

Post-Traumatic Stress Symptoms in Foster Children Following Maltreatment and Neglect

Sylvia H. Oswald | Jörg M. Fegert | Lutz Goldbeck

Department of Child and Adolescent Psychiatry/Psychotherapy, Ulm University Medical Center, Germany

Key Words

Foster children · Posttraumatic stress disorder · Trauma assessment

Summary

Background: Foster children have often experienced traumatic situations in their biological families, which made it necessary to place them in family foster care. Nevertheless, there is little research on posttraumatic stress symptoms in this risk population. **Patients and Methods:** Twenty 7–16 year old foster children (10 boys, 10 girls) from the population of an outpatient psychiatric clinic were compared with 20 matched patients living with at least one biological parent regarding traumatic experiences and posttraumatic stress symptoms. The diagnostic assessment was realized with the UCLA PTSD Reaction Index for DSM-IV and the Schedule for Affective Disorders and Schizophrenia for School-Age Children, Present and Lifetime Version, K-SADS-PL. **Results:** Foster children often experienced chronic and multiple traumata such as maltreatment and/or neglect ($n = 19$); control children, however, more often reported single and circumscribed traumata ($n = 9$). As compared to the control children, the foster children showed a significantly higher prevalence of posttraumatic stress symptoms. **Conclusions:** Due to their history of maltreatment and neglect, foster children develop posttraumatic stress disorders more often. Psychiatric diagnostics of foster children should include an assessment of their trauma history and posttraumatic stress symptoms. If indicated, a trauma-focused psychotherapy should be offered.

Schlüsselwörter

Pflegekinder · Posttraumatische Belastungsstörung · Trauma · Diagnostik

Zusammenfassung

Hintergrund: Pflegekinder haben häufig traumatisierende Situationen erlebt, die ihre Fremdunterbringung erforderlich machten. Dennoch gibt es bislang kaum Untersuchungen zu Traumafolgestörungen in dieser Risikopopulation. **Patienten und Methoden:** Die traumatische Belastung bei 20 7- bis 16-jährigen Pflegekindern (10 Jungen, 10 Mädchen) aus der Inanspruchnahmepopulation einer kinder- und jugendpsychiatrischen Sprechstunde wurde mit einer hinsichtlich Alter und Geschlecht vergleichbaren klinischen Kontrollgruppe von 20 Patienten, die bei wenigstens einem biologischen Elternteil leben, verglichen. Die Diagnostik erfolgte anhand des UCLA PTSD Reaction Index für DSM-IV und des semi-strukturierten Diagnostikinterviews K-SADS Present und Lifetime Version. **Ergebnisse:** Bei den Pflegekindern liegen häufig multiple und chronische Traumata durch Misshandlung und/oder Vernachlässigung vor ($n = 19$); die Kinder der Kontrollgruppe hingegen weisen häufiger einmalige, umschriebene Traumata auf ($n = 9$). Die Prävalenz posttraumatischer Stresssymptome bei Pflegekindern ist signifikant höher als bei den Kindern der Kontrollgruppe. **Schlussfolgerungen:** Pflegekinder entwickeln vor dem Hintergrund ihrer Misshandlungs- und Vernachlässigungsvorgeschichte gehäuft Traumafolgestörungen. Werden Pflegekinder wegen psychischer Auffälligkeiten zur Diagnostik vorgestellt, sollte daher eine gezielte Traumadiagnostik und bei Bedarf eine traumafokussierte Psychotherapie erfolgen.

