Treatment practices for childhood posttraumatic stress disorder☆

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Abstract

Objective: This study surveyed practices in treating childhood PTSD among child psychiatrists and non-M.D. therapists with self-identified interest in treating traumatized children.

Method: An anonymous survey was mailed to 207 child psychiatrists (“medical”) and 460 nonphysician (“non-medical”) therapists inquiring about current interventions used to treat children with PTSD.

Results: Two hundred and forty-seven responses were received: of 77 medical and 82 nonmedical respondents who currently treat children with PTSD, a wide variety of modalities are used. Most preferred modalities among medical responders were pharmacotherapy, psychodynamic, and cognitive-behavioral therapy. Most preferred modalities among nonmedical respondents were cognitive-behavioral, family, and nondirective play therapy. Ninety-five percent of medical respondents used pharmacotherapy for this disorder; most preferred medications to treat childhood PTSD were selective serotonin reuptake inhibitors and alpha-adrenergic agonists. Several significant differences between medical and nonmedical practices were identified.

Conclusions: There is little clinical consensus regarding the effectiveness of the many modalities used to treat traumatized children who have PTSD symptoms; empirical research is particularly needed to evaluate the efficacy of pharmacotherapy and EMDR. © 2001 Elsevier Science Ltd. All rights reserved.

Keywords: Professional practices; PTSD; Trauma; Children

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Introduction

Traumatic events such as child abuse and neglect are experienced by substantial children and adolescents. Although some children appear to function well after such experiences (Kendall-Tackett, Williams, & Finkelhor 1993), childhood traumatization may result in a variety of symptomatic presentations, including depression, anxiety, substance abuse, behavioral problems, and posttraumatic stress disorder (PTSD) (AACAP, 1998). While most children do not develop full-blown PTSD following traumatic exposure, this disorder is frequently under- and mis-diagnosed, particularly in younger children, due to developmental variations in its clinical presentation, the relative newness of its inclusion in the Diagnostic and Statistical Manual (DSM), and the lack of a “gold standard” instrument for assessing its presence in children. In fact, several studies have documented that the majority of abused children develop significant PTSD symptoms and that substantial proportions meet full diagnostic criteria for this disorder (McLeer, Deblinger, Atkins, Foa, & Ralphe, 1988). Large proportions of children experiencing other types of traumatic exposure such as domestic violence, community and school violence, and disaster situations also develop PTSD symptoms (AACAP, 1998). Despite the prevalence of this disorder among traumatized children, there is a relative paucity of empirical research with regard to effective treatment of PTSD in children, and there have been no placebo-controlled randomized clinical trial of psychopharmacological agents for children with PTSD. Aside from trauma-focused cognitive-behavioral therapy, for which there is growing empirical efficacy data (Cohen, Berliner, & Mannarino, 2000; Cohen & Mannarino, 1996; Deblinger, Lippman, & Steer, 1996), no other treatments for childhood PTSD have been adequately evaluated.

The clinical literature regarding treatment of traumatized children describes a wide variety of interventions, including crisis intervention (Pynoos & Nader, 1988), psychoanalytic techniques (Gaensbauer, 1994), creative arts (Lowenstein, 1995), play therapy (Gil, 1991), eye movement desensitization and reprocessing (Muris & Merckelbach, 1999), and pharmacotherapy (Famularo, Kinscheiff, & Fenton, 1988; Looff, Grimley, Kuiler, Martin, & Shunfield, 1995). Given this diversity of treatment approaches and the relative paucity of empirical treatment outcome data, we became interested in how child psychiatrists and other therapists are currently treating children with PTSD symptoms, and whether these two groups treat such children with similar therapeutic approaches. To address these questions, we conducted a survey of child and adolescent psychiatrists and nonphysician therapists who identified themselves as having an interest and/or expertise in this area.

