) repeatedly going over the memory until the distress decreased. After several recountings, therapists began to help participants focus on the most distressing aspects of the memories, referred to as *hot spots*. As noted earlier, this was predominantly a multiply traumatized sample, most of whom had experienced traumas during adulthood as well as during childhood. In creating a hierarchy of memories to address, the most distressing CSA experience took precedence, and only after habituation of anxiety to that memory occurred—as determined by decreases in subjective distress to the memory—did the participant move to the next most distressing memory, which may or may not have been another CSA trauma memory. Distress to the remaining memories was reassessed after completing exposure treatment for each memory. For the in vivo exposure, therapists helped each participant create a hierarchy of avoided, but likely to be safe, situations to approach between sessions. CR involved teaching and reinforcing self-monitoring of thoughts and emotions, identifying automatic thoughts that accompany distressing emotions, learning about different types of cognitive distortions, and working to dispute the distress-enhancing cognitions, with a particular focus on abuse-related cognitions, for which the therapist remained alert during the PE work. CR followed PE during Sessions 4–14.

In addition to the CR and exposure interventions, therapists provided psychoeducation, both about PTSD and the rationale for therapy techniques, and taught the use of breathing retraining. Homework involved each of the components of treatment following their introduction during sessions. All imaginal exposure sessions were audiotaped and homework included daily review of those tapes. The last session included review of the participant's progress, discussion of therapy termination, and assessment of the need for referrals for other problems.

PCT. PCT was designed to describe an active therapeutic intervention that non-CBT clinicians might use in the treatment of PTSD–CSA. It is a collaborative therapeutic intervention in which the therapist's information and expertise are used to assist the client in addressing current life difficulties. It does so by helping the client to recognize the impact of her trauma history on her present coping style and by teaching her a systematic approach to problem solving to enhance coping (DeShazer et al., 1986; D'Zurilla & Goldfried, 1971; Nezu et al., 1989). The main elements of PCT are psychoeducation about the diagnosis of PTSD and the common aftereffects of childhood trauma, training in problem solving, and journal writing.

PCT was specifically designed to omit the hypothesized active ingredients of CBT (breathing retraining, PE, in vivo exposure, and CR). Although the role of trauma was acknowledged in assessing current difficulties, the trauma itself was never the focus of the treatment. PCT was also designed to administer a similar dose of therapy to CBT, both in terms of session number and length and between-sessions homework time.

The first two sessions of PCT were spent establishing rapport, giving an overview of the treatment, presenting the psychoeducational material, and establishing a treatment plan based on the client's choices of problems to address. The framework used to assist in understanding the ways in which CSA trauma can impact the client's current life was that of traumagenic dynamics. Traumagenic dynamics organizes the consequences of the experience of CSA into four categories—a sense of betrayal, powerlessness, stigmatization, and traumatic sexualization (Finkelhor, 1987). Clients were guided in noticing these dynamics in current life difficulties and factoring them in as information in the problem-solving model. The problem-solving model was a modification of systematic problem solving, which has demonstrated efficacy in the treatment of depression (DeShazer et al., 1986; D'Zurilla & Goldfried, 1971; Nezu et al., 1989). Therapists were encouraged to provide empathy, unconditional regard, and genuineness in their sessions (Meador & Rogers, 1973). The foci of subsequent sessions were determined by the participants' choice of current issues to address with the problem-solving skills. Homework was designed to assist clients in consolidating the information conveyed in sessions, writing about their problem solving efforts and, tracking those efforts in a journal to be reviewed with the therapist. A full description of PCT is available in the therapy manual.

WL. Participants assigned to the WL were told that they could receive their choice of the two treatments in about 14 weeks, after completing the post-WL assessment.

Treatment adherence. Adherence to CBT or PCT was measured by experienced clinicians who watched selected videotapes of therapy sessions and rated each session for the presence or absence of particular therapeutic interventions using a form that listed all required, unacceptable, and overlapping interventions for both treatments. The raters received a manual and were trained to rate treatment adherence by one of the study investigators (Annmarie McDonagh) who also completed some of the ratings. Raters assessed treatment adherence by reviewing 3–4 tapes selected at random for each treatment completer. For each participant, a second rater rated one session to evaluate interrater reliability. Scores were obtained by giving credit to a therapist for using an intervention that was required by the treatment and for not using an intervention that was unique to the other condition; the sum of those scores were then divided by the total number of items. For both CBT and PCT, adherence was excellent at 87.80% (SD = 7.19) and 88.50% (SD = 6.96), respectively. Interrater reliability was good (κ = .80).

