EUROPEAN JOURNAL OF PSYCHOTRAUMATOLOGY
2025, VOL. 16, NO. 1, 2486902
https://doi.org/10.1080/20008066.2025.2486902

EUROPEAN JOURNAL OF PSYCHO-TRAUMATOLOGY
THE OFFICIAL JOURNAL OF THE EUROPEAN SOCIETY FOR TRAUMATIC STRESS STUDIES

Taylor & Francis
Taylor & Francis Group

BASIC RESEARCH ARTICLE

OPEN ACCESS Check for updates

Potentially traumatising events and post-traumatic stress symptoms of adolescents in out-of-home care

Carolin Hummel [a,b], Steffen Schepp[a,b], Miriam Rassenhofer[a,b], Andreas Witt[c], Jörg Fegert[a,b] and Elisa Pfeiffer [a,b,d]

[a]Clinic for Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy, Ulm University, Ulm, Germany; [b]German Center for Mental Health (DZPG), partner site Ulm, Ulm, Germany; [c]University Hospital of Child and Adolescent Psychiatry and Psychotherapy, University of Bern, Bern, Switzerland; [d]Department of Clinical Psychology and Child and Adolescent Psychotherapy, Catholic University Eichstätt-Ingolstadt, Ingolstadt, Germany

ABSTRACT

Background: Children and adolescents in out-of-home care are particularly vulnerable to potentially traumatising events (PTEs) and trauma-related mental health disorders. In Germany, there is limited evidence on trauma exposure and posttraumatic stress symptoms (PTSS) among youth in child welfare facilities. Better understanding their psychopathology could support the development of tailored trauma-focused interventions.

Objective: This study investigates PTEs and PTSS (DSM-5 criteria) in adolescents living in residential care. It also examines risk factors for PTSS and compares self-reports with proxy-reports from institutional staff.

Method: A total of N = 126 adolescents (mean age = 14.98 years, SD = 1.62, *range* = 11–19) from 17 residential care facilities in southern Germany and their institutional caregivers completed questionnaires assessing demographics, PTEs, and PTSS.

Results: Participants reported an average of M = 4.51 PTEs (SD = 3.08, *range* = 0–12). High rates of online victimisation were found, with 19.8% reporting cyberbullying and 22.2% reporting being coerced online into sexual acts – the latter showing a strong correlation with PTSS (r = 0.33). Adolescents scored an average of M = 21.24 (SD = 11.01, *range* = 2–50) on the CATS–2, with scores above the clinical cut–off (≥21) indicating high symptom burden. Significant predictors of PTSS included the number of PTEs (β = .55, p < .001), female gender (β = .27, p < .01), and interpersonal trauma (β = .55, p < .001). Correlations between self– and staff–reports were low (r = .06–.19), with staff reporting fewer symptoms.

Conclusion: The findings underline the high vulnerability of youth in care to trauma and stress-related symptoms and support the need for trauma-sensitive care. The prominence of online victimisation highlights the need for routine clinical screening. Low agreement between self- and caregiver reports reinforces the importance of directly assessing adolescents' experiences.

Eventos potencialmente traumáticos y síntomas de estrés postraumático en adolescentes en centros de acogida

Antecedentes: Los niños en casas de acogida constituyen una población especialmente vulnerable no solo por experimentar eventos potencialmente traumáticos (PTEs), sino también por el desarrollo de trastornos de salud mental relacionados con el trauma como consecuencia del trauma y otros estresores. Actualmente, existe una importante falta de evidencia sobre el trauma y síntomas de estrés postraumático (PTSS por sus siglas en ingles) en niños que viven en centros de protección infantil en Alemania. Una mejor comprensión de su psicopatología podría facilitar el desarrollo de intervenciones centradas en trauma adaptadas a esta población para abordar sus necesidades específicas.

Objetivo: Este estudio tiene como objetivo investigar los PTEs y PTSS según los criterios DSM-5 en una población de adolescentes en centros de acogida. Adicionalmente, se analizaron los factores de riesgo asociados con el desarrollo de PTSS.

Método: N = 126 adolescentes con una edad media de 14.98 años (DE = 1.62, rango = 11–19), que vivían en 17 residencias de acogida diferentes en el sur de Alemania, y el personal institucional que cuidaba a estos adolescentes, completaron cuestionarios sobre datos demográficos, PTEs y PTSS.

Resultados: En promedio, los participantes del estudio reportaron M = 4.51 PTEs (DE = 3.08, rango = 0–12). Los adolescentes en casa de acogida reportaron M = 21.24 (DE = 11.01, rango = 2–50) de PTSS en el CATS-2 (punto de corte clínico ≥21). Los factores de riesgo significativos para PTSS incluyeron el número de PTEs (β = .55, p < .001), sexo femenino (β = .27, p < .01), y los PTEs interpersonales (β = .55, p < .001).

ARTICLE HISTORY
Received 24 September 2024
Revised 16 March 2025
Accepted 24 March 2025

KEYWORDS
Trauma; child; PTSD; out-of-home care; child welfare; risk factor

PALABRAS CLAVE
Trauma; niño; TEPT; centros de acogida; protección infantil; factores de riesgo

HIGHLIGHTS

- On average, adolescents in out-of-home care reported M = 4.51 potentially traumatising events, alongside significantly elevated rates of post-traumatic stress symptoms (PTSS).
- The most commonly reported interpersonal potentially traumatising events was bullying (n = 62, 49.2%), while 19.8% (n = 25) specifically reported experiencing cyber-bullying.
- As rates of online victimisation were high in this population, these experiences should be assessed with each patient in clinical practice.
- We found low consistency between self-report and child welfare staff report indicating the importance of self-reported data.

CONTACT Elisa Pfeiffer elisa.pfeiffer@ku.de Clinic for Child and Adolescent Psychiatry, Psychosomatics and Psychotherapy, Ulm University, Steinhövelstraße 1, Ulm 89075, Germany; German Center for Mental Health (DZPG), partner site Ulm, Ulm, Germany; Department of Clinical Psychology and Child and Adolescent Psychotherapy, Catholic University Eichstätt-Ingolstadt, Levelingstraße 7, 85049 Ingolstadt, Germany

Conclusión: Los resultados confirmaron hallazgos previos de la mayor vulnerabilidad para PTEs y de desarrollar secuelas de trauma en la población examinada, lo que refuerza la importancia de establecer cuidados sensibles al trauma en las casas de acogida para jóvenes.

1. Introduction

Potentially traumatising events (PTEs), especially during childhood and adolescence, can have serious consequences for an individual's socioemotional, cognitive, and neurological development (Reuben et al., 2016). As a consequence, individuals who have experienced PTEs, may develop various different trauma-related disorders, such as post-traumatic stress disorder (PTSD), that vary depending on age and developmental stage (De Bellis, 2001). In at-risk populations, the lifetime prevalence of PTSD ranges from 15.1% to 26.2% (Keller et al., 2010; Pinto et al., 2017). These rates are significantly higher than the lifetime prevalence in the general population (Kolko et al., 2010; McMillen et al., 2005; Perkonigg et al., 2000). Children and adolescents in out-of-home care constitute an especially vulnerable population for experiencing PTEs (Salazar et al., 2013). In a study by Salazar et al. (2013), 80.3% of $N = 732$ adolescents in out-of-home care (17–18 years old) reported at least one PTE; 61.7% even reported two or more PTEs. A population of Norwegian adolescents in out-of-home care reported $M = 3.44$ ($SD = 3.33$, *range* = 0–15) different PTEs on average (Lehmann et al., 2020).

Moreover, adolescents in out-of-home care are often exposed to multiple interpersonal PTEs (Greeson et al., 2011) oftentimes within their own family system (Jaritz et al., 2008). These PTEs are further exacerbated by the out-of-home placement itself, that entails separation from attachment figures and familiar surroundings (e.g. Chapman et al., 2004) and/or disruptions in relationships due to placement changes (Connell et al., 2006). Consequently, the affected population exhibits increased prevalence of PTSD ranging from 14% to 19.2% (Kolko et al., 2010; McMillen et al., 2005).