Introduction

Foster children, because of their stressful past history, are at risk for developing behavioral and developmental disorders. In their biological families, they often had massively anxiety-provoking experiences such as neglect, maltreatment, abuse, or domestic violence, which made foster care necessary. In many cases, it is only after the failure of outpatient counseling that foster care is provided for the child, so that these children first endure a long phase of traumatic experiences within the family. In 2006, 78% of the children in Germany who were in full-time foster care had previously received outpatient counseling [Statistisches Bundesamt Deutschland (German Federal Statistical Office), 2007]. At the end of 2007, there were 49,673 children in full-time foster care in Germany [Statistisches Bundesamt Deutschland, 2009]. A survey conducted in England showed that as of March 31, 2008 out of 59,500 foster children, 36,700 (61.7%) had been placed in foster care because of abuse or neglect. Family court decisions on placement in foster care testify to a danger to the children's welfare in their original home environments (22% of cases in 2006) [Statistisches Bundesamt Deutschland, 2007]. In the U.S.A., substance abuse by the parents is one of the most common reasons for placement of the children in foster care [Chernoff et al., 1994]. In 2004, 7 out of 10 abused or neglected children had substance-abusing parents [National Center on Addiction and Substance Abuse at Columbia University, 2004].

Epidemiological studies show a high prevalence of mental disorders among foster children. In the U.S.A., with a sample of 373 17-year-old foster children, the Diagnostic Interview Schedule for DSM-IV showed that 61% had had a lifetime prevalence of mental disorders [McMillen et al., 2005]. Thirty-two percent of the adolescents had exhibited multiple mental disorders during their lifetimes. In the year preceding the survey, 27% of the adolescents had suffered from major depression, 6% from mania, 14% from post-traumatic stress disorder (PTSD), 47% from social conduct disorder, and 20% from attention deficit and hyperactivity disorder (ADHD). A county physician found, in interviews with 6- to 12-year-old American foster children, their foster parents, and their teachers, that in 80% of cases ($n = 203$) there was at least 1 mental disorder [Zima et al., 2000]. Forty-one percent of the children showed disruptive behavior disorders, 32% affective disorders, 20% anxiety disorders, 13% adjustment disorders, and 12% learning disorders. In Switzerland, a study of children and adolescents representative of the general population revealed a 22.5% point prevalence of mental disorders [Steinhausen et al., 1998]. Of these children and adolescents, 12.5% had multiple mental disorders.

Due to foster children's frequent prior traumatic experiences, it seems likely that they are at a higher risk for developing PTSD. PTSD is characterized by re-experiencing the symptom cluster (e.g., recurrent thoughts about the traumatic event), avoidance and blunted affect (e.g., avoidance of places

or things that remind one of the trauma, feelings of alienation, a limited range of affect), and hyperarousal (e.g., irritability, sleep disturbances, hypervigilance, nervousness, etc.). According to the ICD-10, the WHO's multiaxial classification schema for mental disorders, the criteria required for a diagnosis of PTSD are: 1 symptom of re-experiencing the trauma, 1 of avoidance, and 2 of hyperarousal [Remschmidt et al., 2002]. The DSM-IV [Sass et al., 2009] requires 1 symptom of re-experiencing, 3 of avoidance, and 2 of hypervigilance, thereby raising the threshold for diagnosis of PTSD. However, Carrion et al. [2002] have shown that traumatized children with partial symptomatology can also have a clinically significant, functional psychosocial impairment. In Germany, the Bremen Adolescent Study found that 1.6% of the 1,035 students tested, ages 12–17, from the general population, had developed PTSD sometime during their lives [Essau et al., 1999].

Although many foster children have had traumatic experiences, we found, in a systematic review of the literature, just one study that dealt specifically with PTSD in foster children [Oswald et al., in press]. Dubner and Motta [1999] studied the incidence of PTSD in three groups of foster children in the U.S.A., based on a screening procedure and a semi-structured clinical interview: (1) foster children who had been sexually abused, (2) foster children who had been physically abused, and (3) foster children who had not experienced either sexual or physical abuse. In the first group, 64% of the children met the criteria for PTSD; in the second group, 42%; and in the third group, 18%. The high prevalence in the third group suggests that these foster children were exposed to other traumatic experiences, such as neglect or domestic violence.