Data Analysis

Univariate analyses were performed with a t test or chi-square test. We used analyses of variance to examine equivalence of treatment groups at baseline. Both pretherapy to posttherapy, as well as posttherapy to 3- and 6-month follow-up analyses, were conducted with the generalized linear models repeated measures procedure in SPSS. This procedure conducts analysis of variance when the same measurement is made several times on each participant. Treatment is the between-subjects factor, and time is the within-subjects factor. If the overall F test for the interaction between group and time was significant, we then used post hoc analyses (Tukey) to examine pairwise differences between groups. We first conducted intention to treat analyses using data on all who were randomized to treatment. These analyses were of necessity very conservative ones, because we lacked postdropout assessments. Therefore, admission data were carried forward to subsequent assessment points for participants who dropped out of treatment. We then repeated these analyses, including data from only those who completed therapy.

Results

Baseline Analyses

The dropout rate for the study was 23%, with a rate of 41% (12 of 29) for CBT, 9% (2 of 22) for PCT, and 13% (3 of 23) for WL, which was a statistically significant difference, $\chi^2(2, N = 74) = 9.23, p < .02$. Among the CBT therapists, when we excluded data on the one therapist who only treated two clients, one of whom dropped out, there was not a significant difference in dropout rate: Therapist 1: 29% (5 of 17), Therapist 2: 60% (6 of 10), $\chi^2(2, N = 27) = 2.44$. The therapist with the dropout rate of 29% was the therapist with only 1 year of experience prior to the start of the study.

Analysis of the trauma measures that compared participants who completed the study with those who dropped out revealed differences in the frequency of childhood physical abuse (Fisher's exact test, $p < .02$), perceived threat during the worst CSA event, $\chi^2(1, N = 74) = 4.63, p < .05$, and physical injury during the worst CSA event, $\chi^2(1, N = 74) = 5.94, p < .02$, with the dropout group having higher scores on all of these variables than the completer group.

PTSD severity (CAPS) did not differ between CBT dropouts and completers, but there were statistically significant differences on all other psychometric measures. Participants who dropped out of CBT endorsed more depression and greater anxiety, reported lower quality of life, and endorsed more distorted schemas on the TSI than those who stayed in treatment.

Comparing the three treatment group completers on baseline measures revealed no significant difference, with the exception of distorted cognitions (TSI), $F(2, 54) = 3.79, p < .05$. Post hoc analysis revealed participants who completed CBT had lower average scores on the TSI, indicating less distorted cognitions compared with the WL group.

Immediate Effects of Treatment

In addition to providing a PTSD severity score, the primary outcome measure (the CAPS) also provides diagnostic status. In the posttreatment intention-to-treat analysis, 27.6% of the participants in CBT, 31.8% in PCT, and 17.4% on the WL no longer met criteria for PTSD, $\chi^2(2, N = 74) = 1.32$, *ns*. In the completer analysis, 47.1% of the participants in CBT, 35.0% in PCT, and 20.0% on the WL no longer met diagnostic criteria for PTSD diagnosis, $\chi^2(2, N = 57) = 3.07$, *ns*.

The intention-to-treat analyses (see Table 2) revealed a significant Group × Time interaction for the measure of trauma-related cognitive distortion (TSI). The Group × Time interaction was not significant on the measures of PTSD severity, depression, anxiety, dissociation, hostility, anger, or quality of life. Post hoc analysis showed that the significant difference on TSI was between PCT and WL, with PCT reporting more improvement in cognitive distortions (TSI).

In the completer analyses (see Table 3), we found significant Group × Time interactions for the CAPS, STAI, and TSI, and no significant differences on the Beck Depression Inventory, Dissociative Experiences Scale, Cook–Medley Hostility Scale, STAXI, or QOLI. Post hoc analysis of the TSI and CAPS scores revealed that both treatment groups improved significantly compared with the WL but did not differ from each other. Post hoc analysis of STAI scores showed a significant difference between CBT and WL in the expected direction.

Follow-Up Analyses

To assess the long-term effects of treatment, we conducted repeated measures analyses of variance (at posttreatment, 3 months, and 6 months) on all outcome measures for the two treatment groups (see Table 4). There are no WL data for these follow-up comparisons because all WL participants were given their choice of treatment following the WL period. In the completer analysis, at the 3-month follow-up, 82.4% of the participants in CBT and 42.1% in PCT no longer met criteria for PTSD, $\chi^2(1, N = 36) = 6.12, p < .01$. At 6-month follow-up, 76.5% of the participants in CBT and 42.1% in PCT had no PTSD diagnosis, $\chi^2(1, N = 36) = 4.36, p < .05$. For completers, we found significant effects for time on the measures of anxiety (STAI) and quality of life (QOLI), reflecting improvement by both CBT and PCT participants, but we did not find any significant Group × Time interaction on those or any other measures.

