SPOTLIGHT ON PRACTICE

TWO-YEAR FOLLOW-UP STUDY OF COGNITIVE
BEHAVIORAL THERAPY FOR SEXUALLY ABUSED
CHILDREN SUFFERING POST-TRAUMATIC
STRESS SYMPTOMS

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ABSTRACT

Objective: The present study sought to determine whether the 12–session pre–to posttest therapeutic gains that had been found by Deblinger, Lippmann, and Steer (1996) for an initial sample of 100 sexually abused children suffering posttraumatic stress disorder (PTSD) symptoms would be sustained 2 years after treatment.

Method: These sexually abused children, along with their nonoffending mothers, had been randomly assigned to one of three cognitive-behavioral treatment conditions, child only, mother only, or mother and child, or a community comparison condition, and were followed for 3 months, 6 months, 1 year, and 2 years after treatment.

Results: A series of repeated MANCOVAs, controlling for the pre-test scores, indicated that for the three measures of psychopathology that had significantly decreased in the original study (i.e., externalizing behavior problems, depression, and PTSD symptoms), these measures at 3 months, 6 months, 1 year, and 2 years were comparable to the posttest scores.

Conclusions: These findings suggest that the pre–to post-treatment improvements held across the 2–year follow-up period. The clinical and research implications of these findings are discussed. © 1999 Elsevier Science Ltd

Key Words—Child sexual abuse, Treatment outcome, PTSD, Cognitive behavioral therapy, Follow-up.

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THE FINDINGS OF several preliminary investigations suggest that cognitive behavioral approaches are successful not only for treating preschool children who have been sexually abused (Cohen & Mannarino, 1996; Stauffer & Deblinger, 1996), but also for treating school-aged children when the nonoffending parent, usually the mother, is included in the treatment process (Deblinger, Lippmann, & Steer, 1996; Deblinger, McLeer, & Henry, 1990). However, the aforementioned preliminary research studies supporting the effectiveness of such cognitive behavioral interventions have primarily focused on pre- to posttest outcome measures over short-term intervals, and the long-term effectiveness of these cognitive-behavioral approaches remains to be ascertained.

The purpose of the present study was to determine whether the 12-week pre- and posttest therapeutic gains that were found by Deblinger and colleagues (1996) would be sustained after 2 years. Briefly, in that investigation, an initial sample of 100 sexually abused children and their nonoffending mothers were randomly assigned to one of three experimental cognitive behavioral interventions or to a community comparison condition. Specifically, the assigned conditions were as follows: 25 children were assigned to a cognitive behavioral treatment condition that involved the participation of the child only (child only); 25 children were assigned to a cognitive behavioral treatment approach which required the participation only of their nonoffending mothers who learned to serve as their children’s therapeutic agents (mother only); 25 children were assigned along with their nonoffending mothers to a cognitive behavioral treatment approach which involved the participation of both the child and mother (mother and child); and 25 children and nonoffending parents were referred to therapists in their own communities for treatment (community comparison).

The experimental interventions consisted of 12 treatment sessions generally provided on a weekly basis. The sessions were 45 minutes in duration for participants assigned to the child only or parent only conditions, with those assigned to the parent and child condition receiving 90 minute treatment sessions. Deblinger and Heftin (1996) have described these cognitive behavioral interventions in much greater detail in a recently published book.

The child only condition involved the use of several cognitive behavioral strategies in direct work with the child. While informal feedback on the child’s progress was provided to the nonoffending parent(s) periodically, parents were not directly involved in treatment. Rather the therapist worked individually with the child, providing education about child sexual abuse and healthy sexuality, teaching coping skills and personal safety skills, and conducting gradual exposure and processing exercises. These exercises, perhaps the central features of the child intervention, aimed to assist children gradually to confront and process abuse-related thoughts, feelings and memories. This work is designed to help children overcome the anxiety and avoidance often experienced in response to even subtle reminders of the abuse, thereby allowing them to explore more fully their emotional, cognitive, and physiological reactions to the abuse with the assistance of the therapist.

The parent only condition utilized these same cognitive behavioral strategies to educate and assist the nonoffending parents in coping with their own distress related to their children’s sexual abuse. Also, since the children did not meet directly with the therapist in this condition, the parents were encouraged to utilize the education, skill building, gradual exposure and processing exercises at home to help their children cope with the aftermath of the sexual abuse. In addition, parents in this condition received structured parent training to assist them in communicating more clearly and responding more effectively to their children’s behavior problems.

The parent and child condition incorporated both the parent and child interventions described above as well as joint parent child work in the latter stages of therapy. With the therapist’s preparation and guidance, a portion of the latter sessions were devoted to working with the parents and children together, initially reviewing educational material and/or practicing skill building exercises and, when therapeutically appropriate, doing gradual exposure and processing work. This joint work was intended to facilitate open parent child communication regarding the sexual abuse
as well as healthy sexuality and personal safety, while also setting the stage for continued therapeutic work at home.