Methods

Subjects

In order to include an appropriate cohort of professionals to survey (i.e., clinicians treating traumatized children), we obtained membership directories of several professional organizations which serve this population. We selected the two directories which allowed members to most accurately specify their type of practice.
The study was a mailed survey sent to 207 child and adolescent psychiatrists who were members of the American Academy of Child and Adolescent Psychiatry (AACAP) and 460 nonphysician members of the International Society for Traumatic Stress Studies (ISTSS). Participants were selected from the 1998 AACAP Membership Directory, on the basis of their self-identified Special Practice Interests, and from the ISTSS 1997–1998 Membership Directory, on the basis of their self-identified Victim/Survivor Population Groups and Interest Areas. Psychiatrists who belonged to both organizations received only one survey. We included all AACAP members who identified themselves as having a special practice interest in bereavement, dissociative disorder, abuse/neglect, PTSD, sexual abuse, or violence. We included all ISTSS members in the US who identified themselves as working with children or adolescents, or who identified Child Trauma as an interest area.

This study was submitted for Institutional Review Board approval. Because the study involved only anonymous voluntary professional responses, the study was determined to be exempt from IRB review.

Instrument

The survey was a 4-page, 19-medical or 20-nonmedical item questionnaire written by the investigators to identify clinical practices used by psychiatrists and nonmedical therapists to treat children and adolescents with PTSD. The survey was an anonymous, one-time mailing with no financial compensation for participation; in order to maximize the number of respondents, we made the survey as brief as possible. The first question asked whether the respondent treated children with PTSD or significant PTSD symptoms in his/her practice. Respondents who answered negatively were directed to skip to demographic questions at the end of the survey. Additional questions addressed further details about the respondent’s practice, pharmacologic and nonpharmacologic treatment interventions for childhood PTSD, and inquired about what interventions the respondent had used or recommended others to use, how effective these were in treating PTSD in general, and which interventions were most effective in treating each of the three categories of PTSD symptoms (re-experiencing, avoidance/numbing, and hyperarousal). Open-ended comments about effective treatment for childhood PTSD were also solicited. Demographic information including age, gender, ethnicity, type of practice and (for nonmedical respondent) professional discipline was also requested. Respondents were instructed to write to the investigators under separate cover to receive the results of the survey, in order to preserve anonymity.

Procedure

Surveys were mailed to the 667 identified participants in the summer of 1998. Surveys were sent with a one-page introductory letter which explained the purpose of the survey and included the names and addresses of the first two authors. A self-addressed stamped envelope was included in the mailing for return of the survey. Responses to the survey were collected until March 1, 1999. Responses were then entered and data analyses were conducted.
Data analysis

Demographic information between the two groups was compared through the use of \( \chi^2 \) analyses. Unpaired \( t \) tests were utilized to analyze numerical ratings of medication effectiveness. All other data were analyzed through the use of \( \chi^2 \) analyses with Yates’ correction for continuity, to evaluate differences between the two groups. Because of the large number of comparisons conducted, the Bonferroni correction was used to minimize the chance of Type 1 errors.

Results

A total of 240 completed surveys were returned. An additional 18 were returned due to being undeliverable. The overall response rate was 36.9% (240/649). There were 89 medical and 151 nonmedical respondents, indicating 42.9% medical and 34.2% nonmedical response rates. These response rates are consistent with that expected for an uncompensated, anonymous one-time mailed survey. Of the completed surveys, 81 (12 medical and 69 nonmedical) indicated that the respondent did not treat children with PTSD. One hundred fifty-nine respondents (77 medical and 82 nonmedical) endorsed treating children and adolescents with PTSD, and responded to the treatment practice questions. Mean age was 48.6 years. Ethnicity was 88% Caucasian, 2.5% African American, 3.8% Asian, 3.8% Hispanic, and 1.9% American Indian. Sixty-one percent were in private practice, 17.6% in academic practice, 15% worked in public clinic/hospital settings, and 5.1% worked primarily as consultants. Among the nonmedical group, 40.2% had a Ph.D. or Psy.D., 21.9% had an MA or MS, 14.6% had an MSW, 6.1% had a BA/BS, and 17% had another or did not specify highest degree. There were no significant differences between the two groups with regard to ethnicity, age, or type of practice. There was a significant difference between the two groups with regard to gender (\( \chi^2 = 8.96, p < .01 \)), with the medical group having an equal gender distribution and the nonmedical group being predominantly female. There were no significant differences in any demographic characteristics between those who did versus those who did not treat children with PTSD.