To summarize treatment effects, we examined effect sizes (Cohen's d statistic) for the CAPS severity score, comparing the two treatment conditions with each other and to the WL (see Table 5). The effect size for CBT versus PCT on the CAPS favored PCT in the intent-to-treat sample and CBT in the completer sample at posttest, although both were small (<0.30) effects (Cohen, 1988). At follow-up, CBT was associated with greater reductions in CAPS scores than PCT, with medium effect sizes (Cohen, 1988). The effect sizes on the CAPS that compared CBT or PCT versus WL in the intent-to-treat sample at posttest ranged from medium (0.50) to large (0.89–1.07), supporting the superiority of both active treatments compared with WL. On measures of anxiety, depression, dissociation, anger, hostility, and cognitive distortions, CBT was comparable with PCT at all posttherapy assessments, with generally small ($Mdn = 0.32$) effect sizes, and CBT and PCT each was superior to WL at posttest with medium-to-large ($Mdn = 0.87$) effect sizes (except one small effect for PCT on the STAXI).

Discussion

As expected, and consistent with three prior studies, our hypothesis that CBT would be more effective than WL received consis-

Table 2
Group Means (and Standard Deviations) on Main Outcome Measures Before and After Treatment for the Intention-To-Treat Study Groups

	CBT (n = 29)		PCT (n = 22)		WL (n = 23)		
Measure	Pretherapy	Posttherapy	Pretherapy	Posttherapy	Pretherapy	Posttherapy	F(Group × Time)
CAPS							
M	69.9	53.1	67.7	47.2	72.0	65.5	$F(2, 71) = 2.55$**
SD	16.8	28.8	14.6	22.4	17.6	18.6	
BDI							
M	18.9	12.9	17.0	10.8	20.9	19.0	$F(2, 71) = 1.80$*
SD	9.6	12.5	7.7	9.5	7.8	11.3	
STAI							
M	53.5	46.2	54.5	46.4	54.6	51.5	$F(2, 71) = 2.50$**
SD	10.4	13.9	9.2	12.2	9.6	9.7	
TSI							
M	3.1	2.7	2.9	2.4	3.2	3.1	$F(2, 71) = 3.38$***
SD	0.6	0.8	0.5	0.6	0.6	0.6	
DES							
M	16.5	12.4	19.0	11.5	9.4	15.2	$F(2, 71) = 0.39$*
SD	13.7	8.3	16.4	11.7	8.1	14.4	
COOK							
M	20.9	21.6	22.8	17.1	16.2	18.8	$F(2, 71) = 0.48$*
SD	7.9	8.0	10.4	8.4	8.2	9.2	
STAXI							
M	14.6	13.5	12.4	13.0	12.0	12.6	$F(2, 71) = 1.39$*
SD	6.4	5.9	4.1	5.7	4.6	4.4	
QOLI[a]							
M	36.1	39.5	35.2	39.0	36.8	37.2	$F(2, 71) = 0.63$*
SD	15.9	17.0	15.3	12.6	13.2	14.7	

Note. CBT = cognitive–behavioral therapy; PCT = present-centered therapy; WL = wait-list; CAPS = Clinician Administered Posttraumatic Stress Disorder Scale; BDI = Beck Depression Inventory; STAI = Spielberger State–Trait Anxiety Inventory; TSI = Traumatic Stress Institute Beliefs Scale; DES = Dissociative Experiences Scale; COOK = Cook–Medley Hostility Scale; STAXI = State–Trait Anger Expression Inventory ; QOLI = Quality of Life Inventory.
[a] For all scales but the QOLI, a lower score is better.
* $p > .10$. ** $p < .10$. *** $p < .05$.

tent support across several measures of posttraumatic and related symptomatology. PCT also proved consistently more effective than WL on the same array of measures. Both treatments resulted in marked improvements in PTSD symptom severity, state anxiety, and trauma-related cognitive schemas, all of which showed little change for the WL participants. There was no effect of either treatment on quality of life. Both treatments resulted in marked improvements in PTSD symptom severity, state anxiety, and trauma-related cognitive schemas, all of which showed little change for the WL participants. Neither treatment was superior to WL in reducing symptoms of depression, dissociation, and anger or hostility, nor in improving quality of life.

Our hypothesis that CBT would be superior to PCT in promoting trauma recovery received support from the finding that CBT was superior to PCT in achieving remission from the PTSD diagnosis at follow-up. However, this significant difference in diagnostic change was not found either for completers or in intent-to-treat analyses at posttest. Also, the two active treatments did not differ significantly at any assessment time point on any other outcome measure (including PTSD severity). Thus, CBT and PCT appear comparable in achieving sustained symptom reduction and improvements in cognitive distortions, but CBT showed some advantage in achieving sustained change in PTSD diagnosis.

The mean CAPS score in the CBT completer group improved by 36 points from baseline and improved in the PCT group by nearly 24 points. A change of 10–15 is considered clinically meaningful (Schnurr, Friedman, Lavori, & Hsieh, 2001; Weathers et al., 2001). The CAPS effect sizes compared with the WL were large: 1.07 for CBT and 0.89 for PCT. The large effects for CBT compared with WL are in line with the effect sizes reported by Foa et al.'s (1991) and (1999) studies that compared CBT interventions with supportive counseling, but they are smaller than those reported in Resick et al.'s (2002) study that compared CBT interventions (prolonged exposure and cognitive processing therapy) with a minimal attention WL control group.