Disorders resulting from trauma, so-called 'post-traumatic disorders,' are often overlooked in clinical diagnosis, if the patients present with nonspecific symptoms and say little spontaneously about their past history. With regard to the high risk of foster children developing PTSD, the aim of the present study is to investigate the prevalence of post-traumatic stress symptoms in foster children at an outpatient psychiatric clinic. It is assumed that foster children have more often experienced potentially traumatizing events and more often exhibit post-traumatic stress symptoms than do children who live with at least one biological parent.

Patients and Methods

Sample

A consecutive sampling of foster children who were patients at the child and adolescent outpatient clinic of the Ulm University Medical Center between January 2008 and April 2009 was compared with a clinical control group of children who live with at least one biological parent and who were attending the same outpatient clinic. The control patients were recruited such that each foster child from the research group was matched by age (± 6 months) and gender with a child chosen from the clinic's registration documents (matched-pair method). Data collection was conducted as part of the initial clinical examination. The study included patients 6–18 years of age; the purpose and approach of the study were ex-

Tab. 1. Traumata in foster children and control children in the child and adolescent outpatient clinical psychiatric population, recorded with the Trauma Exposure/Loss Profile

	Foster children	Control children	p
Traumatising event present	20 (100%)	9 (45%)	<0.001
<i>Chronic/repetitive types of trauma</i>			
Neglect	17	1	<0.001
Physical abuse	11	1	0.003
Emotional abuse	4	0	0.106
Domestic violence	2	0	0.244
Life-threatening physical illness	0	5	0.024
<i>Circumscribed types of trauma</i>			
Serious accident	0	1	1.0
Violence at school	0	1	1.0
Traumatic death	4	0	0.106
Placement in foster care	20	0	<0.001
<i>One type of trauma</i>	1	9	0.004
<i>Multiple traumata (multiple types of trauma)</i>	19	0	<0.001
2 events	5	0	
3 events	6	0	
4 events	5	0	
5 or more events	3	0	
One-time occurrence	1	7	0.022
Chronic experience (repeated incidents over a prolonged period)	19	2	

plained to the parent or guardian, who gave their consent. The study was approved by the Ethics Committee of the University of Ulm.

From a sample population of 33 foster children who were being treated at the child and adolescent psychiatry clinic of the Ulm University Medical Center, 20 foster children were recruited for the study (10 boys, 10 girls, age 7-16 years, mean value, MV = 10.4 years, standard deviation, SD = 3.0). Five parents or guardians did not agree to participation in the study, and 8 could not be reached.

The control group, randomly selected, accordingly consisted of 20 patients who live with at least one biological parent (10 boys, 10 girls, age 7-16 years, MV = 10.5 years, SD = 2.9). Seventy percent of the parents who were consulted agreed to participation in the study. If consent was not given for a patient to participate, the next appropriate patient, by age and gender, was selected. Seven foster children and 1 patient in the control group did not fill out the UCLA PTSD Reaction Index for DSM-IV [Steinberg et al., 2004]. The reasons were that the patients were too young, mentally retarded, or were so young when exposed to the trauma that they could not remember it. These children were given the PTSD module of the K-SADS Present and Lifetime Version diagnostic interview, if the parental evaluation was noteworthy.

Rating Instruments

To record traumatic events in the patient's past history, we used a German translation of the National Child Traumatic Stress Network's Trauma/Loss Exposure Profile [Oswald and Goldbeck, 2008]. It consists of a differentiated list of circumscribed and chronic types of trauma, specifies trauma according to various criteria, such as whether the child was a witness to or victim of a traumatic event, and it allows one to represent the duration of exposure on a timeline.