Thirteen types of therapy were included in the survey. Respondents were first asked to endorse all modalities which they have used or recommended others to use for childhood PTSD. Percentages endorsing each type are presented in Figure 1. Significant differences between medical and nonmedical respondents were found in psychodynamic/psychoanalytic, EMDR, and pharmacotherapy treatments.

Respondents were also asked to rate their first, second, and third line choices of treatment for children with PTSD. Responses were given weighted values, with first choice being given three points, second choice given two points, and third choice given one point. Responses to each type of treatment were totaled, and then converted to a 100 point scale, for ease of comparison between groups, with 100 indicating unanimous selection by all respondents as first line treatment. Results are presented in Figure 2. Most preferred therapies for medical respondents (in descending order) were pharmacotherapy, psychodynamic/psychoanalytic, and CBT, whereas for nonmedical respondents most preferred treatments were CBT, family,
and nondirective play therapy. There were significant differences in the responses of the two groups with regard to psychodynamic, family, EMDR, Creative Arts, CBT, nondirective play, and pharmacotherapy treatments.

Percentages of respondents endorsing each modality as their first choice treatment modality are presented in Figure 3. Medical respondents most frequently endorsed psychodynamic and CBT interventions as first-line treatment, whereas the nonmedical respondents most frequently endorsed CBT and nondirective play therapy as first line treatment. Significant differences were found between the two groups with regard to EMDR and pharmacotherapy.

Respondents also rated which modality they found most effective for treating reexperiencing, avoidant/numbing, and hyperarousal symptoms. Results are presented in Table 1. For each of these symptom clusters, medical respondents rated psychodynamic and pharmacologic interventions significantly higher than nonmedical respondents, whereas EMDR was rated significantly higher by nonmedical respondents than by medical respondents for all three categories of PTSD symptoms.

With regard to pharmacotherapy, 73 of 77 (95%) medical respondents endorsed using this modality for children with PTSD, whereas 57 of 82 (69.5%) nonmedical respondents endorsed providing therapy for children with PTSD who were also prescribed medication for PTSD symptoms. These respondents were asked which medications they had used or seen used for childhood PTSD; specific examples of each medication class were included in order to assure accurate identification of medication class. Percentages of each group which had
used or seen used each medication type are presented in Figure 4. Significant differences were found between the two groups with regard to alpha and beta blockers.

These respondents were then asked to rate the effectiveness of each medication in decreasing overall PTSD symptomatology. A 5-point Likert scale was utilized, with 1 indicating “significantly worsened PTSD symptoms,” 2 indicating “mildly worsened PTSD symptoms,” 3 indicating “neither worsened nor improved PTSD symptoms,” 4 indicating “mildly improved PTSD symptoms,” and 5 indicating “significantly improved PTSD symptoms.” The medical group’s mean ratings and standard deviations for each medication class were as follows (in descending order of efficacy): SSRI = 4.17(0.70), Antipsychotic = 4.17(1.15), Alpha-agonist = 3.75(0.92), TCA = 4.05(0.86), Anxiolytic = 3.79(0.87), Anticonvulsant = 3.72(1.21), Other = 3.50(1.76), Beta-antagonist = 3.48(0.97), Lithium = 3.33(0.87), Narcotic = 1.67(2.08), and MAOI = 1.50(0.71). Nonmedical mean ratings and standard deviations, in descending order were as follows: Other = 4.33(0.52), SSRI = 4.06(0.74), Alpha-agonist = 3.92(0.82), Anxiolytic = 3.76(0.90), TCA = 3.66(0.75), Lithium = 3.33(0.87), Anticonvulsant = 3.40(0.80), Beta-antagonist = 3.00(0.81), and MAOI = 2.75(0.35). Both groups rated SSRIs as the most effective medication class for treating overall PTSD symptoms in children. Significant differences were found between the two groups with regard to ratings of tricyclics, beta blockers, monoamine oxidase inhibitors, antipsychotic, and “other” medication classes. The most frequently identified medications written in under the “Other” category were Wellbutrin, Effexor, and Naloxone.