Although there was not a significant Group × Time interaction on PTSD symptom severity, the pattern of continued improvement in PTSD symptoms in the CBT condition at follow-up is also consistent with previous studies (Foa et al., 1991, 1999; Marks et al., 1998; Tarrier, Pilgrim, et al., 1999). Although the PCT group did not show this trend toward continued improvement of PTSD symptom severity, they did maintain their gains through the 6-month follow-up period.

Thus, it appears that CBT has a specific positive impact on PTSD symptoms for some female CSA survivors, but the dropout rate of 41.4% suggests that a significant proportion of women was not willing or able to complete CBT. This rate of dropout for CBT was also higher than that reported in other studies of exposure therapy, which ranged from 8.0% to 28.6% (Foa et al., 1991, 1999; Marks et al., 1998; Resick et al., 2002; Tarrier, Pilgrim, et al.,

Table 3
Group Means (and Standard Deviations) on Main Outcomes Before and After Treatment for the Treatment-Completer Study Groups (Completers)

	CBT (n = 17)		PCT (n = 20)		WL (n = 20)		
Measure	Pretherapy	Posttherapy	Pretherapy	Posttherapy	Pretherapy	Posttherapy	F(Group × Time)
CAPS							
M	67.1	38.5	67.5	44.9	70.0	62.5	$F(2, 54) = 4.51$***
SD	18.4	27.7	15.1	22.1	16.9	17.0	
BDI							
M	15.7	7.5	17.7	10.4	21.2	20.1	$F(2, 50) = 3.10$**
SD	7.0	7.9	8.2	10.2	8.1	12.1	
STAI							
M	49.8	39.4	54.3	45.6	56.2	52.7	$F(2, 50) = 3.23$***
SD	11.0	11.9	8.7	11.0	9.5	10.1	
TSI							
M	2.8	2.2	2.9	2.4	3.2	3.1	$F(2, 51) = 3.22$***
SD	0.5	0.5	0.5	0.5	0.7	0.6	
DES							
M	14.7	7.6	12.6	9.4	20.5	16.7	$F(2, 51) = 0.76$*
SD	12.9	5.7	8.7	8.6	17.1	16.0	
COOK							
M	18.5	12.9	21.0	14.9	25.0	20.4	$F(2, 51) = 0.09$*
SD	8.7	7.6	7.6	7.0	9.2	9.0	
STAXI							
M	13.2	11.2	13.7	12.1	12.6	12.9	$F(2, 51) = 1.13$*
SD	5.8	3.4	6.1	4.9	4.3	4.8	
QOLI[a]							
M	43.3	47.1	34.7	38.9	36.0	34.7	$F(2, 50) = 1.19$*
SD	14.8	13.9	16.3	13.6	12.6	14.3	

Note. CBT = cognitive–behavioral therapy; PCT = present-centered therapy; WL = wait-list; CAPS = Clinician Administered Posttraumatic Stress Disorder Scale; BDI = Beck Depression Inventory; STAI = Spielberger State–Trait Anxiety Inventory; TSI = Traumatic Stress Institute Beliefs Scale; DES = Dissociative Experiences Scale; COOK = Cook–Medley Hostility Scale; STAXI = State–Trait Anger Expression Inventory; QOLI = Quality of Life Inventory.
[a] For all scales but the QOLI, a lower score is better.
* $p > .10$. ** $p < .10$. *** $p < .05$.

1999). Because of the higher dropout rate in CBT than in PCT or WL in this study, comparisons between CBT and the other two groups are less scientifically sound than those comparing PCT and WL, in which dropouts were few. It is interesting to note that 10 women from the WL chose to begin CBT, and 5 of those dropped out of the treatment; whereas 9 women from the WL chose PCT, and all of them completed treatment. Thus, it does not appear in this limited sample that having one's choice of treatment affected the dropout rates.

Therapist differences could be a factor in the differential dropout, although this study does not allow for adequate assessment of therapist effects. A multisite trial would be needed to use a sufficient number of therapists in each condition, so that therapist could be treated as a random factor in the design and inferences could be drawn across therapists in general. An examination of the timing of dropping out from CBT indicated that this occurred most often (75%) between the completion of the 4th–7th sessions. Although this finding is descriptive and requires replication, it suggests the possibility that participants may have experienced difficulties early in the exposure process (which began in Session 4) or may have had cumulative difficulties or unmet expectations as CBT progressed (Session 7 included a structured discussion of the participant's progress and satisfaction with treatment). Strategies to make the initiation of prolonged exposure tolerable and helpful to clients have been developed (Cloitre et al., 2002; Foa et al., 1999) and may be important in preventing premature termination.