If a traumatic experience had occurred in the past, we conducted an exploratory examination for PTSD symptoms, using the UCLA PTSD Reaction Index for DSM-IV. This questionnaire compiles the symptoms of PTSD according to DSM-IV, and exists in parallel versions for children, adolescents, and parents. The original American version of the questionnaire displays a high convergent validity ($r = 0.70$) with the PTSD

module of the Schedule for Affective Disorders and Schizophrenia for School-Age Children, Epidemiological Version (K-SADS-E) [Orvaschel, 1985], high internal consistency (Cronbach's $\alpha = 0.90$), and high test-retest reliability ($r_{tt} = 0.84$). The questionnaire was used in a German translation [Arbeitsgruppe Psychotraumatologie (Working Group on Psychotraumatology) of the University of Ulm Medical Center, 2008]. The German translation currently has no quality control criteria. The lead researcher helped children with a developmental age of 7-12 to fill out the questionnaire; children and adolescents age 13 and older completed it independently, as did the caregivers. The caregivers were asked to fill out the questionnaire completely, even if no prior traumatizing event had occurred, to allow a comparison of the behavior of children in both samples.

Given evidence of at least subclinical symptomatology (1 symptom each of re-experiencing, avoidance/blunted affect, and hyperarousal, with a designation of 'seldom'), the PTSD module of the semi-structured diagnostic interview Schedule for Affective Disorders and Schizophrenia for School-Age Children - Present and Lifetime Version (K-SADS-PL) was conducted separately with the child (7 years and older) and the caregiver [Delmo et al., 1998]. The interviews were conducted by trained psychology students and child and adolescent psychotherapists. The inter-rater reliability of the American version is 93-100% [Kaufmann et al., 1997]. Examination for other mental disorders was conducted according to the standards of the child and adolescent outpatient clinic. These included a child and adolescent psychiatric history and diagnostic report, using the ICD-10 and DSM-IV diagnostic system for mental disorders [Döpfner et al., 2008], and the multi-axial diagnostic schema for mental disorders of children and adolescents according to ICD-10 [Remschmidt et al., 2002]. Where DSM-IV criteria were met for a diagnosis of PTSD, other mental disorders were converted to a uniform classification standard using the DSM-IV nomenclature.

Data Analysis

Statistical analysis was performed with the SPSS 16.0 software package. Mean comparisons were made with t-tests for independent samples and frequency comparisons with χ^2 tests.

Fig. 1. Post-traumatic stress symptoms in the foster child group (n = 18) and in the control group (n = 20), in the parent questionnaire of the UCLA PTSD Reaction Index.

B1: My child has very unpleasant thoughts, images, or memories of the sounds of what happened, even though he/she doesn't want them to. B1: My child plays games or draws things that are part of what happened. B2: My child has bad dreams about the event or about other things. B3: My child has flashbacks to the event; he/she acts or feels as though it were still happening. B4: My child is very nervous, anxious, or sad when something reminds him/her of what happened. B5: My child has physical problems when he/she remembers what happened, such as heart palpitations, headaches, or abdominal pain.

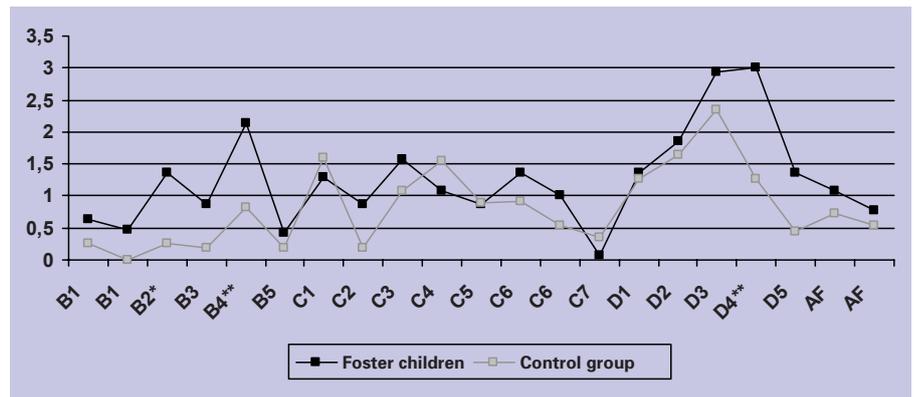
D1: My child finds it difficult to get to sleep or wakes up frequently at night. D2: My child feels irritable, angry, or upset. D3: My child has difficulty concentrating or paying attention. D4: My child is cautious about dangers or things that frighten him/her. D5: My child is easily startled, for example if he/she hears a loud noise or is taken by surprise.