In the original study (Deblinger, Lippmann et al., 1996), a 2-by-2 least-squares ANCOVA was used to compare the following outcome measures: the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983); the Children’s Depression Inventory (CDI; Kovacs, 1992); the State-Trait Anxiety Inventory for Children (STAIC; Spielberger, 1973); a Post-Traumatic Stress Disorder (PTSD) index composed of the PTSD section of the Schedule for Affective Disorders and Schizophrenia for School-Age Children (K-SADS-E; Orvaschel, Puig-Antich, Chambers, Tabrizi, & Johnson, 1982); and a slightly modified version of the Parenting Practices Questionnaire (PPQ; Strayhorn & Weidman, 1988). Using the Statistical Analysis System’s (SAS; SAS Institute, Inc., 1990) general linear modeling (GLM) program, the pretest score for each measure was entered as a covariate to adjust the posttest measure. The two main effects in this 2-by-2 ANCOVA design were for whether a Mother (0 = No, 1 = Yes) or Child (0 = No, 1 = Yes) was assigned to treatment; and the Mother × Child interaction was also included in the model. None of the Mother × Child interactions was significant, but there were four significant main effects. The children who were assigned to the experimental cognitive behavioral treatment (i.e., child only and parent) displayed fewer symptoms on the PTSD rating scale at posttest than did the children who were not themselves assigned to the experimental treatment, (i.e., community and parent only) \( F(1, 85) = 9.57, p < .01 \). Second, the mothers who were assigned to the experimental cognitive-behavioral treatment (i.e., parent only and parent and child) reported more effective parenting skills on the PPQ at posttest than the mothers who were not assigned to treatment did (i.e., child only and community), \( F(1, 83), p < .01 \). Third, the mothers who were assigned to the experimental treatment (i.e., parent only and parent and child) rated their children on the CBCL as displaying fewer externalizing behaviors at posttest than did the mothers who were not assigned to treatment, \( F(1, 84) = 4.24, p < .05 \). Finally, the children of the mothers who were assigned to treatment (i.e., parent only and parent and child) described less self-reported depression on the CDI at posttest than did the children of the mothers who were not assigned to treatment, \( F(1, 85) = 3.97, p < .05 \).

**METHOD**

**Participants**

The background and clinical characteristics of the children and their parents as well as the initial treatment outcome findings have been presented in detail by Deblinger and colleagues (1996). Briefly, the initial sample recruited for this investigation included 100 sexually abused children who experienced contact sexual abuse that had been substantiated by an investigation conducted by the Division of Youth and Family Services and/or the Prosecutor’s office. Child participants exhibited a minimum of three PTSD symptoms. Their ages ranged from 7 to 13 years old, with a mean age of 9.89 (SD = 2.00) years. There were 83 (83%) girls and 17 (17%) boys; 70 participants (70%) were White, 21 (21%) Black, 7 (7%) Hispanic, and 2 (2%) Other. The biological father or stepfather was described as the current perpetrator by 31 (31%) of the children, and penile penetration was involved in 35 (35%) of the cases. With respect to the total number of life-time occasions of sexual abuse, 33 (33%) had been abused on 11 or more occasions, whereas 67 (67%) had been abused on 10 or less occasions. For 53 (53%) of the children, the duration of the sexual abuse had been for 7 or more months, whereas such abuse had occurred for less than 7 months in 47 (47%) of the children.
Measures

Structured background interview. A structured parent interview that has been used in prior investigations (Deblinger, Hathaway, Lippmann, & Steer, 1993; Deblinger et al., 1990) was used to collect the pertinent demographic and abuse-related information.

Posttraumatic Stress Disorder (PTSD). Children’s PTSD symptoms related to the sexual abuse were assessed using the PTSD section of the K-SADS-E (Orvaschel et al., 1982) which has demonstrated good interrater reliability (McLeer, Deblinger, Henry, & Orvaschel, 1992). For these analyses the mother and child composite scores were used.

Child Depression Inventory (CDI). The CDI is a reliable and well validated 27 item self-report measures of depressive symptomatology in children ages 7 to 17 (Kovacs, 1985).

Child Behavior Checklist (CBCL). The CBCL is a well established and reliable 138 item parent report measure of social competence and behavior problems in children ages 4 to 16 (Achenbach & Edelbrock, 1983).

Parenting Practices Questionnaire (PPQ). The PPQ, a self report measure completed by parents that assesses the quality of parental interactions with children, has demonstrated good internal consistency and test-retest reliability (Strayhorn & Weidman, 1988). Higher scores on this measure indicate more effective parenting skills. A slightly revised version of the PPQ was used in a prior investigation (Stauffer & Deblinger, 1996) as well as in this investigation.

