Original Article

Usual Care for Maltreatment-Related Pediatric Posttraumatic Stress Disorder in Germany

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Abstract: Child maltreatment represents a major risk factor for the development of emotional and behavioral problems, especially posttraumatic stress disorder (PTSD). While effective trauma-focused treatments are available, little is known about the usual mental healthcare for abused youths in Germany. The present study compared the utilization of mental healthcare in abused youths who had developed a PTSD (N = 95) with a group presenting other mental disorders (N = 146). Semistructured interviews were used to assess maltreatment histories, current mental health, and healthcare utilization. In addition, potential child factors associated with access to mental healthcare (age and level of functioning) were examined. Results showed that 65 % of both diagnostic groups currently fail to use any mental healthcare service. Of the participants with PTSD, 43 (45 %) had never received any mental healthcare intervention. Investigations on potential barriers are necessary to close the huge gap between clinical services and evidence-based, trauma-focused interventions.

Keywords: Child maltreatment, posttraumatic stress disorder, psychotherapy, usual care, mental healthcare

Standardtherapie für Posttraumatische Belastungsstörung (PTSB) bei misshandelten Kindern und Jugendlichen

Zusammenfassung: Kindesmisshandlung, -missbrauch und -vernachlässigung stellen Risikofaktoren für die Entwicklung emotionaler Probleme und Verhaltensauffälligkeiten dar, insbesondere für die Entwicklung einer Posttraumatischen Belastungsstörung (PTBS). Während wirksame traumafokussierte Therapien verfügbar sind, ist bisher wenig über die übliche psychiatrisch/psychotherapeutische Versorgung misshandelter Kinder und Jugendlicher in Deutschland bekannt. Die vorliegende Untersuchung vergleicht daher die Inanspruchnahme psychiatrischer und psychotherapeutischer Hilfen durch misshandelte Kinder und Jugendliche, welche eine PTBS entwickelt haben (N = 95), mit einer Gruppe, welche andere psychische Störungen aufweist (N = 146). Mittels semistrukturierter klinischer Interviews wurden die Misshandlungsanamnese, die aktuelle psychische Gesundheit sowie die in Anspruch genommenen Hilfen erhoben. Des Weiteren wurden Faktoren untersucht, welche möglicherweise mit dem Zugang zu therapeutischer Versorgung assoziiert sind (aktuelles Alter und psychosoziales Funktionsniveau). Die Ergebnisse zeigen, dass innerhalb beider Untersuchungsgruppen 65 % der Kinder und Jugendlichen aktuell keine psychiatrischen und psychotherapeutischen Hilfen in Anspruch nehmen. Dreiundvierzig Studienteilnehmer mit einer PTBS (45 %) hatten vor Studienteilnahme noch nie eine Therapie erhalten. Daher ist die Untersuchung von Barrieren notwendig, welche die Dissemination evidenzbasierter Therapien für misshandelte Kinder und Jugendliche möglicherweise erschweren.

Schlüsselwörter: Kindesmissbrauch, posttraumatische Belastungsstörung, Psychotherapie, übliche Versorgung, psychische Gesundheitsversorgung

Introduction

Abused children and adolescents represent a high-risk population for the development of mental health problems. Especially PTSD occurs as a consequence of having experienced life-threatening and/or extremely stressful events such as physical abuse, sexual abuse, emotional abuse, severe neglect, or domestic violence. International studies point to prevalence rates of PTSD of up to 50 % in abused children, with even higher rates found in clinical samples (Kearney, Wechsler, Kaur, & Lemos-Miller, 2010). Ford and colleagues (Ford, Vostanis, Meltzer, & Goodman, 2007) found PTSD in children being cared for by authorities to be 19 times more prevalent than in children living in private households. Clinical practice guidelines for the treatment of pediatric PTSD recommend trauma-focused

psychotherapy (Cohen, Bukstein, Walter, Benson, Chrisman, & Farchione, 2010; Foa, Keane, Friedman, & Cohen, 2008). However, according to clinical estimates, only 30 % of pediatric PTSD cases actually receive appropriate care in Germany (Deutschsprachige Gesellschaft für Psychotraumatherapie, 2013). In particular abused children may be at risk for insufficient treatment. For instance, a large service gap was found in a representative US sample of children who had been investigated by child-welfare agencies after reported maltreatment: Only one in four children with significant emotional or behavioral problems had received any mental healthcare during the year before study participation (Burns et al., 2004).