C1: My child tries not to talk about, think about, or feel anything about what happened. C2: My child tries to stay away from the people, places, or things that remind her/him of the event. C3: My child finds it hard to remember important parts of what happened. C4: My child would rather be alone than with his/her friends.

C5: My child feels lonely and not as close to other people as before. C6: My child has trouble feeling happiness or love. C6: My child has trouble feeling sadness or anger.

C7: My child thinks that he/she will not live for long.

AF: My child thinks that what happened is partly his/her fault. AF: My child is afraid that the bad event will happen again.



Results

Trauma Case History

All 20 foster children had had traumatic experiences, but only 45% of the patients who live with at least one parent (the control group) had experienced a traumatizing event. One foster child had had a circumscribed, single trauma; 19 foster children had experienced multiple and chronic traumata. But the control children had only had circumscribed, single traumata (table 1). While foster children were exposed to significantly more frequent neglect and physical abuse, the control patients reported significantly more frequent life-threatening physical illnesses.

Post-Traumatic Stress Symptoms

According to the parental description based on the UCLA PTSD Reaction Index for DSM-IV, the foster children (n = 18) had significantly more symptoms of re-experiencing (cluster B, $t = 2.22$, $p = 0.037$) and hyperarousal (cluster D, $t = 2.19$, $p = 0.039$) than those in the control group (n = 20). On the item level, the foster children had a significantly greater symptom value than the control group, as the following items show: D4: 'My child is cautious about dangers or things that frighten him/her' ($t = 3.17$, $p = 0.004$); B4: 'My child becomes very agitated, anxious, or sad if she/he remembers what happened' ($t = 2.58$, $p = 0.17$); and B2: 'My child has bad dreams about the event or about other things' ($t = 2.31$, $p = 0.033$). Overall, using the above-mentioned evaluation criteria, the foster parents' descriptions of 5 foster children were unremarkable, while partial clinical symptomatology was described in 9 fos-

ter children (i.e., the criteria were met by two clusters), and there was full clinical symptomatology of PTSD in 4 children. In the control group, 14 children were described as unremarkable, 5 children had partial symptomatology, and 1 child had full symptomatology (figs. 1, 2).

In the self-description of the children and adolescents using the UCLA PTSD Reaction Index, on the item level, the foster children had a significantly higher value for item C3: 'It is hard for me to remember important parts of what happened' ($t = 2.48$, $p = 0.027$). At the level of symptom clusters, however, no significant differences were found between the foster children (n = 13) and the control group (n = 19). Four foster children described themselves as unremarkable, 3 foster children described partial symptomatology, and 6 foster children full symptomatology. In the control group, 14 children described themselves as unremarkable, 4 children described partial symptomatology, and 1 child full symptomatology (figs. 3, 4).

Diagnoses

The K-SADS-PL was conducted with the children whose questionnaires suggested at least a subclinical level of post-traumatic stress symptoms. Three foster children were diagnosed with PTSD according to the DSM-IV, through this semi-structured interview. By contrast, none in the control group were diagnosed with PTSD. A statistical frequency comparison was not done because of the small cell frequency.

The other clinical diagnostics revealed three mental disorders in 5 foster children (25%), two mental disorders in 4 foster children (20%), one mental disorder in 10 foster children (50%), and 1 foster child with no mental disorder (5%). The

Fig. 2. Post-traumatic stress symptoms, represented according to the DSM-IV-defined areas of re-experiencing symptoms (cluster B), avoidance (cluster C), and hypervigilance (cluster D), in the foster children group (n = 18) and the control group (n = 20), based on parental information in the UCLA PTSD Reaction Index.