Finally, these respondents were asked which medication they found most effective for
treating reexperiencing, avoidant/numbing, and hyperarousal symptoms in children. A substantial number of nonmedical respondents did not complete these items. For reexperiencing symptoms, medical respondents most frequently endorsed SSRI (46.6%), alpha-agonist (16.4%), and TCA (15.0%) as the most effective medication class; for avoidance/numbing, they most frequently endorsed SSRI (49.3%) and TCA (20.5%), and for hyperarousal they most frequently endorsed alpha agonist (38.3%), SSRI (17.8%), anxiolytic (12.3%), and TCA (10.9%) medications. All other classes received less than 10% of medical respondents’ endorsement. Significant differences were that medical respondents more frequently endorsed SSRI medications for reexperiencing symptoms, tricyclic antidepressants for avoidance/numbing symptoms, and alpha agonists for hyperarousal symptoms than did nonmedical respondents.

Discussion

This study attempted to elucidate current practices in treating traumatized children and adolescents with PTSD symptoms. Several findings are particularly noteworthy. First, it is clear that, despite the absence of controlled medication trials for childhood PTSD, many child psychiatrists use psychotropic medications to treat this disorder (although only 17% of those surveyed prefer this as their first line treatment choice). If this sample of respondents is representative of current child psychiatric practice among those with a special interest in
Table 1. Percentage of respondents endorsing most effective treatment for re-experiencing, avoidance/numbing, and hyperarousal symptoms by discipline†

<table>
<thead>
<tr>
<th></th>
<th>Re-experiencing</th>
<th>Avoidance/Numbing</th>
<th>Hyperarousal</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Medical</td>
<td>Non-medical</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Psychodynamic</td>
<td>23.3</td>
<td>6.1</td>
<td>7.65*</td>
</tr>
<tr>
<td>Family</td>
<td>6.5</td>
<td>4.9</td>
<td>.19</td>
</tr>
<tr>
<td>Group</td>
<td>5.2</td>
<td>3.7</td>
<td>.22</td>
</tr>
<tr>
<td>EMDR</td>
<td>3.9</td>
<td>22.0</td>
<td>11.29***</td>
</tr>
<tr>
<td>Crisis Counseling</td>
<td>0</td>
<td>2.4</td>
<td>1.9</td>
</tr>
<tr>
<td>Creative Art</td>
<td>2.6</td>
<td>15.9</td>
<td>8.16*</td>
</tr>
<tr>
<td>CBT</td>
<td>30.0</td>
<td>34.1</td>
<td>.33</td>
</tr>
<tr>
<td>Supportive</td>
<td>6.5</td>
<td>7.3</td>
<td>.04</td>
</tr>
<tr>
<td>Nondirective Play</td>
<td>10.4</td>
<td>17.1</td>
<td>1.48</td>
</tr>
<tr>
<td>Pharmacotherapy</td>
<td>41.6</td>
<td>3.7</td>
<td>33.23***</td>
</tr>
<tr>
<td>Hypnosis</td>
<td>1.3</td>
<td>7.3</td>
<td>3.41</td>
</tr>
<tr>
<td>Biofeedback</td>
<td>0</td>
<td>1.2</td>
<td>.94</td>
</tr>
<tr>
<td>Other</td>
<td>11.7</td>
<td>14.6</td>
<td>.30</td>
</tr>
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</table>

†As some respondents gave more than one response, totals add up to > 100.
*Chi-square with Yates correction for continuity $p < .01$; **$p < .001$; ***$p < .0001$. 
treating childhood PTSD, an overwhelming majority (95%) prescribe medication for this disorder. This finding argues strongly for the need to conduct randomized controlled trials (RCT) of psychotropic medications for this disorder, particularly of antidepressants and alpha-adrenergic agonists (the most commonly used medications in this sample). To our knowledge, no such RCTs have yet been funded.

Cognitive behavioral therapy (CBT) was the most preferred first line treatment among nonmedical and the second most preferred among medical respondents for treating childhood PTSD symptoms. This may reflect the fact that clinicians identified as having special practice interest in treating these children have kept abreast of recent research which has supported the efficacy of this treatment modality for this population. It may also reflect recent efforts of researcher-clinicians in this field to disseminate CBT treatment techniques through national and international presentations (Cohen & Mannarino, 1998a; Deblinger & Cohen, 1998; Kolko, 1998; March, Amaya-Jackson, Murray, & Schulte, 1996).