In this study, therapist competency is an unlikely explanation for the difference in dropout between the group, given our finding that those who completed CBT had a higher rate of remission of PTSD compared with PCT. Although we do not have competency ratings for this study, all therapists were carefully supervised by experts in their treatment who watched videotapes of sessions and provided intensive feedback regarding competent practice as well as fidelity to the treatment model on a weekly basis. The therapists for each treatment also were experienced in and committed to their modality. Although the CBT therapists had fewer years of clinical experience than the PCT therapists, experience is less predictive of competence or outcome than specialized training and client contact in the specific treatment (Driscoll et al., 2003).

Concerning potential risk indicators of dropout, there was a substantial degree of overlap in baseline PTSD symptom severity such that some completers had quite severe initial PTSD symptoms, whereas some dropouts initially had only moderately severe PTSD symptoms. Therefore, it would be premature to conclude that female CSA survivors with PTSD symptoms at any particular level of severity are not good candidates for CBT involving prolonged exposure. However, CBT dropouts endorsed greater

Table 4
Mean Scores (and Standard Deviations) on Main Outcomes at the Posttherapy Assessment Points for the CBT and PCT Groups, on the Basis of the Treatment-Completer Study Group

	CBT (n = 17)			PCT (n = 17)				
Measure	Posttherapy	3-month follow-up	6-month follow-up	Posttherapy	3-month follow-up	6-month follow-up	F(group)	F(Group × Time)
CAPS								
M	38.5	32.8	31.9	43.6	44.4	43.3	$F(1, 33) = 1.74$*	$F(2, 66) = 0.69$*
SD	27.7	20.4	27.8	22.9	17.7	23.4		
BDI								
M	7.5	7.3	7.1	10.5	10.8	12.3	$F(1, 31) = 1.89$*	$F(2, 62) = 0.52$*
SD	7.9	8.2	8.6	10.6	8.6	10.3		
STAI								
M	39.4	37.4	38.2	46.4	46.4	46.6	$F(1, 30) = 4.20$***	$F(2, 60) = 0.22$*
SD	11.9	11.8	12.9	11.0	11.9	13.4		
TSI								
M	2.2	2.1	2.1	2.4	2.4	2.4	$F(1, 31) = 1.71$*	$F(2, 62) = 1.27$*
SD	0.5	0.5	0.7	0.5	0.5	0.7		
DES								
M	7.6	8.0	5.2	10.2	9.7	8.5	$F(1, 32) = 0.85$*	$F(2, 64) = 0.19$*
SD	5.7	10.3	4.9	8.7	10.8	11.6		
COOK								
M	12.9	12.4	13.9	15.2	15.5	15.5	$F(1, 32) = 0.93$*	$F(2, 64) = 0.27$*
SD	7.6	7.0	10.2	7.2	7.4	8.0		
STAXI								
M	11.2	11.6	11.2	12.5	12.0	13.8	$F(1, 31) = 1.43$*	$F(2, 62) = 1.19$*
SD	3.4	3.9	3.6	5.3	3.1	5.3		
QOLI[a]								
M	47.1	52.8	49.3	38.0	37.2	35.8	$F(1, 30) = 8.03$****	$F(2, 60) = 0.88$*
SD	13.9	17.7	15.5	13.9	13.2	15.8		

Note. CBT = cognitive–behavioral therapy; PCT = present-centered therapy; CAPS = Clinician Administered Posttraumatic Stress Disorder Scale; BDI = Beck Depression Inventory; STAI = Spielberger State–Trait Anxiety Inventory; TSI = Traumatic Stress Institute Beliefs Scale; DES = Dissociative Experiences Scale; COOK = Cook–Medley Hostility Scale; STAXI = State–Trait Anger Expression Inventory; QOLI = Quality of Life Inventory.
[a] For all scales but the QOLI, a lower score is better.
* $p > .10$. *** $p < .05$. **** $p < .01$.

severity of non-PTSD symptoms (e.g., depression, anxiety), which suggests that CBT may not be as well tolerated among women with more complex clinical presentations. Comorbid Axis II diagnosis is also likely an important factor contributing to dropout in the CBT group. In that group, all 4 of the women who had a comorbid diagnosis of borderline personality disorder, and 7 of the 11 women who had a comorbid diagnosis of avoidant personality disorder, dropped out of that condition, whereas no one with those diagnoses dropped out of the other two groups. Consistent with the view that CBT may not be as well tolerated when the clinical picture is more complicated, the growing body of research on predictors of outcome of exposure based treatments suggests that the cognitive and affect-regulation problems often found as sequelae of CSA may be problematic (Ehlers et al., 1998; Lee, Scragg, & Turner, 2001; Livanous et al., 2002; Tarrier, Pilgrim, et al., 1999; Tarrier, Sommerfield, & Pilgrim, 1999).