Studies on PTEs in children in out-of-home care have predominantly focused on narrow samples, such as children within specific age ranges (Salazar et al., 2013) or those placed with foster parents (Lehmann et al., 2020). Despite their substantial representation within child welfare systems, studies comprehensively examining children across various types of out-of-home care settings, such as youth residential care facilities, remain scarce. Group homes, which accommodate multiple children simultaneously, exhibit considerable variability across institutions, locations, and regions. Such variability is insufficiently addressed in the already limited number of studies involving adolescents in the German child welfare system. This gap in research is critical, as children in these environments are likely to experience different forms and intensities of PTE compared to those living with foster parents. Moreover, these children might be exposed to various additional stressors (e.g. lack of individual attention or instability within the institution).

Despite the increased prevalence of posttraumatic stress symptoms (PTSS) in adolescents in out-of-home care (Oswald et al., 2010), there is a lack of studies in the German-speaking region that examine the frequency and intensity of PTSS in this vulnerable population based on the current fifth version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; American Psychiatric Association, 2013). In the DSM-5 (American Psychiatric Association, 2013), PTSD is characterised by 20 symptoms grouped into four clusters: intrusion, avoidance, negative alterations in cognition and mood (NACM), and hyperarousal. The DSM-IV (American Psychiatric Association, 2000) classified PTSD using only three clusters: re-experiencing, avoidance/numbing, and hyperarousal. So far, most studies on adolescents in out-of-home care have focused on the frequency of symptoms based on DSM-IV criteria (e.g. Carrion et al., 2002; Oswald et al., 2010) but recent studies showed that symptoms in the NACM cluster are particularly central in children and adolescents (Bartels et al., 2019). There is currently no robust understanding of how PTSS, as conceptualised by the DSM-5, manifest in this vulnerable population in Germany.

While limited studies on PTSS in adolescents in out-of-home care exist internationally, cultural and systemic differences highlight the need for localised research. In Germany, the child welfare system under the Youth Welfare Act (SGB VIII) emphasises prevention and support measures to safeguard and foster youth development. Upholding these standards is crucial for shaping the long-term trajectories of these adolescents, ensuring they receive the necessary support to overcome PTEs and build a stable foundation for their future. As this population is among the most vulnerable child populations in Germany, a better understanding of their PTSS is crucial for planning trauma-focused interventions targeted at this specific population.

Some studies on PTEs in the population of adolescents in out-of-home care, such as the work by Jaritz

et al. (2008), have relied exclusively on proxy reports. However, a recent study on a sample of young refugees in German child welfare facilities has shown that agreement between adolescents' self-reports and proxy assessments (staff at the child welfare facilities) of PTSS is often low (Dietlinger et al., 2024). A recent study by Skar et al. (2021) on $N = 6653$ caregiver-child dyads in Norway found greater disagreement among caregivers and older children compared to younger children, with children consistently reporting higher levels of PTE exposure across all trauma types. Hence, staff in child welfare facilities might often have limited prior knowledge on PTEs and PTSS in the children they care for. The consistency of self- and proxy-report for children and youth in out-of-home care (without a refugee background) thus needs to be further investigated.

To better understand the development of PTSS in these adolescents, several potential risk factors need to be investigated. We tried to identify such risk factors on two levels (1) A scientific approach: There is quite some research on potential risk factors for PTSS in children and adolescents that needs to be considered (e. g. Alisic et al., 2014; Brewin et al., 2000; Sayed et al., 2015; Trickey et al., 2012). These studies provide valuable theoretical frameworks and evidence-based insights into the mechanisms contributing to PTSS development. (2) A practical approach: This approach emphasises factors that are straightforward to detect and assess in clinical or practical settings. Examples include the *cumulative number of PTEs*, *female gender*, and the *frequency of interpersonal PTEs*. Early detection of these risk factors enables child welfare staff to recognise warning signs more effectively, fostering earlier intervention and improved support.

The risk of developing PTSD increases with the cumulative exposure to PTEs, a phenomenon referred to as the 'building block' effect (Kolassa et al., 2010; Neuner et al., 2004). This relationship has been consistently documented in the literature, with multiple traumatisation identified as a significant predictor of PTSS. Greeson et al. (2011) found this effect in a study with a large sample of adolescents in foster care in the US who experienced multiple interpersonal traumatic events. However, the magnitude of its impact appears to vary depending on sample characteristics and study design (Brewin et al., 2000). These findings need to be replicated in an out-of-home care sample in Germany.

Interpersonal PTEs, such as abuse or neglect, substantially elevate the risk of developing PTSS and complex psychopathological conditions (Cloitre et al., 2013; Perkonigg et al., 2016). In the meta-analysis by Alisic et al. (2014), higher average rates of PTSD (25.2%) were found after interpersonal PTE compared with non-interpersonal PTEs (9.7%). However, Fischer et al. (2016) did not determine a significant effect for the association between interpersonal PTE (compared with non-interpersonal PTE) and higher rates of PTSD in a sample of children and adolescents aged 11–18 years from residential care facilities in Switzerland. The authors suggested that the lack of a significant association might be explained by the high-risk nature of adolescents in child welfare systems, characterised by low care stability. In such populations, interpersonal PTE may result in a broader spectrum of internalising symptoms (e.g. anxiety, depression, emotional withdrawal, or low self-esteem) and externalising symptoms (e.g. aggression, impulsivity, or disruptive behaviour) rather than manifesting specifically as PTSD. Nonetheless, this deviation of findings from the results of the meta-analysis by Alisic et al. (2014) is surprising, indicating a need for further research in this regard.

Numerous studies found that girls are at a higher risk of developing PTSD than boys (e.g. Bokszczanin, 2007; Landolt et al., 2013; Perkonigg et al., 2000). However, a few other studies did not observe this gender difference (e.g. Maercker et al., 2008; Rasmussen et al., 2013). A review by Vasileva et al. (2015) which included various populations of adolescents out-of-home care found no gender effects on the prevalence of PTSD but gender specific trauma profiles could be identified.

Hence, the aim of this study was to investigate PTEs and PTSS in adolescents residing in German welfare facilities and to evaluate the consistency of self- and proxy-reports (by child welfare staff). Additionally, we examined the extent to which certain risk factors – that could be important for clinical practice on the one hand, and are already supported by research on the other hand – predict the occurrence of PTSS in adolescents in out-of-home care in Germany.

2. Method

This study is part of the project 'Ankommen (English: Arriving) – A Manualized group intervention for and with peers in child welfare' (Hummel et al., 2021; Läntzsch et al., 2022; Schepp et al., 2024). The 'Ankommen' intervention is a manualized group programme specifically developed for adolescents in out-of-home care, based on behavioural and trauma-therapeutic principles. It is run by trained and supervised welfare workers in youth residential care facilities. The project was funded by the Baden-Württemberg Foundation. The study received positive ethical approval from the Ethics Committee of the University of Ulm on February 17, 2020 (number: 417/19). For this study, the baseline data of the project were investigated. In this study only cross-sectional baseline data was taken into account. For more

information on the overall study, please see Schepp et al. (2024).

2.1. Recruitment

Trained youth welfare workers, within the cooperating youth residential care facilities were responsible for recruiting study participants. They informed the adolescents in their child welfare institution about the study, including its procedures, potential risks, and other relevant details, through flyers and informational materials. Potential participants and their legal guardians completed written informed consent forms (which were designed child friendly), prior study participation. During the baseline assessment, scientific staff presented the study again in further detail and addressed any questions the adolescents or their legal guardians might have regarding study's procedures, study design, potential risks, or other concerns.

The following inclusion criteria for the current study were applied: (1) Participants aged between 11 and 19. (2) Provision of written informed consent by child and legal guardian. (3) The adolescents were living in a child welfare institution at the time of the study. The following exclusion criteria were applied: (1) In the case of acute suicidality, clinical measures were initially performed to stabilise the adolescents. (2) Adolescents living in custody with an unclear perspective on the duration of their stay in the respective youth residential care facilities were excluded from the study.