To date, there is a lack of empirical data about the mental healthcare use of abused children and adolescents in Germany. This can partly be explained by the lack of regular screening for a history of child abuse and neglect (CAN) and subsequent underdiagnosis of abuse-related PTSD in clinical settings, which prevents a systematic statistical monitoring of the standard care provided (Münzer, Fegert, & Goldbeck, 2015). As a consequence, it is difficult to estimate the level of evidence of treatments.

Ongoing research tries to identify factors explaining differences in the likelihood of receiving mental health services. A description of the characteristics of 322 abused children and adolescents participating in the CANMANAGE project (Child Abuse and Neglect Case-Management project) showed that the utilization of services was independent of the child's present mental health state (Ganser, Münzer, Plener, Witt, & Goldbeck, 2016). Impairment of the child's psychosocial functioning may be more selective for seeking treatment. Caregivers who recognize functional problems in these children might be more likely to seek professional treatment. Hodges and Wong (1997) showed that the Child and Adolescent Functional Assessment Scale significantly predicted service utilization after 6 and 12 months. Moreover, high impairment scores were related to a higher number of in- and outpatient services, and were identified as the best predictors for service use over other measures of psychopathology.

A large-scale German epidemiological study on outpatient mental healthcare for children and adolescents found the child's age to be relevant in the type of service utilization: Younger patients (<8 years) with mental disorders predominantly received logopedic treatment, ergotherapy, and physiotherapy, whereas with increasing age psychiatric and psychotherapeutic services were utilized more (Lehmkuhl, Köster, & Schubert, 2009). Moreover, a review showed that more mental health service is sought out for boys during childhood and early adolescence, whereas girls seek help more frequently in late adolescence (Zwaanswijk, Verhaak, Bensing, Van der Ende, & Verhulst, 2003). However, there is a lack of research exploring potential factors related to how children access mental healthcare after abuse (Horowitz, Putnam, Noll, & Trickett, 1997).

To date, the standard mental healthcare specifically for abuse-related PTSD in Germany has not been investigated. The present study aims to

1. describe the utilization of mental healthcare service among children and adolescents with abuse-related pediatric PTSD;
2. compare the proportion of youths consulting mental healthcare services among children and adolescents with PTSD and among abused youths with other diagnoses.
3. explore potential factors related to how children access mental healthcare, such as age, sex, and level of functioning.

Methods

Participants and Procedure

We included children and adolescents between 4 and 17 years with a known history of exposure to abuse as reported by the responsible child-welfare agency. Individuals were eligible to participate if they currently lived in safe circumstances. Altogether 241 youths (91 girls and 150 boys) with current mental disorders were recruited in the scope of a multisite research collaborative comprising child and adolescent mental-health services and child-welfare institutions from the German Federal States of Baden-Wuerttemberg, Lower Saxony, and North Rhine-Westphalia (multisite study *CANMANAGE*, DRKS00003979). Data were collected using semistructured interviews conducted by trained and supervised research assistants after obtaining the informed and written assent of the participants and the informed consent of their legal guardians. The study was approved by the institutional review board at the study center in Ulm as well as by local ethic committees affiliated to the cooperating clinical sites (ZfP Südwürttemberg, Abteilung für Psychiatrie und Psychotherapie des Kindes- und Jugendalters, Ravensburg; SHG-Klinik für Kinder- und Jugendpsychiatrie, Kleinblittersdorf; Vestische Kinder- und Jugendklinik, Datteln; Klinik für Kinder- und Jugendpsychiatrie der PK Lüneburg). Participants received an incentive of EUR 20 for taking part.