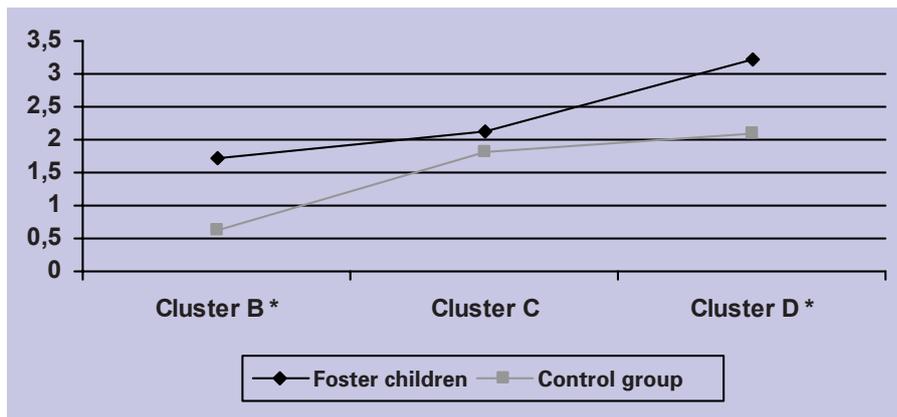


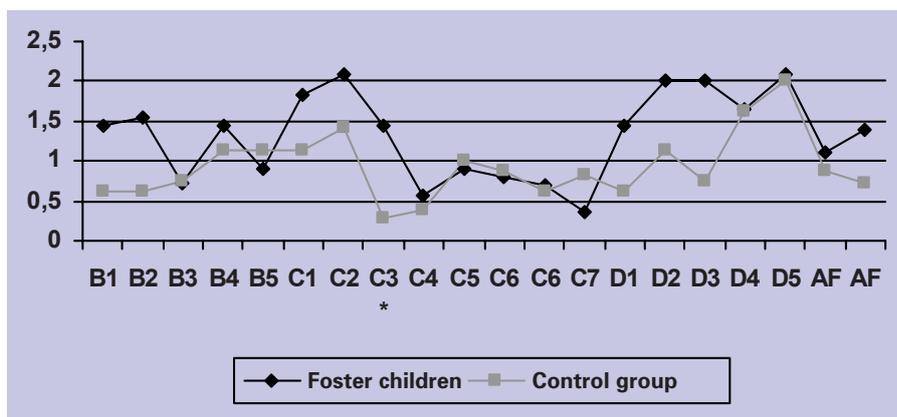
Fig. 3. Post-traumatic stress symptoms in the foster children group (n = 13) and the control group (n = 19), based on child and adolescent questionnaires of the UCLA PTSD Reaction Index.

B1: Bad thoughts, images, or sounds from the event pass through my mind, although I don't want them to. B2: I dream about what happened, or have other bad dreams. B3: I feel as though I lived through the event again. B4: If something reminds me of the event, I get very confused, anxious, or sad. B5: If something reminds me of the event, I have strong physical feelings, for example, my heart beats fast, my head or my stomach hurts.

C1: I try not to talk about, think about, or feel anything about what happened. C2: I try to stay away from the people, places, or things that remind me of the event. C3: It is hard for me to remember important parts of what happened. C4: I would rather be alone than with my friends. C5 I feel lonely and not close to other people. C6: I have trouble feeling joy or love. C6: I have trouble feeling sadness or anger. C7: I don't think I will live for long.

D1: I often find it hard to fall asleep or I wake up frequently at night. D2: I feel irritable, angry, or upset. D3: I have trouble concentrating or paying attention. D4: I am cautious about dangers or things that frighten me. D5: I am easily startled, for example if I hear a loud noise or something takes me by surprise.