Participants were screened for inclusion and exclusion criteria by youth welfare professionals and scientific staff during the baseline assessment. The selection of individuals for study participation was made by child welfare staff, who were instructed to invite all individuals potentially meeting the eligibility criteria in their respective institution. However, the number of individuals invited and the proportion who ultimately participated in the baseline assessment were not systematically recorded. As a result, it is not possible to calculate or draw valid conclusions regarding the response rate. The recruitment period was September 2020 to May 2022.

2.2. Study population

A total of $N = 126$ adolescents in out-of-home care, aged between 11 and 19, were included in the study. The participants resided in 17 child welfare facilities located in the federal states of Baden-Württemberg and Bavaria in Southern Germany. The mean age of the participants was $M = 14.98$ years ($SD = 1.62$, *range* = 11–19). The sample consisted of $n = 63$ (50.0%) male and $n = 63$ (50.0%) female participants. Please see Table 1 for an overview of the demographic characteristics of the sample.

2.3. Procedure

At the baseline assessment each adolescent was provided with a tablet to independently complete the questionnaires. As a token of appreciation for completing the questionnaires during the data collection session, the adolescents were given a voucher.

The EQUALS programme (https://www.equals.ch/unser-tool) was used to collect the tablet-based data. The child welfare staff who knew/ cared for the participating children completed several questionnaires as proxy reports at the screening appointment. The child welfare staff play a crucial role in meeting the emotional, physical, and developmental needs of the young people under their care. This may include tasks such as providing a safe and stable living environment, offering emotional support, assisting with daily activities, advocating for the child's needs, and facilitating access to needed services and resources. They normally don't live with the children, but care for them several hours a day, together with a team of other staff.

2.4. Measures

For this study, several validated and standardised self- and proxy-reported measures were used.

Demographic questionnaire. The following information about the youth was provided by the child welfare staff of the study participants and subsequently analysed: gender, age, caregiving situation, duration of the measure/placement, psychiatric and psychotherapeutic treatments.

Child and Adolescent Trauma Screen Version 2. The Child and Adolescent Trauma Screen Version 2 (CATS-2; Sachser et al., 2022) is used for both self- and proxy-reports. It assesses traumatic events and PTSS in children and adolescents, based on the DSM-5 and ICD-11 criteria for PTSD. Individual trauma history is assessed using a dichotomous Event Checklist (yes, no) consisting of 15 items. For this study, it was assumed that the PTEs reported in the study occurred both prior to and during the adolescents' placement in out-of-home care. Respondents with at least one identified PTE indicate their most distressing event and rate the frequency of PTSS over the past four weeks using 20 four-point items, ranging from 'never' (0) to 'almost always' (3). The CATS-2 includes five items for DSM-5 criterion B (re-experiencing, *range* = 0–15), two for criterion C (avoidance, *range* = 0–6), seven for criterion D (negative alterations in cognitions and mood, *range* = 0–21), and six for criterion E (hyperarousal, *range* = 0–15). The PTSS sum score was calculated by adding up the scores of items 1–20 (possible sum scores: 0–60). For items 9, 10, and 15, only the highest values were included in the calculation, as they include several

Table 1. Sample description.

Designation	Characteristic values		
Age (in years)	*M* = 14.98	*SD* = 1.63	*Range* = 11–19
Gender	Male	*n* = 63	50.0%
	Female	*n* = 63	50.0%
Out-of-home care situation	5-day residential group	*n* = 2	1.6%
	Children's village family	*n* = 4	3.2%
	Residential group internal	*n* = 69	54.8%
	Decentralized residential group	*n* = 40	31.7%
	Special/extraordinary/intensive residential group	*n* = 4	3.2%
	Other	*n* = 7	5.5%
Duration of the intervention (in years)	*M* = 1.80	*SD* = 1.81	*Range* = 0.07–9.87
Currently undergoing psychiatric treatment	Yes	*n* = 33	26.2%
	No	*n* = 90	71.4%
	Unkown	*n* = 3	2.4%
Currently undergoing psychotherapeutic treatment	Yes	*n* = 51	40.5%
	No	*n* = 72	57.1%
	Unkown	*n* = 3	2.4%

Note: *N* = 126, *M*: mean; *SD*: standard deviation; *n*: number of participants.

examples of a symptom. In the CATS-2, scores ≥ 21 are considered clinically relevant (Sachser et al., 2022). The CATS-2 demonstrates excellent reliability, with Cronbach's alpha values of .89 for self-reports and .91 for proxy-reports (Sachser et al., 2022). In the present study, the self-reported PTSD symptom scale demonstrated a Cronbach's alpha of .88, and the proxy-reported PTSD symptom scale achieved a Cronbach's alpha of .83. The following Cronbach's alpha values were obtained for the items within the respective symptom clusters: cluster B $\alpha = .81$, cluster C $\alpha = .62$, cluster D $\alpha = .75$, and cluster E $\alpha = .53$.

Childhood Trauma Questionnaire. The Childhood Trauma Questionnaire (CTQ; Bernstein et al., 1998) assesses experiences of abuse and neglect during childhood and adolescence through self-reports. The abuse scale is divided into three subscales: emotional, physical, and sexual abuse. The neglect scale comprises two subscales: emotional and physical neglect. Participants rate the occurrence of PTEs on a five-point Likert scale ranging from 'never true' (1) to 'very often true' (5). A separate sum score is calculated for each scale based on the reported values, with each subscale consisting of five questions, resulting in a score range from 5 to 25. The interpretation of the scales is guided by the severity classifications proposed by Häuser et al. (2011). The German version of the Childhood Trauma Questionnaire demonstrates comparable psychometric properties to the original American version (Klinitzke et al., 2012; Wingenfeld et al., 2010) . The five-factor structure of the original version was confirmed for the German adaptation through confirmatory factor analysis (*RMSEA* = 0.065, *CFI* = 0.94, *TLI* = 0.93; Wingenfeld et al., 2010).

2.5. Statistical analyses

Only participants who reported at least one PTE on the CATS-2 Event Checklist were assessed for PTSS using the CATS-2 symptom checklist. Missing data from *n* = 10 (7.9%) participants who did not report a PTE in the CATS-2 Event Checklist were labelled as such in the dataset and were excluded from further analysis.

The data analysis and evaluation were conducted using the Statistical Package for the Social Sciences (SPSS, version 26). Descriptive analyses were performed to examine the frequency of PTEs, the frequency of interpersonal and accidental PTEs (according to the CATS-2 Event Checklist) and the frequency of abuse and neglect experiences (CTQ). The authors decided to add the CTQ measure to the CATS-2 interpersonal event assessment as it assesses abuse and neglect experiences more thoroughly than the CATS-2 measure. There is substantial evidence that children and adolescents in out-of-home care report high rates of maltreatment (Greeson et al., 2011; Jaritz et al., 2008), which is why this study aims at reporting on these events in more detail. Mean values and standard deviations were calculated for the CTQ subscales, and one-sample t-tests were used to determine whether the subscale sum scores significantly deviated from zero. Additionally, descriptive statistics of the PTSD symptom clusters, as measured by the CATS-2 symptom checklist, were calculated. To compare self-reports and proxy-reports, correlations were computed between the mean sum score of the CATS-2 symptom proxy-report and the CATS-2 symptom self-report. Furthermore, correlations were calculated for the individual PTSD symptom clusters in both self-reports and proxy-reports to explore their relationship.