Measures

Sociodemographic information on the child's sex, age, and current place of residence was collected from the caregiver via questionnaire. Experiences of victimization were assessed using the semistructured interview version of the

Juvenile Victimization Questionnaire (JVQ; Hamby, Finkelhor, Ormrod, & Turner, 2004).

Three modules covering reports on 24 forms of offenses against children and youth were applied: child maltreatment covering physical abuse by a caregiver, psychological/emotional abuse, neglect, and custodial interference/familial abduction; sexual victimization including sexual assaults by known adults, nonspecific sexual assaults, sexual assaults by peers, attempted or completed rape, flashing/sexual exposure, verbal sexual harassment, and statutory rape/sexual misconduct; and witnessing and/or indirect victimization concerning domestic violence, witness to domestic violence, and witness to parent assault of siblings. One item was added to the Sexual Assault Module to account for the exposure or involvement in the production of pornography. The original version of the JVQ showed good psychometric properties (test-retest reliability (95%, range 77–100%) and internal consistency reliability (Cronbach's α = .80; Finkelhor, Hamby, Ormrod, & Turner, 2005). The German version of the JVQ used in this study was established by the Optimus Study Switzerland (Averdijk, Mueller-Johnson, & Eisner, 2012).

Present mental state according to ICD-10 criteria was determined using the semistructured diagnostic screening interview Kiddie-Sads Present and Lifetime Version (K-SADS-PL) including caregiver reports and self-reports for children aged 8 or older (Delmo, Weiffenbach, Gabriel, & Poustka, 2000; Kaufman, Birmaher, Brent, Rao, & Ryan, 1996). The interviewer rated the level of functioning using the Children's Global Assessment Scale (Shaffer et al., 1983) based on the K-SADS information. The Children's Global Assessment Scale (C-GAS) is a widely used measure to rate the global impairment of children and adolescents on a continuous scale ranging from 1 to 100. Functioning in the normal range is indicated by scores above 70. According to Green, Shirk, Hanze, and Wanstrath (1994), the C-GAS of psychiatric inpatients is unrelated to other measures of symptom severity but highly correlated to children's general functional competence. The scale shows good psychometric properties with an interrater reliability between 0.83 and 0.91 and a retest reliability of 0.85 (Shaffer et al., 1983).

Utilization of mental healthcare services was recorded using an open-ended question: "Did you get help in a healthcare facility due to ..." (interviewer states the reported abuse for each participant individually). As neither the minor participants nor their caregivers were always able to exactly describe the type of treatment they were receiving, the present study coded whether participants reported the use of mental health services from an institution that fulfills the requirements to offer evidence-based treatments (EBT). The German mental healthcare system offers treatment for children and adolescents from the following:

1. licensed office-based child and adolescent psychotherapists,
2. licensed office-based child and adolescent psychiatrists,
3. licensed office-based psychotherapists for adults with additional qualifications to treat children and adolescents,
4. inpatient child and adolescent mental health clinics,
5. outpatient clinics of child and adolescent psychiatric hospitals or at a department for child and adolescent psychiatry/psychotherapy within larger hospitals.

The names of clinical services providers as well as the frequency and time of their utilization were recorded. Reported logopedic treatment, ergotherapy, and physiotherapy were also recorded, even though they do not represent evidence-based treatments for mental disorders. Furthermore, reports on psychotropic medication were collected. Services offered outside of the healthcare system were not considered in the present study.

The raw data of a randomly selected subgroup of $n = 20$ cases was coded by two independent evaluators in order to determine the current healthcare utilization status, i.e., the use of any mental healthcare in the past 3 months as well as the past mental healthcare utilization since the index abusive event. If both evaluators did not agree, discrepancies were discussed with a third reviewer, and a final congruent evaluation was reached. The interrater reliability was excellent and beyond chance concerning present mental health services ($k = 1$) as well as concerning past services ($k = .8$; Fleiss, Levin, & Paik, 2013). The three reviewers were then randomly assigned to evaluate the remaining 221 cases.