The efficacy and tolerability of PCT suggests that a combination of education on the impact of trauma on interpersonal functioning and relationships, as well as learning skills to enhance social problem solving in here-and-now situations, may be an effective non-CBT approach to PTSD secondary to CSA. The fact that this treatment had more of an impact on PTSD symptoms than on depressive symptoms suggests its mechanism is not simply an antidepressant effect such as has already been demonstrated for problem-solving therapy. Consistent with phase models of PTSD treatment (e.g., Cloitre et al., 2002; Herman, 1992), the building and strengthening of personal and interpersonal problem-solving skills can address many of the fundamental problems in psychosocial functioning that are endemic to CSA-related PTSD (Briere et al., 1997). Women in our study reported that the approach generated hope and a sense of empowerment. Many were grateful to learn a structured approach to problem solving that helped them move past the feeling of being overwhelmed by their lives.

Such an approach might be further enhanced by integrating skills for affect regulation (Cloitre et al., 2002). Neither PCT nor CBT proved as efficacious as hoped in reducing symptoms of depression, dissociation, and anger or hostility, nor in improving quality of life. These difficulties are common sequelae of CSA and are associated with difficulties in regulating extremes of affective distress. Therefore, we are currently testing a modification of PCT that integrates affect-regulation skills with PCT's components of PTSD education and social problem-solving training.

In summary, for women who did not drop out, CBT treatment was highly effective for achieving remission of PTSD diagnosis, ameliorating PTSD and anxiety symptom severity, and reducing trauma-related cognitive distortions, compared with a WL control group. Although PCT was not as successful in achieving sustained remission from PTSD diagnosis as CBT, it did as well as CBT in

Table 5
Effect Sizes (Cohen's d) for Posttherapy, 3-Month, and 6-Month Follow-Up Group Contrasts of Outcome Measures

	Posttreatment			3-month follow-up	6-month follow-up
Measure	CBT vs. PCT	CBT vs. WL	PCT vs. WL	CBT vs. PCT	CBT vs. PCT
CAPS					
Intent-to-treat	−0.22	0.50	0.89		
Completers	0.26	1.07	0.89	0.61	0.45
BDI	0.32	1.26	0.87	0.42	0.55
STAI	0.54	1.21	0.67	0.76	0.64
TSI	0.40	1.64	1.27	0.60	0.43
DES	0.25	0.75	0.60	0.16	0.40
COOK	0.27	0.90	0.69	0.43	0.18
STAXI	0.22	0.41	0.16	0.11	0.58

Note. For all measures but the Clinician Administered Posttraumatic Stress Disorder Scale (CAPS), only treatment completer effect sizes are included. Results for the Quality of Life Inventory are omitted from the table because the pretreatment difference on that measure maintained across time explains the effect, rather than the treatment. CBT = cognitive–behavioral therapy; PCT = present-centered therapy; WL = wait-list; BDI = Beck Depression Inventory; STAI = Spielberger State–Trait Anxiety Inventory; TSI = Traumatic Stress Institute Beliefs Scale; DES = Dissociative Experiences Scale; COOK = Cook–Medley Hostility Scale; STAXI = State–Trait Anger Expression Inventory.

reducing PTSD and anxiety symptom severity and reducing cognitive distortions. In addition, PCT had few dropouts. The results suggest that both CBT and PCT may have value in the treatment of CSA-related PTSD with women and point to future directions for the development and testing of therapies that can address the sequelae of CSA that neither CBT nor PCT were able to ameliorate (e.g., depression, dissociation, anger).

References

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

Amir, M., Kaplan, Z., Efroni, R., Levine, Y., Benjamin, J., & Kotler, M. (1997). Coping styles in posttraumatic stress disorder (PTSD) patients. *Personality and Individual Differences, 23,* 399–405.

Beck, A. T., Steer, R. A., & Garbing, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical Psychology Review, 8,* 77–100.

Blanchard, E. B., Hickling, E. J., Devineni, T., Veazey, C. H., Galovski, T. E., Mundy, E. A., et al. (2003). A controlled evaluation of cognitive–behavioral therapy for posttraumatic stress in motor vehicle accident survivors. *Behaviour Research and Therapy, 41,* 79–96.

Boudewyns, P. A., & Hyer, L. (1990). Physiological response to combat memories and preliminary treatment outcome in Vietnam veteran PTSD patients treated with direct therapeutic exposure. *Behavior Therapy, 21,* 63–87.

Briere, J. (1984, April). *The effects of childhood sexual abuse on later psychological functioning: Defining a postsexual-abuse syndrome.* Paper presented at the Third National Conference on Sexual Victimization of Children, Washington, DC.

Briere, J., & Elliott, D. M. (1994). Immediate and long-term impacts of child sexual abuse. *Future of Children, 4,* 54–69.

Briere, J., & Runtz, M. (1986). Suicidal thoughts and behaviors in former sexual abuse victims. *Canadian Journal of Behavioral Sciences, 18,* 413–423.