Design

To ascertain whether the significant psychotherapeutic gains on the measures listed above persisted beyond the post treatment assessment, the children and their mothers who had participated in Deblinger et al.’s (1996) preliminary study were again administered the CBCL, the CDI, and the PTSD at 3 months, 6 months, 1 year, and 2 years following treatment (posttest). With the exception of the 6-month follow-up, the PPQ was administered to the nonoffending parents according to the same follow-up schedule. A series of $2 \times 2 \times 5$ MANCOVAs, in which the pretest scores of the matching outcome measures were used to adjust for the residualized gains in posttest and each of the follow-up measures, was then performed. The main effects were for Child (No = 0, Yes = 1) or Mother (No = 0, Yes =1) participation in therapy and Time (1 = posttest [12 weeks], 2 = 3 months after posttest, 4 = 6 months after posttest, 4 = 1 year after posttest, and 5 = two years after posttest). The MANCOVA’s Time by Type of Group (Child or Mother) interaction was used to set the upper level of alpha for interpretative purposes. Univariate contrasts based on the SAS GLM repeated-measures profile-analysis procedure (SAS Institute, Inc., 1990) were used to ascertain whether there were significant differences between the chronologically ordered, adjacent means of the residuaresalized outcome measures, if the MANCOVA Time by Type of Group interaction was significant.

RESULTS

Given the 2-year duration of follow-up, there was a substantial amount of missing outcome data. For example, out of the 25 community children for whom complete CBCL data were available at pretest, only 12 (48%) had been rated by their mothers at posttest and at all four of the follow-up evaluations. To examine potential dropout bias, we conducted MANCOVAs (a) with imputed end-point (last value) data in which the last obtained score on an outcome measure for a respondent
was carried forward for his or her remaining follow-up evaluations and (b) with data from only those participants who had completed all six evaluations. Because the results of the MANCOVAs for both types of data sets were comparable, we decided to base our interpretations only on the participants for whom complete pretest, posttest, and follow-up data were available. We recognize, however, that this does not fully control for the possible differential attrition of non-responders. Table 1 presents the means and standard deviations of the CBCL Externalization, the CDI, the PTSD, and the PPQ scores over Time by Type of Group assignment. The Time × Mother interaction for the CBCL Externalization ratings, Wilks’ lambda = .86, F(4, 60) = 2.47, the Time × Mother interaction for the CDI scores, Wilks’ lambda = .90, F(4, 67) = 1.84, and the Time × Child Interaction for the PTSD scores, Wilks’ lambda = .92, F(4, 66) = 1.39, were not significant. The significant therapeutic gains that had been previously reported by Deblinger et al. (1996) between pre- and posttest had remained comparable across the four follow-up periods. With respect to the PPQ, the Time × Mother interaction was significant beyond the .01 level, two-tailed test, Wilks’ lambda = .78, F(4, 68) = 4.76. The subsequent profile analysis indicated that the posttest and 3-month gains in the effectiveness of parenting practices were comparable, but then dropped slightly after 1 year, F(1, 71) = 8.66, p < .01; the 1- and 2-year adjusted mean PPQ scores were comparable.

**DISCUSSION**

The results of the present investigation indicate that for the three variables that had demonstrated significant change in the original study (i.e., CBCL Externalization, the CDI, and the PTSD)
(Deblinger et al., 1996), sexually abused children’s adjusted follow-up scores at 3 months, 6 months, 1 year, and 2 years post-treatment were comparable to adjusted post-treatment scores. This suggests that sexually abused children’s post-treatment improvements in externalizing behavior, depression and PTSD were maintained over the 2-year follow-up period. Thus, with the passage of time, there was no return to prior levels of symptomatology on these measures of children’s adjustment. The pre-to post-test gain in the effectiveness of parenting practices for mothers who had participated in treatment (i.e., parent only and parent and child) as measured by the PPQ showed a slight, but significant deterioration at the 1 year follow point. However, the 2-year follow-up assessment indicated no further decline in effective parenting practices. Some decline in the use of newly acquired parenting skills is expected and may not be clinically meaningful given the lack of increase in children’s behavior problems.

The present findings provide further preliminary support for the long term effectiveness of cognitive behavioral interventions for sexually abused children. The maintenance of treatment gains over 2 years is particularly meaningful given the often chronic and recurrent nature of PTSD symptoms.