Statistical Analyses

The proportions of current and past mental healthcare utilization were compared between children and adolescents with abuse-related PTSD and the group with other mental disorders using chi-square analyses. Youths who reported mental healthcare use prior to study participation and untreated youths were compared regarding age and level of psychosocial functioning using a multivariate analysis of variance (MANOVA). Sex was included as additional independent variable.

Results

More than 85% of all participants reported exposure to more than one type of abuse (see Table 1). Interviews assessing the mental health showed a high prevalence (60%) of comorbid disorders with PTSD, the most frequent ones

being depression (n = 18; 18.9 %) and enuresis (n = 12; 12.6 %; for this overview, nocturnal enuresis and daytime urinary incontinence are not reported separately). The most frequent diagnoses in the control group with other mental disorders than PTSD were attention deficit hyperactivity disorder (ADHD; n = 48; 32.8 %), conduct disorders (n = 38; 26 %), and enuresis (n = 23; 15.8 %).

Service utilization for PTSD: In the clinical interview, 33 (34.7 %) youths with PTSD (n = 95) reported currently using a mental health service, and 27 (28.4 %) reported past use of services (see Figure 1). Present medication with stimulants, antipsychotics, and/or antidepressants was indicated by 15 (15.8 %) participants with PTSD, 12 of whom had a co-morbid disorder (ADHD, conduct disorders, depressions, and enuresis). Current functional training in terms of logopedic treatment, ergotherapy, and/or physiotherapy was being received by 14 (14.7 %) children and adolescents with PTSD, most of whom (n = 8) did not report current psychotherapeutic treatments. Of the participants with PTSD, 43 (45.3 %) had never received any mental healthcare intervention.

Service utilization with other mental disorders: The children and adolescents with other mental disorders provided comparable information: 51 participants reported currently being in (34.9 %) mental health interventions, and 34 participants (23.3 %) had used professional mental health services in the past. Again, with 75 persons (51.4 %), a substantial proportion of participants had never received any mental healthcare. About one out of four individuals (n = 36; 24.7 %) within the non-PTSD group reported currently using stimulants, antipsychotics, and/or antidepres-

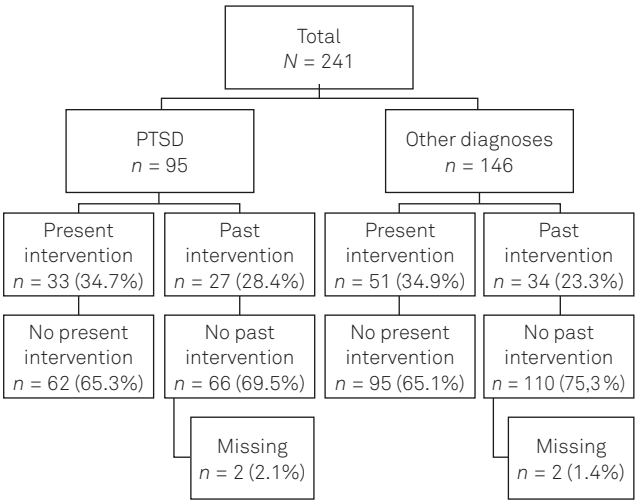

Figure 1. Frequencies of present and past mental healthcare use for the PTSD group and the group with other current diagnoses.

Table 1. Sample description

	PTSD (n = 95)		Other mental disorders (n = 146)	
	n	%	*n*	%
Females	46	48.4	45	30.8
Living arrangements				
With both parents	15	15.8	10	6.8
Mother, with or without partner	32	33.7	71	48.6
Father, with or without partner	13	13.6	6	4.1
With adoptive or foster parent(s)	15	15.8	24	16.4
Residential facility	20	21.1	29	19.9
With other relatives	–		6	4.1
Type of maltreatment				
Physical abuse	73	76.8	112	76.7
Emotional abuse	68	71.6	60	41.1
Sexual abuse	46	48.4	44	30.1
Neglect	64	67.4	86	58.9
Domestic violence	65	68.4	96	65.8
Current age in years, *M (SD)*	10.56 (3.54)		10.03 (3.18)	
Time since index maltreatment event in years, *M (SD)*	2.43 (2.2)		3.22 (2.8)	

sants. A vast majority used medication due to ADHD and/or conduct disorder according to clinical practice guidelines. Current functional training was reported by 14 participants within the non-PTSD group (9.6%), 9 of whom without current mental healthcare.