AF: I think that what happened is partly my fault. AF: I'm afraid that the bad event will happen again.



three most common diagnoses among the foster children were attachment disorder (30%), ADHD (25%), and an unspecified disorder in infancy, childhood, or adolescence (25%). In the control group, 2 children exhibited three mental disorders (10%), 5 children had two mental disorders (25%), 10 children had one mental disorder (50%), and 3 children had no mental disorder (15%). In the control group, the three most common diagnoses were ADHD (40%), social conduct disorders (20%), and depression (15%).

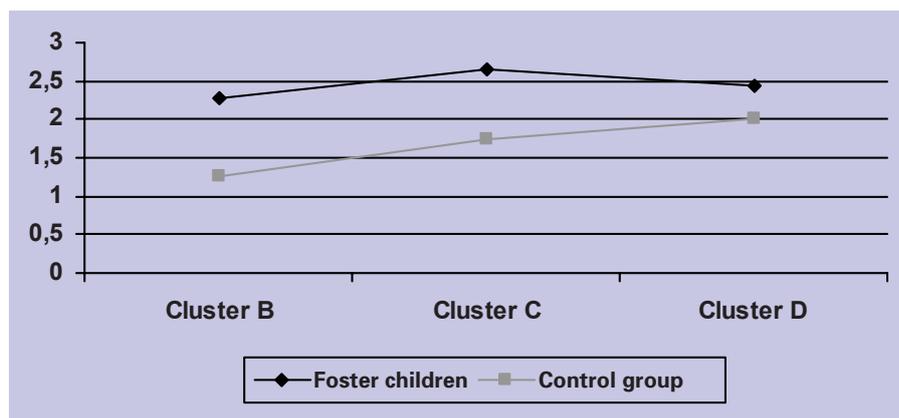
Discussion

Foster children from a psychiatric population of children and adolescents have, as would be expected, experienced traumatic events and post-traumatic stress symptoms more fre-

quently than patients who live with at least one biological parent. The number of foster children who developed full-scale PTSD according to DSM-IV, as a result of chronic and multiple traumas, is low by comparison to the rate of exposure to trauma (3 out of 20 foster children, 15%).

The discrepancy between the high rate of trauma exposure and the relatively low prevalence of PTSD is partly due to DSM-IV's high diagnostic threshold. The full PTSD criteria, according to DSM-IV, are not often reached by traumatized children, in spite of clinically relevant post-traumatic stress symptoms and significant functional impairment. This may be related to the fact that the diagnostic criteria of DSM-IV and the available standardized research instruments – including those used in our study – require verbal description of the experience and the thoughts and feelings evoked by it, and so do not take into account the fact that younger children, because

Fig. 4. Post-traumatic stress symptoms, represented according to the DSM-IV-defined areas of re-experiencing symptoms (cluster B), avoidance (cluster C), and hypervigilance (cluster D) in the foster children group (n = 13) and in the control group (n = 19), according to self-report of the children and adolescents in the UCLA PTSD Reaction Index.



of developmentally limited cognitive and linguistic processing capabilities, cannot adequately put into words the trauma they experienced [Scheeringa et al., 1995]. Accordingly, the absence of full-scale PTSD does not prove that no trauma disorders are present. This view is also consistent with the finding that children with subclinical post-traumatic stress symptoms can be functionally affected just as much as children with full-scale PTSD [Carrión et al., 2002]. Therefore in clinical practice, if there is a subclinical post-traumatic symptomatology, possible therapeutic needs should also be considered.

The results we obtained from a small clinical sample indicate that the prevalence of PTSD in foster children, studied in the clinical context, is considerably higher than in the rest of the child and adolescent psychiatric population, especially on the symptom level. The frequency of post-traumatic stress symptoms in the foster children we studied is also higher than that shown in previous studies of children and adolescents. Thus, as mentioned earlier, the Bremen Adolescent Study of 12- to 17-year-olds found 1.6% lifetime prevalence of PTSD [Essau et al., 1999]. A U.S. study that examined the prevalence of PTSD at various institutions found a 3% PTSD prevalence in 6- to 17-year-old children and adolescents in a psychiatric facility, and a 3.5% PTSD prevalence in 12- to 17-year-old children and adolescents in drug counseling centers [Garland et al., 2001].