Briere, J., & Runtz, M. (1993). Childhood sexual abuse: Long-term sequelae and implications for psychological assessment. *Journal of Interpersonal Violence, 8,* 312–330.

Briere, J., Woo, R., McRae, B., Foltz, J., & Sitzman, R. (1997). Lifetime victimization history, demographics, and clinical status in female psychiatric emergency room patients. *Journal of Nervous and Mental Disease, 185,* 95–101.

Carlson, E. B., Putnam, F. W., Ross, C. A., Torem, M., Coons, P., Dill, D. L., et al. (1993). Validity of the Dissociative Experiences Scale in screening for multiple personality disorder: A multicenter study. *American Journal of Psychiatry, 150,* 1030–1036.

Cloitre, M., Koenen, K. C., Cohen, L. R., & Han, H. (2002). Skills training in affective and interpersonal regulation followed by exposure: A phase-based treatment for PTSD related to childhood abuse. *Journal of Consulting and Clinical Psychology, 70,* 1067–1074.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). New York: Erlbaum.

Cook, W., & Medley, O. (1954). Proposed hostility and pharisaic-virtue scales for the MMPI. *Journal of Applied Psychology, 38,* 414–418.

Cooper, N. A., & Clum, G. A. (1989). Imaginal flooding as a supplementary treatment for PTSD in combat veterans: A controlled study. *Behavior Therapy, 20,* 381–391.

Corcoran, C. B., Green, B. L., Goodman, L. A., & Krinsley, K. E. (2000). Conceptual and methodological issues in trauma history assessment. In A. Y. Shalev, R. Yehuda, & A. C. McFarlane (Eds.), *International handbook of human response to trauma* (pp. 223–232). New York: Kluwer Academic/Plenum Publishers.

Courtois, C. A. (2000). The aftermath of child sexual abuse: The treatment of complex posttraumatic stress reactions. In L. T. Szuchman & F. Muscarella (Eds.), *Psychological perspectives on human sexuality* (pp. 549–572). New York: Wiley.

DeShazer, S., Berg, I., Lipchik, E., Nunnally, E., Molnar, A., Gingerich, W., et al. (1986). Focused solution development. *Family Process, 25,* 207–222.

Driscoll, K. A., Cukrowicz, K., Reitzel, L., Hernandez, A., Petty, S., & Joiner, T., Jr. (2003). The effect of trainee experience in psychotherapy on client treatment outcome. *Behavior Therapy, 34,* 165–177.

D'Zurilla, T. J., & Goldfried, M. (1971). Problem solving and behavior modification. *Journal of Abnormal Psychology, 78,* 107–126.

D'Zurilla, T. J., & Nezu, A. (1982). Social problem solving in adults. In

P. C. Kendall (Ed.), *Advances in cognitive–behavioral research and therapy.* New York: Academic Press.

Ehlers, A., Clark, D. M., Dunmore, E., Jaycox, L., Meadows, E., & Foa, E. B. (1998). Predicting response to exposure treatment in PTSD: The role of mental defeat and alienation. *Journal of Traumatic Stress, 11,* 457–471.

Elhai, J. D., Frueh, B. C., Gold, P. B., Gold, S. N., & Hamner, M. B. (2000). Clinical presentations of posttraumatic stress disorder across trauma populations: A comparison of MMPI-2 profiles of combat veterans and adult survivors of child sexual abuse. *Journal of Nervous and Mental Disease, 188,* 708–713.

Finkelhor, D. (1987). The trauma of child sexual abuse: Two models. *Journal of Interpersonal Violence, 2,* 348–366.

Foa, E. B., Dancu, C. V., Hembree, E. A., Jaycox, L. H., Meadows, E. A., & Street, G. P. (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, E. B., Rothbaum, B. O., Riggs, D. S., & Murdock, T. B. (1991). Treatment of posttraumatic stress disorder in rape victims: A comparison between cognitive–behavioral procedures and counseling. *Journal of Consulting and Clinical Psychology, 59,* 715–723.

Frisch, M. B., Cornell, J., Villanueva, M., & Retzlaff, P. J. (1992). Clinical validation of the Quality of Life Inventory: A measure of life satisfaction for use in treatment planning and outcome assessment. *Psychological Assessment, 4,* 92–101.

Herman, J. L. (1981). *Father–daughter incest.* Cambridge, MA: Harvard University Press.

Herman, J. L. (1992). *Trauma and recovery.* New York: Basic Books.

Johnson, D. M., Sheahan, T. C., & Chard, K. M. (2003). Personality disorders, coping strategies, and posttraumatic stress disorder in women with histories of childhood sexual abuse. *Journal of Child Sexual Abuse, 12,* 19–39.

Keane, T. M., Fairbank, J. A., Caddell, J. M., & Zimering, R. T. (1989). Implosive (flooding) therapy reduces symptoms of PTSD in Vietnam combat veterans. *Behavior Therapy, 20,* 245–260.

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry, 52,* 1048–1060.