Types of mental healthcare services: Table 2 presents the identified types of clinical services for both groups. Results show that predominantly psychiatric outpatient clinics, office-based child and adolescent psychiatrists and psychotherapists were involved in prior treatment. Results of χ^2 consistency tests did not show significant PTSD-specific mental health service utilization (current: χ^2 (1, N = 241) = .001, p = .975; past: χ^2 (1, N = 237) = .869, p = .351).

A MANOVA was conducted to compare age and psychosocial functioning (C-GAS) between participants who reported having received a mental healthcare intervention at any time point prior to study participation and the untreated comparison group as well as between male and female participants. Results revealed a significant main effect for prior treatment (F(2, 234) = 11.71, p <.001) and sex (F(2, 234) = 4.64, p <.05). Youths who reported an intervention were on average older (M = 11.04, SD = 3.34) than the untreated comparison group (M = 9.42, SD = 3.2; F(1,235) = 20.12, p <.001, η p^2 = .079) and showed a lower current level of functioning (M = 54.9, SD = 12.4 vs. M = 58.5, SD = 11.02; F(1, 235) = 5.12, p = .025, η p^2 = .021). Moreover, the results of the MANOVA showed a significant interaction effect of the prior utilization of mental healthcare interventions and sex with respect to age: Whereas untreated girls and boys were of comparable age, irrespective of their diagnoses (M = 9.32 years, SD = 2.96 vs. M = 9.48 years, SD = 3.28), female participants who reported treatment were, on average, 2 years older than male participants (M = 12.40 years, SD = 3.39 vs. M = 10.17 years, SD = 3.02).

Discussion

Our results show that 65% of the children and adolescents with a history of abuse fulfilling PTSD criteria do not use any mental healthcare service. This result exceeds even the discouraging ratio reported by the BELLA study, based on a representative sample of the general population, stating that only every second child with a mental disorder had received treatment (Hintzpeter et al., 2015; Ravens-Sieberer, Wille, Bettge, & Erhart, 2007). Our findings present a conservative estimate as our high-risk study population was already known either to the child-welfare system or healthcare system in any form. Therefore, an even higher proportion of untreated mental disorders can be expected among abused youths who are yet unknown to child-welfare or other support agencies.

We found no differences in mental health service utilization between survivors of child abuse with PTSD and youths with other mental disorders. The finding that almost 30% of those youths with a current PTSD diagnosis reported previous use of mental healthcare suggests that these standard care interventions had no sustainable and sufficient effects. This may be due to the lack of implementation of evidence-based, trauma-focused interventions. Approximately 13% (n = 12) of those participants with PTSD report the use of medication and/or functional trainings, but they did not report any psychotherapy – despite the superiority of trauma-focused psychotherapy and the lack of evidence for pharmacotherapy for pediatric PTSD (Gillies, Taylor, Gray, O'Brien, & D'Abrew, 2013). Moreover, there is no evidence for using functional treatments as stand-alone interventions for psychopathology. These results indicate an alarming gap between current clinical services and evidence-based, trauma-focused interventions.