To investigate the relationship between PTSS (CATS-2 symptom checklist) and potential predictors, Pearson's or point-biserial correlation coefficients were calculated. The predictors included: number of PTEs (sum score of CATS-2 Event Checklist), number of interpersonal PTEs (CATS-2 Event checklist), experiences of abuse and neglect (sum scores from the CTQ subscales) and female gender. For each significant correlation, a simple regression model was calculated with the respective risk factor as the

independent variable and the CATS-2 symptom sum score as the dependent variable. Due to the interdependencies between variables (number of PTEs, interpersonal PTEs and experiences of abuse/ neglect), separate regression models were calculated for each risk factor. For interpreting correlation strength, the thresholds defined by Cohen (1988) were applied: $r = .10$ (weak effect), $r = .30$ (moderate effect), and $r = .50$ (strong effect). Additionally, effect sizes were calculated to quantify the strength of these relationships.

3. Results

3.1. Potentially traumatic events

In the CATS-2 Event Checklist, $n = 12$ (9.5%) reported one, $n = 13$ (10.3%) reported two, and $n = 91$ (72.3%) reported three or more PTEs. On average, participants reported $M = 4.51$ ($SD = 3.08$, *median* = 4; range: 0–12) PTEs. Table 2 presents the frequency distribution of reported PTEs. On average, participants reported $M = 0.87$ ($SD = 0.76$; – *range* = 0–3) accidental PTEs and $M = 3.35$ ($SD = 2.49$; *range* = 0–9) interpersonal PTEs (based on CATS-2). The most frequently reported interpersonal PTE was bullying, with 49.2% of participants ($n = 62$) reporting this experience. Additionally, 19.8% ($n = 25$) reported experiencing cyber-bullying. Notably, 22.2% ($n = 28$) of participants reported being asked or blackmailed online to perform sexual acts. Overall, significantly more interpersonal PTEs were reported than accidental ones ($t(125) = 11.90$, $p < .001$, $d = 2.35$; see Table 2).

In the CTQ, participants primarily reported emotional neglect ($M = 14.80$, $SD = 5.84$, *range* = 5–25; $t(125) = 28.45$, $p < .001$), followed by emotional abuse ($M = 10.56$, $SD = 6.12$, *range* = 5–25; $t(125) = 19.35$, $p < .001$), physical neglect ($M = 9.09$, $SD = 3.59$, *range* = 5–21; $t(125) = 28.41$, $p < .001$), and physical abuse ($M = 8.81$, $SD = 5.00$, *range* = 5–25; $t(125) = 19.81$, $p < .001$). Sexual abuse experiences were the least reported PTE ($M = 7.60$, $SD = 5.45$, *range* = 5–25; $t(125) = 15.65$, $p < .001$).

3.2. Posttraumatic stress symptoms

The sample of adolescents in out-of-home care reported a mean CATS-2 score of 21.24 ($SD = 11.01$, *range* = 2–50; see Table 3). Overall, $n = 59$ (46.8%) adolescents in out-of-home care reported CATS-2 score above the clinical cut-off (≥21). For more details on the sub-scales, please see Table 3.

In child welfare staff reports, a lower average total score of $M = 13.28$ ($SD = 7.70$, *range* = 0–36, $t(97) = 6.50$, $p < .001$) was found. Overall, self-reports and child welfare staff reports correlated to a minor but not significant degree ($r = 0.19$, $p = 0.07$). The range of total scores also differed, with self-reports ranging from 2–50 and child welfare staff reports ranging from 0–36. According to the child welfare staff reports, $n = 21$ (16.7%) adolescents reported clinically relevant symptoms, while in self-reports $n = 59$ (46.8%) adolescents had CATS-2 scores ≥ 21. Only the subscale of 'hyperarousal' (cluster E) correlated significantly between self-reports and child welfare staff reports ($r = .29$, $p < .01$). Correlations between self-reports and child welfare staff reports on the subscales 're-experiencing' ($r = .06$, $p = .54$), 'avoidance' ($r = .11$, $p = .28$), and 'negative changes in cognition and mood' ($r = .15$, $p = .13$) were low and not significant.

3.3. Risk factors for the development of posttraumatic stress symptoms

The number of experienced PTEs was strongly correlated with PTSS (CATS-2 self-report symptom sum

Table 2. Frequency and proportion of self-reported potentially traumatic events according to the dichotomous Event Checklist of the Child and Adolescent Trauma Screen Version 2 (CATS-2).

	'Yes' answers	
Traumatic experience	*n*	%
Accidental		
Serious accident or injury	69	54.8
Distressing or frightening medical treatment	24	19.0
Natural disaster	16	12.7
Interpersonal		
Someone bullied me. Someone said very mean things that scared me.	62	49.2
Seen someone being slapped, punched, or beaten up at school or elsewhere	55	43.7
Threatened, beaten, or seriously injured by a family member	52	41.3
Threatened, beaten, or seriously injured at school or elsewhere	52	41.3
Seen someone in the family being threatened, beaten, or seriously injured	48	38.1
A loved one died suddenly or violently.	43	34.1
Someone did sexual things to me or someone wanted me to do sexual things with them. I couldn't say no or was forced to do so.	35	27.8
Someone asked or blackmailed me online to do sexual things.	28	22.2
Someone bullied me online. Said very mean things that scared me.	25	19.8
Assaulted, injured with a knife or firearm, or robbed under threat	17	13.5
Been in a war zone	5	4.0

Note: $N = 126$.

Table 3. Descriptive statistics and test statistics of reported posttraumatic stress symptoms (PTSS; CATS-2).

CATS-2 scale	*M*	*SD*	min	max	*t*(115)	95% CI	*p*
Sum	21.24	11.03	2	50	20.74	19.21; 23.27	<.001
Cluster B: Re-experiencing	4.42	3.58	0	12	13.30	3.76; 5.08	<.001
Cluster C: Avoidance	2.30	1.89	0	6	13.09	1.95; 2.65	<.001
Cluster D: NACM	8.18	4.32	0	19	20.41	7.39; 8.97	<.001
Cluster E: Arousal	6.34	3.29	1	15	20.75	5.73; 6.94	<.001

Note. $n = 116$. CATS-2: Child and Adolescent Trauma Scale, 2nd version; NACM: Negative alterations in cognitions and mood; min: minimum; max: maximum; CI: confidence intervals.

score; $r = 0.55$, $p < .001$). Variations in the number of reported PTEs accounted for 26.7% of the variance in PTSS ($R^2 = .30$; $F(1, 114) = 49.71$, $p < .001$). This indicates that a higher trauma burden serves as a significant predictor of PTSS (see Table 4).

The number of experienced interpersonal PTEs (CATS-2) and PTSS were strongly correlated ($r = .53$, $p < .001$; see Table 5). A moderate correlation with PTSS was identified for bullying ($r = 0.30$), while a small to moderate correlation was observed for cyber-bullying ($r = 0.23$). Notably, being asked or blackmailed online to perform sexual acts (classified as online sexual victimisation) demonstrated nearly the strongest correlation with PTSS ($r = 0.33$). On a sidenote, the number of experienced accidental PTEs and the total score on the CATS-2 self-report showed a low significant correlation ($r = .19$, $p = .05$). Overall, differences in the number of reported interpersonal PTEs predicted 25.6% of the variance in PTSS ($R^2 = .29$; $F(1, 114) = 45.36$, $p < .001$; see Table 4).

There was a high positive correlation between experiences of abuse (CTQ) and PTSS ($r = .50$, $p < .001$). In contrast, experiences of neglect did not correlate significantly with PTSS ($r = .15$, $p = .11$). The experiences of abuse explained 32.1% of the variance in PTSS ($R^2 = .50$; $F(1, 114) = 37.26$, $p < .001$; see Table 4). Emotional abuse ($r = .44$, $p < .001$), physical abuse ($r = .38$, $p < .001$), and sexual abuse ($r = .39$, $p < .001$) were associated with an increased CATS-2 total score.

A low significant correlation ($r = .27$, $p < .01$) was found between gender and PTSS. Differences in gender accounted for 7.3% of the variance in PTSS in the sample ($R^2 = 0.07$, $F(1,114) = 9.02$, $p < .01$; see Table 4).

Table 5. Associations between potentially traumatic events (CATS-2 Event Checklist) and posttraumatic stress symptoms (PTSS; CATS-2 symptom checklist) ($N = 116$).