Krinsley, K. E., Weathers, F. W., Vielhauer, M. J., Newman, E., Walker, E. A., Kaloupek, D. G., et al. (1994). *Evaluation of Lifetime Stressors Interview.* Unpublished manuscript, National Center for Posttraumatic Stress Disorder, Behavioral Science Division, Boston.

Lawrence, K. J., Cozolino, L., & Foy, D. W. (1995). Psychological sequelae in adult females reporting childhood ritualistic abuse. *Child Abuse & Neglect, 19,* 975–984.

Lee, D. A., Scragg, P., & Turner, S. (2001). The role of shame and guilt in traumatic events: A clinical model of shame-based and guilt-based PTSD. *British Journal of Medical Psychology, 74,* 451–466.

Livanous, M., Basoglu, M., Marks, I. M., De Silva, P., Noshirvani, H., Lovell, K., et al. (2002). Beliefs, sense of control, and treatment outcome in posttraumatic stress disorder. *Psychological Medicine, 32,* 157–165.

Marks, I., Lovell, K., Noshirvani, H., Livanou, M., & Sian, T. (1998). Treatment of posttraumatic stress disorder by exposure and/or cognitive restructuring: A controlled study. *Archives of General Psychiatry, 55,* 317–325.

Meador, B., & Rogers, C. (1973). Client-centered therapy. In R. Corsini (Ed.), *Current psychotherapies* (pp. 125–128). Itasca, IL: Peacock.

Nezu, A. M. (1986). Efficacy of a social problem solving therapy approach for unipolar depression. *Journal of Consulting and Clinical Psychology, 54,* 196–202.

Nezu, A. M. (1987). A problem-solving formulation of depression: A literature review and proposal of a pluralistic model. *Clinical Psychology Review, 7,* 121–144.

Nezu, A. M., & Carnevale, G. J. (1987). Interpersonal problem solving and coping reactions of Vietnam veterans with posttraumatic stress disorder. *Journal of Abnormal Psychology, 96,* 155–157.

Nezu, A. M., Nezu, C. M., & Perri, M. G. (1989). *Problem-solving therapy for depression: Theory, research, and clinical guidelines.* New York: Wiley.

Nezu, A. M., & Perri, M. G. (1989). Problem solving therapy for depression: An initial dismantling investigation. *Journal of Consulting and Clinical Psychology, 57,* 408–413.

Pearlman, L. A. (2001). Treatment of persons with complex PTSD and other trauma-related disruptions of the self. In J. P. Wilson, M. J. Friedman, & J. D. Lindy (Eds.), *Treating psychological trauma and PTSD* (pp. 205–236). New York: Guilford Press.

Resick, P. A., Nishith, P., Weaver, T. L., Astin, M. C., & Feuer, C. A. (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,* 867–879.

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

Saunders, B. E., Villeponteaux, L. A., Lipovsky, J. A., Kilpatrick, D. G., & Veronen, L. J. (1992). Child sexual assault as a risk factor for mental disorders among women: A community survey. *Journal of Interpersonal Violence, 7,* 189–204.

Schnurr, P. P., Friedman, M. J., Lavori, P. J., & Hsieh, F. Y. (2001). Design of VA Cooperative Study #420: Group treatment of PTSD. *Controlled Clinical Trials, 22,* 74–88.

Spaccarelli, S. (1994). Stress, appraisal, and coping in child sexual abuse. *Psychological Bulletin, 116,* 340–362.

Spielberger, C. D. (1988). Anger Expression Scale. In M. Hersen & A. S. Bellack (Eds.), *Dictionary of behavioral assessment techniques* (pp. 446–448). New York: Pergamon Press.

Spielberger, C. D., Gorusch, R., & Lushene, R. (1970). *Manual for the State–Trait Anxiety Inventory (self-evaluation questionnaire).* Palo Alto, CA: Consulting Psychologists Press.

Spitzer, R. L., Williams, J. B., Gibbon, M., & First, M. B. (1994). *Structured Clinical Interview for DSM–IV—Patient edition.* New York: New York State Psychiatric Institute, Biometrics Research Department.

Tarrier, N., Pilgrim, H., Sommerfield, C., Faragher, B., Reynolds, M., Graham, E., et al. (1999). 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.

Tarrier, N., Sommerfield, C., & Pilgrim, H. (1999). The effect of relative level of expressed emotion (EE) on the outcome of psychological treatment of PTSD patients. *Psychological Medicine, 29,* 801–812.

Tarrier, N., Sommerfield, C., Pilgrim, H., & Humphreys, L. (1999). Cognitive therapy or imaginal exposure in the treatment of posttraumatic stress disorder. *British Journal of Psychiatry, 175,* 571–575.

Weathers, F. W., Keane, T. M., & Davidson, J. R. T. (2001). Clinician-Administered PTSD Scale: A review of the first ten years of research. *Depression and Anxiety, 13,* 132–156.

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