Despite the findings of at least two studies which demonstrated that CBT was superior to nondirective play/nondirective supportive therapy in decreasing PTSD and other symptoms in abused children (Cohen & Mannarino, 1996, 1998b), many clinicians continue to favor the use of less directive interventions for traumatized children. Specifically, medical respondents to this survey rated psychodynamic/psychoanalytic therapy as the most preferred overall type of therapy and the most preferred first line treatment choice for this population, while nonmedical respondents rated nondirective play therapy third and second in these categories, respectively. It is important for researchers to remember that randomized controlled trials conducted in research settings may not tell the whole story about effective interventions for resolving symptomatology, and that experienced therapists may detect important therapeutic benefits and changes not yet measured by research trials.
The results of this survey indicate that EMDR has become an increasingly accepted treatment modality for childhood PTSD among nonmedical therapists, although very few physicians endorse its use. The state of empirical knowledge with regard to EMDR is quite comparable to that of psychotropic medications, in that adult clinical trials have provided some support for the use of each modality for PTSD, but these studies have been far from unanimous in their demonstration of efficacy (Friedman, 1997; Pitman et al., 1996; Wilson, Becker, & Tiner, 1995). The preference of medical respondents for medication may indicate the overall comfort that physicians have with using pharmacotherapy with children; it is also possible that child psychiatrists are frequently consulted by other therapists specifically to provide pharmacotherapy and for this reason, have not had the opportunity to use other treatments with some of these children. However, this does not explain the differential medical preference for psychodynamic therapy over EMDR. It is possible that physicians are more resistant to the use of newer treatment modalities than nonmedical therapists; it is also possible that EMDR has been less discussed in medical than nonmedical journals. Larger controlled trials of EMDR are certainly indicated, given the procedure’s growing popularity (Muris & Merckelbach, 1999).

The section of the survey which solicited open-ended comments about effective treatments provided some anecdotal information about how clinicians decided upon which intervention to use. Several respondents commented on the need to use “whatever works for a particular child” in treating childhood PTSD. One nonphysician commented, “Start with CBT then grow more eclectic if the need arises.” Among medical respondents, many commented that they select specific medications according to the child’s symptoms (for example, “clonidine for poor sleep”). Very few respondents appeared to be strongly committed to using only one type of treatment, as evidenced by comments such as “it depends entirely on the specific situation.”

The current survey did not allow us to determine whether clinicians use significantly different approaches for treating PTSD symptoms than they use for treating other psychiatric conditions in children. It is therefore possible that some therapists favor treatment modalities they are most comfortable with (due to previous training or experience) rather than using different treatment modalities for different symptoms. However, the widespread use of EMDR among nonmedical clinicians would tend to counter the argument that therapists are faithful to whatever modality they were most exposed to during their training (because EMDR training was not widely available until the last few years).

Limitations

This study has several limitations. Although the response rate was consistent with similar surveys, a relatively small number of treating clinicians ultimately responded to the survey. Therefore, it is difficult to know how generalizable these findings are to all therapists treating childhood PTSD. One could argue that those most interested or involved in treating this population were most likely to respond to this survey, and therefore the present results are an accurate reflection of current practices of those most involved in the field, but there is no way to know whether this is true. At best, these findings may reflect clinical practice among members of AACAP and ISTSS who treat children with PTSD. It would be helpful to
replicate this survey on a larger scale in order to address this issue of generalizability. Additionally, because of limited funding, this was by necessity an uncompensated survey with a single mailing. We also felt compelled to make the survey quite short, on the assumption that increased length would result in a decreased response rate. There are many more questions we would like to have addressed, particularly how clinicians make decisions about what treatment interventions to use with a specific child. Despite these limitations, we believe that the results of the present survey are important in that they describe a cross-sectional perspective of current treatment practices of a childhood psychiatric disorder which is underdiagnosed and often not treated at all.