Potentially Traumatic Event ($N = 116$)	PTSS	
	r	*p*
Serious accident or injury	.01	n.s.
Someone bullied me. Someone said very mean things that scared me.	.23	<.05
Seen someone being slapped, punched, or beaten up at school or elsewhere	.16	n.s.
Threatened, beaten, or seriously injured by a family member	.32	<.01
Threatened, beaten, or seriously injured at school or elsewhere	.33	<.01
Seen someone in the family being threatened, beaten, or seriously injured	.23	<.05
A loved one died suddenly or violently.	.04	n.s.
Someone did sexual things to me or someone wanted me to do sexual things with them. I couldn't say no or was forced to do so.	.34	<.01
Distressing or frightening medical treatment***	.27	<.01
Someone asked or blackmailed me online to do sexual things.	.33	<.01
Someone bullied me online. Said very mean things that scared me.	.30	<.01
Assaulted, injured with a knife or firearm, or robbed under threat	.32	<.01
Natural disaster	.08	n.s.
Been in a war zone	.29	<.01

4. Discussion

The aim of this study was to investigate PTEs and PTSS in a heterogeneous sample of adolescents in out-of-home care, as well as the consistency between self- and proxy-report and to identify risk factors for PTSS.

As expected, participants reported high rates of PTEs which are higher compared with non-risk populations (20%; Perkonigg et al., 2000). These results are consistent with findings from other studies in which adolescents in out-of-home care also reported increased exposure rates (e. g. Lehmann et al., 2020; Salazar et al., 2013). The most frequently reported

Table 4. Predictors of posttraumatic stress symptoms in adolescents in out-of-home care.

Coefficients	*b*	SD	*β*	*t*	*p*	95% CI LB	95% CI UB
(constant)	10.79	1.71		6.30	<.001	7.40	14.18
Number of potentially traumatising events (CATS-2)	2.13	0.30	.55	7.05	<.001	1.54	2.73
(constant)	18.11	1.44		1.59	<.001	15.26	20.96
Gender	5.96	1.98	.27	3.00	<.01	2.03	9.89
(constant)	12.24	1.60		7.68	<.001	9.08	15.40
Number of interpersonal traumatising events (CATS-2)	2.47	0.37	.53	6.73	<.001	1.31	3.20
(constant)	10.14	2.03		5.00	<.001	6.12	14.15
Experiences of abuse (CTQ)	0.40	0.07	.50	6.10	<.001	0.30	0.53

Note: Dependent variable: Sum score of posttraumatic stress symptoms, measured by the Child and Adolescent Trauma Screen Version 2 (CATS). For the variable gender, the following values have the following meanings: 0 = male, 1 = female.

PTE was a serious accident or injury. However, it is questionable at what point adolescents classify an accident or injury as serious and to what extent it really constitutes a PTE. In comparable studies, the proportion of reported serious accidents or injuries is lower (e. g. Lehmann et al., 2020). The second most prevalent PTE was bullying with 49.2% of participants reporting this experience. Sterzing et al. (2020) found a similar rate in girls who were cared for child protection services in the US. Altogether 44.1% of these girls reported to be victims of bullying – a rate approximately 7 times higher than the rate found in a nationally representative sample of non-child welfare involved adolescents (Nansel et al., 2001). Similarly, in a recent study by Pfeiffer, Garbade et al., (2024), bullying was identified as one of the most frequently reported PTEs among Ukrainian children and adolescents, with 39.7% ($n = 71$) of participants reporting bullying and 12.3% ($n = 22$) specifically indicating cyber-bullying. Bullying rates were even higher in a study with a clinical sample in Germany (59.4%; Sachser et al., 2022). In the current study, we found a moderate but significant correlation between bullying and PTSS ($r = .30$) and a small to moderate correlation ($r = .23$) was observed between cyber-bullying and PTSS. Previous research indicates a stronger association between bullying and PTSS in both adults and children (Idsoe et al., 2012; Nielsen et al., 2015). For instance, Nielsen et al. (2015) reported a moderate to strong correlation ($r = 0.42$) between bullying and PTSS, with an average of 57% of victims reporting PTSS above clinical thresholds. The relationship between bullying and PTSS needs to be further investigated in future research. In fact, bullying, and cyber-bullying have long been overlooked as potential PTEs in the scientific literature and clinical practice. The CATS-2 (Sachser et al., 2022) is the first questionnaire to explicitly include bullying as a PTE.

The finding that online sexual victimisation (e.g. being asked or blackmailed to perform sexual acts) demonstrated the strongest correlation with PTSS ($r = .33$) could be considered particularly newsworthy and underscores the particularly harmful impact of this form of trauma. This aligns with research suggesting that sexual trauma, whether online or offline, is often associated with greater symptom severity due to its deeply personal and intrusive nature (e.g. Cloitre et al., 2013; Perkonigg et al., 2016). These results emphasise the importance of trauma-focused assessments that address both online and offline victimisation. Despite the increasing prevalence of online interactions among adolescents, experiences such as cyber-bullying and online sexual victimisation remain underrepresented in trauma questionnaires and research. Expanding awareness of these forms of trauma is critical for early detection and intervention.

More interpersonal PTEs were reported than accidental ones ($d = 2.35$). This is not surprising because minors placed in a child welfare institutions often experience interpersonal traumas within their own family system (Jaritz et al., 2008). The absence or loss of a supportive family system often serves as an indication for out-of-home placement. In line with these findings, these CTQ scores in the actual sample of children in care exceeded those in the non-risk general population (Iffland et al., 2013).

On average, the sample of adolescents in out-of-home care reported a mean CATS-2 score of 21.24, which is above the CATS-2 cut-off of ≥21 but lower compared with a German clinical sample of children and adolescents who were assessed with the same questionnaire ($M = 30.75$; $SD = 12.91$; Sachser et al., 2022). Overall, it should be noted that even if children and adolescents do not exhibit the full clinical picture of PTSD, subclinical PTSS can lead to functional impairments to the same extent as the full-blown disorder (Carrion et al., 2002).

Self-reports and child welfare staff reports demonstrated only a low level of correlation, with child welfare staff consistently reporting lower rates of symptoms in adolescents in out-of-home care. This discrepancy may be attributed to the nature of PTSD symptoms, such as intrusions and emotional numbness, which are often internalising and thus challenging for child welfare staff to observe. For instance, research by Scheeringa et al. (2006) revealed that child welfare staff often underreport symptoms outlined in Criterion B (intrusive re-experiencing) for adolescents, which could lead to an underestimation of PTSD prevalence. Similarly, Skar et al. (2021) found greater inconsistency in older adolescents, with adolescents consistently reporting higher levels of trauma exposure and symptoms across all trauma types. Higher agreement between caregiver and child reports was associated with lower levels of PTSS in children. When only the child reported exposure to PTEs, PTSS levels were significantly higher compared to instances when both caregiver and child reported the trauma.

Hence, in out-of-home care settings, staff may lack detailed knowledge of early traumatic experiences, particularly those predating placement, further complicating their ability to accurately assess trauma and PTSS. This aligns with findings indicating that staff in such settings may underestimate the psychological challenges of youth they have not known for extended periods (Gearing et al., 2015). Moreover, the limited correlation highlights the importance of prioritising youth self-reports when assessing trauma and PTSS. Adolescents are often the most reliable informants of their internal experiences, making their perspectives crucial for accurate assessment and tailored interventions.