Comparison of parental descriptions of the foster children and of the control group, on the symptom level, showed that the foster children displayed significantly more severe symptoms in the areas of re-experiencing and hyperarousal. There were no significant distinctions between the groups in avoidance symptoms. This could be related to the fact that avoidance symptoms are difficult for outside observers to detect. For this reason, and because of children's lack of introspection with regard to their perception and description of avoidance symptoms, the validity of findings about avoidance symptoms for post-traumatic disorders in children is open to question [Bryant et al., 2004; Scheeringa et al., 2006].

Children's self-descriptions in the two groups differ mainly with respect to one avoidance symptom, namely the difficulty

in remembering important parts of the event. This could be because most foster children, as compared with control patients, had already been traumatized in early childhood, and therefore could no longer remember the events precisely.

The diagnosis of trauma disorders is often hampered by the fact that foster children present for diagnosis and treatment with nonspecific symptoms (e.g., difficulty concentrating, angry outbursts, aggressive behavior, restlessness, etc.), and neither the caregivers nor the children spontaneously report previous traumatic experiences. Furthermore, the symptoms overlap with those of other mental disorders, and the lack of specificity of some symptoms, in the absence of a case history of trauma, may be misleading and result in faulty diagnosis, such as a diagnosis of ADHD. Foster children also display a number of other risk factors that may contribute to nonspecific symptoms, such as genetic predisposition, prenatal risk factors (e.g., alcohol or substance abuse during pregnancy), perinatal risk factors (e.g., premature birth), or postpartum risk factors (e.g., lack of care, dysfunctional family relationships).

In interpreting the results of this study, we recognize the small sample as a limiting methodological factor. Studies in larger clinical samples would be useful, to verify the findings suggested by our study. Another limitation is a possible selection effect of the sample, due to its study of the population at a child and adolescent outpatient institution. The symptoms might be less prevalent in a field sample of foster children. Nevertheless, the clinical validity of our results is accentuated by the fact that child and adolescent psychotherapists are frequently confronted with foster children who have psychiatric disorders. The low recruitment rate of 60% for foster children and 70% for control children cannot be excluded as an additional selection effect. Among the reasons for refusal to participate in the study could be fear of being blamed or feelings of guilt. For the parents or guardians who could not be reached during the course of treatment, their own psychological stress or an unstable lifestyle may have played a role. Another limiting factor of this study is that 7 foster children and 1 control child did not fill out the UCLA PTSD Reaction Index. Since some post-traumatic stress symptoms, such as re-

current memories or avoidance of thinking about the traumatic event, are not externally noticeable, symptoms of PTSD may have been overlooked in the researcher's assessment, and may have contributed to an underestimation of the degree of stress. In addition, there was no survey of comorbid mental disorders using a standardized and structured interview according to DSM-IV, so that the objectivity of these findings and their comparability with findings from other studies are limited.

Against the background of the complex symptomatology found in our sample of foster children and the relatively high proportion of multiple diagnoses, future research should attempt to operationalize complex post-traumatic stress symptoms that could not yet be adequately recorded using current classification schemata. Many foster children have complex

psychopathology and developmental deficits that, compared to children and adolescents with classic post-traumatic disorder, require more comprehensive therapy. This complex symptomatology has long been described as comorbidity. Van der Kolk's group [2005] proposed a comprehensive conception of trauma disorder, introducing the concept of Developmental Trauma Disorder. Research results remain insufficient to provide an empirically grounded operationalization and validation of this syndrome. Risk groups such as foster children, or children and adolescents from orphanages, might be an appropriate target group for such studies.

Conflicts of Interest

None.

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