Clinical implications

The clearest clinical implications of these findings are that clinical practice for childhood PTSD is quite diverse, and that it has extended well beyond our empirical knowledge about effective treatments for this disorder. To some degree this may reflect the paucity of empirical treatment studies for PTSD in children; that is, in the absence of a convincing body of empirical literature showing superior efficacy of a specific treatment modality, clinicians will base treatment decisions on more subjective criteria (what they are most comfortable using, what has worked best in their own experience, etc.). There is no clear consensus among the clinicians surveyed about effective treatment for this disorder. The widespread clinical use of newer treatments such as SSRI medication and EMDR, which have no demonstrated efficacy for this population, raise significant questions about how such clinical decisions are made. Well designed studies involving head-to-head comparisons of commonly used interventions would greatly assist such decision-making, and improve our ability to provide optimal clinical care to traumatized children.

Acknowledgments

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References


**RÉSUMÉ**

**Objectif:** Cette étude enquête sur les pratiques dans le traitement du syndrome de stress post-traumatique (PTSD) chez les pédo-psychiatres et chez les thérapeutes non-médecins s’intéressant personnellement au traitement des traumatismes chez les enfants.

**Méthode:** Une enquête anonyme a été envoyée à 207 pédo-psychiatres ("médi cal") et à 460 thérapeute non-médecins ("non-médical") pour les interroger sur leur façon habituelle de traiter les enfants présentant un syndrome post-traumatique (PTSD).

**Résultats:** 247 réponses ont été reçues: pour 77 médecins et 82 non-médecins traitant couramment des enfants présentant un syndrome post-traumatique, un grande variété de modalités étaient utilisées. Les modalités préférées par la plupart des médecine étaient la pharmacothérapie, la thérapie psychodynamique ou comportementale-cognitive. Les non-médecins préféraient pour la plupart la thérapie...
comportementale-cognitive, la thérapie familiale ou la thérapie non-directive par le jeu. 95% des réponses venant de médecins faisaient état de recours à la pharmacothérapie pour ce trouble, la médication préférée pour traiter le syndrome de stress post traumatique chez l’enfant étant les inhibiteurs sélectifs de la recapitation de la sérotonine et agonistes alpha adrénergiques. On a identifié plusieurs différences significatives entre les pratiques médicales et non-médicales.

**Conclusions:** Il y a peu de consensus clinique en ce qui concerne l’efficacité des nombreuses modalités utilisées pour traiter les enfants qui ont subi un traumatisme et qui présentent un syndrome de stress post-traumatique. La recherche empirique est particulièrement nécessaire pour évaluer l’efficacité de la pharmacothérapie et de la thérapie visuelle (EMDR).

**RESUMEN**

**Objetivo:** Este estudio encuestó las prácticas en el tratamiento del DSPT infantil entre psiquiatras infantiles y terapeutas no médicos con interés autoidentificado en el tratamiento de niños traumati-zados.

**Método:** Se envió por correo una encuesta anónima a 207 psiquiatras infantiles (“médicos”) y 460 terapeutas “no médicos” preguntándoles sobre las intervenciones que usaban actualmente para tratar a los niños con DSPT.

**Resultados:** Se recibieron 247 respuestas: en las 77 respuestas médicas y las 82 no médicas de terapeutas que tratan niños con DSPT en el presente, se utilizaron una variedad de modalidades. Las modalidades preferidas entre los encuestados médicos estaban farmacoterapia, psicodinámica, y terapia conductual-congnitiva. Las modalidades preferidas entre los encuestados no médicos fueron conductual-cognitiva, familia, y terapia de juego no directiva. El noventa y cinco porcentaje de los encuestados médicos usaron farmacoterapia para este desorden; los medicamentos que la mayoría prefirió para tratar el DSPT infantil fueron inhibidores selectivos de la reabsorción de la serotoninina y agonistas alfa-adrenérgicos. Se identificaron varias diferencias significativas entre las prácticas médicas y no médicas.

**Conclusiones:** Existe poco consenso clínico en relación con la efectividad de muchas de las modalidades utilizadas en el trata miento de niños traumatizados que presentan síntomas de DSPT; se necesitan particularmente investigaciones empíricas para evaluar la eficacia de la farmacoterapia y el EMDR.