Adolescents with an increasing number of PTEs demonstrated higher levels of PTSS. This was in line with the findings of Greeson et al. (2011) and Lehmann et al. (2020). These results were consistent with studies conducted on adults (Brewin et al., 2000), adolescents, and children (e.g. Kisely et al., 2018). They back the hypothesis that repeated exposure to PTE increases the risk of developing PTSS. Moreover, the number of interpersonal PTEs was identified as a risk factor for PTSS among adolescents in out-of-home care, consistent with the meta-analyses conducted by Brewin et al. (2000) and Alisic et al. (2014). This finding supported the notion that experiencing PTE in interpersonal relationships contributed to the development of PTSS. However, it is important to note that this result differed from the study conducted by Fischer et al. (2016) which did not observe any significant effect of interpersonal PTE (compared with non-interpersonal PTE) on higher rates of PTSD in a sample of children and adolescents in residential care. This differences in the findings could potentially be explained, by the unbalanced gender distribution in the study by Fischer et al. (2016, p. 65.9% male, 34.1% female). In the study by Fischer et al. (2016), the individuals affected by multiple interpersonal PTEs were more likely to be female. Since previous research suggests that multiple interpersonal traumatisation is more likely to be associated with PTSS (e.g. Alisic et al., 2014), it can be assumed that the lower proportion of female study participants in the sample examined in Fischer et al. (2016) might explain why no significant correlation was found between interpersonal PTE and PTSS.

The PTEs that were most strongly associated with PTSS were (digital) sexualised and domestic violence. Sexual abuse, in particular, markedly increased the risk of PTSS, followed by emotional abuse, which was also observed in other studies with children and adolescents (Kisely et al., 2018). In particular, the strong association between sexual violence and PTSS has also been identified in other studies with children and adolescents of different ethnicities in child welfare systems (e.g. Salazar et al., 2013).

Furthermore, the moderating role of gender in the relationship between PTEs and PTSS frequency was examined. The results revealed a significant effect of the 'female gender' variable on PTSS. These findings are consistent with numerous studies conducted across various populations (Alisic et al., 2014; Bokszczanin, 2007; Farhood et al., 2018; Green et al., 1991; Karsberg & Elklit, 2012; Landolt et al., 2013; Perkonigg et al., 2000). It is important to note that although gender should be seen as a risk factor for the development of PTSS in children and adolescents, trauma-focused services for those affected should be expanded in general, independent of gender.

4.1. Strengths and limitations

One of the major strengths of this study was the inclusion of a comparatively heterogeneous and hard-to-reach sample of adolescents in out-of-home care from multiple facilities in south Germany.

Data within this vulnerable population was collected using a measure that conceptualised PTSD based on the current diagnostic criteria of DSM-5 and ICD-11. This allowed for the assessment and examination of a broad spectrum of potentially PTEs. This comprehensive approach also addressed the importance of assessing abuse and neglect experiences, as well as more recent phenomena such as online sexual violence and cyberbullying. To capture experiences of childhood abuse and neglect, an established procedure was employed, which contributed to a comprehensive understanding of interpersonal PTE. Furthermore, the use of self-report measures enabled the assessment of symptoms that might not be easily recognised by staff, including re-experiencing symptoms. We lack data on how many individuals were invited to participate, preventing calculation of a response rate or definitive claims about generalizability. However, our sample includes diverse child welfare facilities across Germany with minimal inclusion criteria, which provides some support to the broader applicability of our finding.

There also several limitations that may restrict the generalizability of the results. First, one limitation is that potentially PTEs were recorded dichotomously, without considering their actual frequency and intensity. Second, as is the case in many studies involving the hard-to-reach population of adolescents in out-of-home care, results should be interpreted with caution due to the small sample size. Third, it is important to note that most data were collected during a period of pandemic-related restrictions, which have been associated with PTSS, depression, and anxiety symptoms in adolescents (Guessoum et al., 2020). Fourth, In the demographics for gender there were no options for 'non-binary' or 'transgender' or 'none-of-the-above'. These circumstances may have potentially influenced the responses of the adolescents. Fifth, these results are based on questionnaires, not clinical interviews, which is why no conclusions can be made regarding PTSD diagnosis. Sixth, this study focused on very specific risk factors due to their practical relevance and accessibility in child welfare services. However, especially posttraumatic factors, such as social support and coping mechanisms, which are crucial in shaping PTSS development, were not included in the study as these variables were not assessed. Future research should incorporate these factors to achieve a more comprehensive understanding of PTSS mechanisms.

However, the results clearly indicated that adolescents in out-of-home care were at an increased risk of experiencing multiple and interpersonal PTEs. To further enhance understanding, future studies should employ longitudinal assessments of PTSD to explore the long-term effects and causal relationships between PTEs, risk factors, and the development of PTSD and complex symptomatology. Additionally, it would be valuable to examine the trajectory of PTSS throughout the duration of youth welfare measures, identifying both risk and resilience factors within the context of child welfare systems.

Furthermore, subsequent studies should also consider the occurrence of other mental disorders resulting from PTEs (e.g. Carliner et al., 2016; Hoven et al., 2005; Vibhakar et al., 2019), in addition to PTSD. This broader perspective will advance a more comprehensive understanding of the impact of PTEs on mental health outcomes.

4.2. Future research and implications

The results of the current study indicate that, despite the high prevalence of PTSS among children in out-of-home care, the availability of mental health care services for children and adolescents in Germany remains insufficient. Research by Vasileva and Petermann (2017) suggests that approximately one-third of younger adolescents in out-of-home care with mental health issues do not undergo mental health care interventions. Hensel (2010) estimates the treatment rate to be less than 30% in this population. This situation highlights a significant gap between the considerable need for assistance and the limited access to support services. This is particularly striking given the availability of short-term trauma-focused treatments that could be beneficial – such as Trauma-Focused Cognitive Behavioural Therapy (TF-CBT; de Arellano et al., 2014), Supporting Students Exposed to Trauma (SSET; Jaycox et al., 2009; Schultz et al., 2012), or Cognitive Behavioural Intervention for Trauma in Schools (CBITS; Jaycox, 2003; Stein et al., 2003). These interventions are currently being implemented and evaluated for this population in Germany (Pfeiffer, Dörrie et al., 2024). This gap is particularly problematic for the highly burdened population of adolescents in out-of-home care, as psychological stress is associated with an increased risk of discontinuing treatment measures (Schmid et al., 2013). Consequently, Schmid et al. (2014) recommend that paying more attention to (trauma-related) mental health symptoms in adolescents in out-of-home care might help to reduce early termination rates. Asking routinely about potentially PTEs in child welfare services (using e.g. standardised questionnaires or clinical interviews) would allow a better identification of PTEs and PTSS which would then enable timely access to appropriate treatment for affected individuals, addressing their specific needs effectively. The inconsistency between self-reports and staff reports on PTSS in this study is similar to previous studies (e.g. Skar et al., 2021) and emphasises the importance of training staff in out-of-home care to be more sensitive to trauma-related symptoms. Lastly, this study also shows that caregiver/ staff assessment is not sufficient to identify adolescents at risk. Self-report data on trauma and PTSS is key and not only an addition to proxy-reports in clinical but also child welfare settings.

Challenges for future research are not only the implementation and evaluation of effective trauma-focused interventions for this population, but to also focus on a sustainable dissemination so more children and adolescents in out-of-home care who suffer from PTSS will have access to such treatments. Manualized trauma-focused short-term group interventions (e.g. Auslander et al., 2017; Schultz et al., 2012) with psychoeducational and cognitive–behavioural elements are a promising approach, with trained professionals implementing them in the child welfare institutions so the children would not have to travel to the therapist to reduce known treatment barriers. Such interventions were found to significantly improve PTSS in a population of refugees in German welfare institutions, another highly vulnerable population for experiencing interpersonal PTEs (Pfeiffer et al., 2018).

Geolocation information

This research was conducted in Germany, mostly southern Germany.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by the Baden-Württemberg Foundation.

Data availability statement

The data are available upon request from the authors.

ORCID

Carolin Hummel http://orcid.org/0009-0008-3704-3561
Elisa Pfeiffer http://orcid.org/0000-0002-9742-3004

References

Alisic, E., Zalta, A. K., van Wesel, F., Larsen, S. E., Hafstad, G. S., Hassanpour, K., & Smid, G. E. (2014). Rates of post-traumatic stress disorder in trauma-exposed children and adolescents: Meta-analysis. *British Journal of Psychiatry*,

204(5), 335–340. Cambridge Core. https://doi.org/10.1192/bjp.bp.113.131227.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). American Psychiatric Association.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Association.