Gradual exposure and processing, the central features of the experimental interventions, aim to help sexually abused children overcome PTSD and related difficulties. Although negative emotional and behavioral reactions are to be expected in response to an assault of any kind, children experiencing PTSD symptoms continue to experience these difficulties in response to innocuous stimuli associated with the original assault(s) long after the abuse has ended. Gradual exposure helps to reverse these conditioned responses by encouraging children to confront abuse reminders through a gradual and therapeutic process which encourages children to share the details of their abusive experiences as well as their related thoughts and emotions. Ultimately, previously automatic anxiety or avoidant responses to abuse-related thoughts and discussion begin to decrease, thereby freeing children to process their abuse-related feelings and concerns more effectively with the assistance of therapists or nonoffending parents. Participating nonoffending parents learn to reduce their children’s abuse-related fears and avoidant behaviors through modeling, gradual exposure, and processing exercises. In addition, parents receive coping and parenting skills training to improve their communication and interactions with their children, thereby leading to further reductions in children’s emotional and behavioral difficulties. Additional information about the child and nonoffending parent interventions are provided in the recently published treatment manual (Deblinger & Heflin, 1996).

Although the present investigation provides support for the cognitive-behavioral interventions, it has its limitations. Whenever there was incomplete data from measures at any of the follow-up assessments—if a child or parent participant was unavailable to complete the specific measures at any of the follow-up points—this necessarily resulted in missing data. Thus, although only 10% of the original sample had dropped out of the investigation by the post-treatment assessment, there was between 25% to 32% missing data (depending on measure) in the follow-up period examined in the present study. Expectably, there were some participants who were lost to follow-up during the 2-year period and situations where particular parents were, for some reason, unable to complete certain measures. It should be acknowledged that drop out subjects may reflect relative non-responders. During the follow up phase, participants in this investigation were offered $20 to compensate them for the time and inconvenience associated with the assessments. To minimize missing data, participants in future investigations might be contacted more frequently to maintain their connections with the researchers and update current addresses and might be offered greater monetary incentives. Another study limitation was the tremendous variability in the experiences of participants who were encouraged to seek therapy in their communities. Despite the assistance offered by child protection workers and victim witness advocates, many children in this condition did not receive treatment or received treatment that was highly variable in its quality and intensity.

Future research, therefore, should contrast cognitive behavioral therapy with a more well defined
and controlled alternative therapy approach. Such a design—in which all participants are actively involved at a single agency throughout—may help to increase long term compliance with assessments and maximize follow-up data as well.

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REFERENCES


RÉSUMÉ

Objectif: Cette étude a voulu préciser si les acquis thérapeutiques observés par Deblinger, Lippmann et Steer dans une recherche de 1996 allaient se maintenir deux ans plus tard. La recherche en question avait mesuré les acquis au moyen de tests administrés avant et après une thérapie, auprès de cent enfants qui avaient été abusés sexuellement et qui souffraient du désordre de stress post-traumatique.

Méthode: Les cent enfants, ainsi que leur mère, ont été divisés de façon aléatoire en trois groupes et orientés vers trois types de traitement cognitif-comportemental: un groupe composé d’enfants seulement, un groupe de mères seulement et un groupe composé de mères et de leurs enfants. Un quatrième groupe comparatif a aussi été étudié tiré le de la collectivité. On a fait le suivi à quatre étapes suivant le traitement: après trois mois, six mois, un an et deux ans.

Résultats: Les résultats indiquent que les acquis mesurés immédiatement après le traitement dans l’étude originale se maintiennent. Au niveau des trois mesures de psychopathologie où on a noté une amélioration lors du test post-traitement (par ex., les problèmes de comportement extériorisés, la dépression et des symptômes du désordre de stress post-traumatique), on observe un score semblable tant aux trois mois qu’aux six mois, un an et deux ans suivant le traitement.

Conclusions: Ces constats suggèrent que les améliorations qui ont suivi le traitement se maintiennent deux ans plus tard. L’article discute des conséquences cliniques et de la recherche.

RESUMEN

Objetivo: El presente estudio buscó determinar si los beneficios terapéuticos de las 13 sesiones pre y post test que se habían obtenido en Deblinger, Lippmann y Steer (1986) en una muestra inicial de 100 niños sexualmente abusados que sufrían síntomas de Desorden de Stress Post Traumático (DSPT) se mantenían dos años después del tratamiento.
Método: Estos niños sexualmente abusados, junto con las madres no ofensoras, habían sido asignadas al azar a una de tres condiciones de tratamiento cognitivo-conductual, el niño solo, la madre sola, o madre e hijo, o una condición en la comunidad como control, y se les dió seguimiento por 3 meses, 6 meses, 1 año, y 2 años después del tratamiento.

Resultados: Una serie de MANCOVAS repetidas, controlando los puntajes del pre-test, indicaron que las tres medidas psicopatológicas que habían disminuido significativamente en el estudio original (problemas de conductas exteriorizantes, depresión y síntomas de DSPT), estas medidas a los 3 meses, 6 meses, 1 año, y 2 años resultaron coparables con los puntajes del post test.

Conclusiones: Estos hallazgos sugieren que la mejoría del tratamiento pre y post test se mantienen a través del seguimiento en un período de dos años. Se discuten las implicaciones clínicas y para la investigación de estos resultados.