In line with a large German epidemiological study done on a health-insurance population, our study of a high-risk

Table 2. Types of present and past mental healthcare services (multiple answers possible)

	PTSD (n = 95)				Other mental disorders (n = 146)			
	Present (n = 33)		Past (n = 27)		Present (n = 51)		Past (n = 34)	
Type of service	n	%	n	%	n	%	n	%
Inpatient service	1	1.0	11	11.5	3	2.1	12	8.2
Outpatient clinic	24	25.0	7	7.3	26	17.8	5	3.4
Office-based child and adolescent psychiatrist	7	7.3	3	3.1	22	23.2	4	2.9
Office-based child and adolescent psychotherapist	3	3.1	6	6.2	3	2.1	7	4.8
Office-based psychotherapist for adults			2	2.1			2	1.4
Clinic for developmental and behavioral pediatrics			2	2.1			7	4.8

population showed that individuals who report mental healthcare utilization were on average 1.5 years older (Lehmkuhl et al., 2009). Irrespective of the disorder, female participants who reported treatment tended to be older than treated boys. These findings seem to be inconsistent with the results of Hintzpeter et al. (2015), who found age and sex not to be associated with mental healthcare use. However, the comparability of findings is limited because of the different operationalization of treatments, data sources, and study populations. Whereas Hintzpeter et al. (2015) asked the respondents whether they have consulted a psychologist, psychiatrist, or psychotherapist in a certain time frame, Lehmkuhl et al. (2009) analyzed the care-seeking behavior based on insurance data. Neither study specifically reports on child abuse.

A number of barriers to participation in treatment are conceivable for the present study sample. Because the majority of children who experience CAN are abused by their caregivers, many may be suffering a parallel lack of intrafamilial support by these very same caregivers, who tend not to direct their children toward mental healthcare offers. Moreover, standard care is also supported by both governmental and nongovernmental German child-welfare agencies providing counseling, though referral to the mental healthcare system might be hindered by a lack of interinstitutional cooperation. Additional barriers named in previous research include multiple factors on the agency-level such as long waiting lists, inconvenient agency hours and scheduling problems (Staudt, 1999). Moreover, caregivers, teachers, and medical care providers need to be enabled to identify children's need for mental health services and to face children's fear of stigmatization (Owens et al., 2002). In view of the above, the ongoing longitudinal German multicenter study CANMANAGE is investigating the effectiveness of a structured, CAN-specific case management at the interface between the child-welfare and the healthcare system (Ganser et al., 2017).

Limitations

Our results should be viewed in the context of study limitations. The presentation of past episodes of psychological disorders and their association with treatment utilization would provide a more differentiated view. Moreover, detailed information about type and intensity of treatments were not available. Therefore, a more detailed insight on the use of actual EBT cannot be provided. However, most clients of healthcare services were not aware of the type of treatment they were receiving, and the present study reflects their level of information. Furthermore, previous research within foster-care samples suggests that the type of abuse children experience is associated with later service use for children: Increased service use was reported for sexual or physical abuse, whereas neglect was associated with decreased help seeking (Garland, Landsverk, Hough, & Ellis-MacLeod, 1996; Leslie, Hurlburt, Landsverk, Barth, & Slymen, 2004). Yet the vast majority of our sample is characterized by the experience of multiple abuse, so that the diversity of current housing situations hinders comparisons.

The heterogeneous sample in this study covered a wide range of age, diverse abuse histories, and multiple mental disorders. Therefore, the data provide sufficient comparability with clinical populations in the German healthcare and child-welfare system and are therefore characterized by high external validity. Moreover, the present study assessed the overall level of functioning involving multiple areas at home, at school, and with peers in addition to psychopathology, the goal being to reflect the individual living situation (Schorre & Vandvik, 2004).

Implications for Service Development and Future Research

Maltreated children and adolescents have significant difficulties to access mental health services. Results indicate that barriers exist even though evidence-based, trauma-focused treatment, such as targeting child physical abuse and family aggression, is available (Kolko, Iselin, & Gully, 2011). Regarding abuse-related PTSD in particular, a recently completed treatment study on trauma-focused cognitive behavioral therapy (Tf-CBT) for children and adolescents demonstrated the effectiveness of Tf-CBT within a German mental healthcare setting (Goldbeck, Muche, Sachser, Tutus, & Rosner, 2016). However, the availability of trauma-focused interventions in the regular clinical practice is still limited. Further dissemination and implementation of EBT for abused children as well as research on the best methods to achieve higher availability and utilization of these treatments are urgently needed. The exploration of barriers preventing or delaying the use of treatment is crucial in this context.

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