Auslander, W., McGinnis, H., Tlapek, S., Smith, P., Foster, A., Edmond, T., & Dunn, J. (2017). Adaptation and implementation of a trauma-focused cognitive behavioral intervention for girls in child welfare. *American Journal of Orthopsychiatry*, *87*(3), 206–215. https://doi.org/10.1037/ort0000233

Bartels, L., Berliner, L., Holt, T., Jensen, T., Jungbluth, N., Plener, P., Risch, E., Rojas, R., Rosner, R., & Sachser, C. (2019). The importance of the DSM-5 posttraumatic stress disorder symptoms of cognitions and mood in traumatized children and adolescents: Two network approaches. *Journal of Child Psychology and Psychiatry*, *60*(5), 545–554. https://doi.org/10.1111/jcpp.13009

Bernstein, D. P., Fink, L., Handelsman, L., & Foote, J. (1998). Childhood trauma questionnaire. *Assessment of family violence: A handbook for researchers and practitioners*. https://doi.org/10.1037/t02080-000.

Bokszczanin, A. (2007). PTSD symptoms in children and adolescents 28 months after a flood: Age and gender differences. *Journal of Traumatic Stress*, *20*(3), 347–351. https://doi.org/10.1002/jts.20220

Brewin, C. R., Andrews, B., & Valentine, J. D. (2000). Meta-analysis of risk factors for posttraumatic stress disorder in trauma-exposed adults. *Journal of Consulting and Clinical Psychology*, *68*(5), 748–766. https://doi.org/10.1037/0022-006X.68.5.748

Carliner, H., Keyes, K. M., McLaughlin, K. A., Meyers, J. L., Dunn, E. C., & Martins, S. S. (2016). Childhood trauma and illicit drug use in adolescence: A population-based national comorbidity survey replication–adolescent supplement study. *Journal of the American Academy of Child & Adolescent Psychiatry*, *55*(8), 701–708. https://doi.org/10.1016/j.jaac.2016.05.010

Carrion, V. G., Weems, C. F., Ray, R., & Reiss, A. L. (2002). Toward an empirical definition of pediatric PTSD: The phenomenology of PTSD symptoms in youth. *Journal of the American Academy of Child & Adolescent Psychiatry*, *41*(2), 166–173. https://doi.org/10.1097/00004583-200202000-00010

Chapman, M. V., Wall, A., Barth, R. P., & National Survey of Child and Adolescent Well-Being Research Group. (2004). Children's voices: The perceptions of children in foster care. *American Journal of Orthopsychiatry*, *74*(3), 293–304. https://doi.org/10.1037/0002-9432.74.3.293

Cloitre, M., Garvert, D. W., Brewin, C. R., Bryant, R. A., & Maercker, A. (2013). Evidence for proposed ICD-11 PTSD and complex PTSD: A latent profile analysis. *European Journal of Psychotraumatology*, *4*(1), 20706. https://doi.org/10.3402/ejpt.v4i0.20706

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Lawrence Erlbaum Associates.

Connell, C. M., Vanderploeg, J. J., Flaspohler, P., Katz, K. H., Saunders, L., & Tebes, J. K. (2006). Changes in placement among children in foster care: A longitudinal study of child and case influences. *Social Service Review*, *80*(3), 398–418. https://doi.org/10.1086/505554

de Arellano, M. A. R., Lyman, D. R., Jobe-Shields, L., George, P., Dougherty, R. H., Daniels, A. S., Ghose, S. S., Huang, L., & Delphin-Rittmon, M. E. (2014). Trauma-focused cognitive-behavioral therapy for children and adolescents: Assessing the evidence. *Psychiatric Services*, *65*(5), 591–602. https://doi.org/10.1176/appi.ps.201300255

De Bellis, M. D. (2001). Developmental traumatology: The psychobiological development of maltreated children and its implications for research, treatment, and policy. *Development and Psychopathology*, *13*(3), 539–564. Cambridge Core. https://doi.org/10.1017/S0954579401003078

Dietlinger, F. K., Müller, L. R. F., Pfeiffer, E., Sachser, C., & Rosner, R. (2024). Agreement for posttraumatic stress symptoms among unaccompanied young refugees and professional caregivers. *European Journal of Psychotraumatology*, *15*(1), 2416834. https://doi.org/10.1080/20008066.2024.2416834

Farhood, L., Fares, S., & Hamady, C. (2018). PTSD and gender: Could gender differences in war trauma types, symptom clusters and risk factors predict gender differences in PTSD prevalence? *Archives of Women's Mental Health*, *21*(6), 725–733. https://doi.org/10.1007/s00737-018-0849-7

Fischer, S., Dölitzsch, C., Schmeck, K., Fegert, J. M., & Schmid, M. (2016). Interpersonal trauma and associated psychopathology in girls and boys living in residential care. *Children and Youth Services Review*, *67*, 203–211. https://doi.org/10.1016/j.childyouth.2016.06.013

Gearing, R. E., Schwalbe, C. S. J., MacKenzie, M. J., Brewer, K. B., & Ibrahim, R. W. (2015). Assessment of adolescent mental health and behavioral problems in institutional care: Discrepancies between staff-reported CBCL scores and adolescent-reported YSR scores. *Administration and Policy in Mental Health and Mental Health Services Research*, *42*(3), 279–287. https://doi.org/10.1007/s10488-014-0568-y

Green, B. L., Korol, M., Grace, M. C., Vary, M. G., Leonard, A. C., Gleser, G. C., & Smitson-Cohen, S. (1991). Children and disaster: Age, gender, and parental effects on PTSD symptoms. *Journal of the American Academy of Child & Adolescent Psychiatry*, *30*(6), 945–951. https://doi.org/10.1097/00004583-199111000-00012

Greeson, J. K. P., Briggs, E. C., Kisiel, C. L., & Layne, C. M. (2011). Complex trauma and mental health in children and adolescents placed in foster care: Findings from the national child traumatic stress network. *Child Welfare*, *90*(6), 20.

Guessoum, S. B., Lachal, J., Radjack, R., Carretier, E., Minassian, S., Benoit, L., & Moro, M. R. (2020). Adolescent psychiatric disorders during the COVID-19 pandemic and lockdown. *Psychiatry Research*, *291*, 113264. https://doi.org/10.1016/j.psychres.2020.113264

Häuser, W., Schmutzer, G., Brähler, E., & Glaesmer, H. (2011). Maltreatment in childhood and adolescence. *Deutsches Ärzteblatt International*, *108*(17), 287–294. https://doi.org/10.3238/arztebl.2011.0287

Hensel, T. (2010). Traumatherapie bei Kindern und Jugendlichen: Ausbildungs-und Versorgungsrealität aus der Sicht eines niedergelassenen Kinder-und Jugendlichenpsychotherapeuten und Ausbilders in Kindertraumapsychotherapie. In J. M. Fegert, U. Ziegenhain, & L. Goldbeck (Hrsg.), *Traumatisierte Kinder und Jugendliche in Deutschland* (pp. S. 82–87). Juventa Verlag.

Hoven, C. W., Duarte, C. S., Lucas, C. P., Wu, P., Mandell, D. J., Goodwin, R. D., Cohen, M., Balaban, V., Woodruff, B. A., Bin, F., Musa, G. J., Mei, L., Cantor, P. A., Aber, J. L., Cohen, P., & Susser, E. (2005). Psychopathology among New York city public school children 6 months

after September 11. *Archives of General Psychiatry*, *62*(5), 545–551. https://doi.org/10.1001/archpsyc.62.5.545

Hummel, C., Läntzsch, S., Fegert, J. M., Witt, A., Rassenhofer, M., & Pfeiffer, E. (2021). Akzeptanz für die eigene Fremdunterbringung: Das Projekt „Ankommen". *Evangelische Jugendhilfe (EREV)*, *98*(2), 88–97.

Idsoe, T., Dyregrov, A., & Idsoe, E. C. (2012). Bullying and PTSD symptoms. *Journal of Abnormal Child Psychology*, *40*(6), 901–911. https://doi.org/10.1007/s10802-012-9620-0

Iffland, B., Brähler, E., Neuner, F., Häuser, W., & Glaesmer, H. (2013). Frequency of child maltreatment in a representative sample of the German population. *BMC Public Health*, *13*(1), 980. https://doi.org/10.1186/1471-2458-13-980

Jaritz, C., Wiesinger, D., & Schmid, M. (2008). Traumatische Lebensereignisse bei Kindern und Jugendlichen in der stationären Jugendhilfe. *Trauma & Gewalt*, *2*(4), 266–277.

Jaycox, L. (2003). *CBITS: Cognitive-behavioral intervention for trauma in schools*. RAND Corporation. https://doi.org/10.7249/CB209

Jaycox, L. H., Langley, A. K., Stein, B. D., Wong, M., Sharma, P., Scott, M., & Schonlau. M. (2009). Support for students exposed to trauma: A pilot study. *School Mental Health*, *1*, 49–60. https://doi.org/10.1007/s12310-009-9007-8.

Karsberg, S. H., & Elklit, A. (2012). Victimization and PTSD in a rural Kenyan youth sample. *Clinical Practice & Epidemiology in Mental Health*, *8*(1), 91–101. https://doi.org/10.2174/1745017901208010091

Keller, T. E., Salazar, A. M., & Courtney, M. E. (2010). Prevalence and timing of diagnosable mental health, alcohol, and substance use problems among older adolescents in the child welfare system. *Children and Youth Services Review*, *32*(4), 626–634. https://doi.org/10.1016/j.childyouth.2009.12.010

Kisely, S., Abajobir, A. A., Mills, R., Strathearn, L., Clavarino, A., & Najman, J. M. (2018). Child maltreatment and mental health problems in adulthood: Birth cohort study. *The British Journal of Psychiatry*, *213*(6), 698–703. https://doi.org/10.1192/bjp.2018.207

Klinitzke, G., Romppel, M., Häuser, W., Brähler, E., & Glaesmer, H. (2012). The German version of the childhood trauma questionnaire (CTQ): Psychometric characteristics in a representative sample of the general population. *Psychotherapie, Psychosomatik, medizinische Psychologie*, *62*(2), 47–51. https://doi.org/10.1055/s-0031-1295495

Kolassa, I.-T., Ertl, V., Eckart, C., Kolassa, S., Onyut, L. P., & Elbert, T. (2010). Spontaneous remission from PTSD depends on the number of traumatic event types experienced. *Psychological Trauma: Theory, Research, Practice, and Policy*, *2*(3), 169–174. https://doi.org/10.1037/a0019362

Kolko, D. J., Hurlburt, M. S., Zhang, J., Barth, R. P., Leslie, L. K., & Burns, B. J. (2010). Posttraumatic stress symptoms in children and adolescents referred for child welfare investigation. A national sample of in-home and out-of-home care. *Child Maltreatment*, *15*(1), 48–63. https://doi.org/10.1177/1077559509337892

Landolt, M. A., Schnyder, U., Maier, T., Schoenbucher, V., & Mohler-Kuo, M. (2013). Trauma exposure and posttraumatic stress disorder in adolescents: A national survey in Switzerland. *Journal of Traumatic Stress*, *26*(2), 209–216. https://doi.org/10.1002/jts.21794

Läntzsch, S., Fegert, J. M., Pfeiffer, E., Witt, A., & Rassenhofer, M. (2022). Potenzielle Inhalte und Rahmenbedingungen einer Gruppenintervention für Jugendliche zur Aufarbeitung der eigenen Fremdunterbringung. *Praxis der Kinderpsychologie und Kinderpsychiatrie*, *71*(1), 55–71. https://doi.org/10.13109/prkk.2022.71.1.55

Lehmann, S., Breivik, K., Monette, S., & Minnis, H. (2020). Potentially traumatic events in foster youth, and association with DSM-5 trauma- and stressor related symptoms. *Child Abuse & Neglect*, *101*, 104374. https://doi.org/10.1016/j.chiabu.2020.104374

Maercker, A., Forstmeier, S., Wagner, B., Glaesmer, H., & Brähler, E. (2008). Posttraumatische Belastungsstörungen in Deutschland. *Der Nervenarzt*, *79*(5), 577–586. https://doi.org/10.1007/s00115-008-2467-5

McMillen, J. C., Zima, B. T., Scott, L. D., Auslander, W. F., Munson, M. R., Ollie, M. T., & Spitznagel, E. L. (2005). Prevalence of psychiatric disorders among older youths in the foster care system. *Journal of the American Academy of Child & Adolescent Psychiatry*, *44*(1), 88–95. https://doi.org/10.1097/01.chi.0000145806.24274.d2

Nansel, T. R., Overpeck, M., Pilla, R. S., Ruan, W. J., Simons-Morton, B., & Scheidt, P. (2001). Bullying behaviors among US YouthPrevalence and association with psychosocial adjustment. *JAMA*, *285*(16), 2094–2100. https://doi.org/10.1001/jama.285.16.2094

Neuner, F., Schauer, M., Karunakara, U., Klaschik, C., Robert, C., & Elbert, T. (2004). Psychological trauma and evidence for enhanced vulnerability for posttraumatic stress disorder through previous trauma among West Nile refugees. *BMC Psychiatry*, *4*(1), 34. https://doi.org/10.1186/1471-244X-4-34

Nielsen, M. B., Tangen, T., Idsoe, T., Matthiesen, S. B., & Magerøy, N. (2015). Post-traumatic stress disorder as a consequence of bullying at work and at school. A literature review and meta-analysis. *Aggression and Violent Behavior*, *21*, 17–24. https://doi.org/10.1016/j.avb.2015.01.001

Oswald, S. H., Fegert, J. M., & Goldbeck, L. (2010). Traumafolgestörungen bei Pflegekindern nach Misshandlung und Vernachlässigung. *Verhaltenstherapie*, *20*(1), 37–44. https://doi.org/10.1159/000274622

Perkonigg, A., Höfler, M., Cloitre, M., Wittchen, H.-U., Trautmann, S., & Maercker, A. (2016). Evidence for two different ICD-11 posttraumatic stress disorders in a community sample of adolescents and young adults. *European Archives of Psychiatry and Clinical Neuroscience*, *266*(4), 317–328. https://doi.org/10.1007/s00406-015-0639-4

Perkonigg, A., Kessler, R. C., Storz, S., & Wittchen, H.-U. (2000). Traumatic events and post-traumatic stress disorder in the community: Prevalence, risk factors and comorbidity. *Acta Psychiatrica Scandinavica*, *101*(1), 46–59. https://doi.org/10.1034/j.1600-0447.2000.101001046.x

Pfeiffer, E., Dörrie, L., Köksal, J., Krech, F., Muche, R., Segler, J., & Sachser, C. (2024). Evaluation of "cognitive behavioral intervention for trauma in schools" (CBITS) in child welfare programs in Germany: Study protocol of a randomized controlled trial. *Trials*, *25*(1), 399. https://doi.org/10.1186/s13063-024-08190-x

Pfeiffer, E., Garbade, M., & Sachser, C. (2024). Traumatic events and posttraumatic stress symptoms in a treatment-seeking sample of Ukrainian children during the war. *Child and Adolescent Psychiatry and Mental Health*, *18*(1), 25. https://doi.org/10.1186/s13034-024-00715-1

Pfeiffer, E., Sachser, C., Rohlmann, F., & Goldbeck, L. (2018). Effectiveness of a trauma-focused group

intervention for young refugees: A randomized controlled trial. *Journal of Child Psychology and Psychiatry*, *59*(11), 1171–1179. https://doi.org/10.1111/jcpp.12908

Pinto, R. J., Morgado, D., Reis, S., Monteiro, R., Levendosky, A., & Jongenelen, I. (2017). When social support is not enough: Trauma and PTSD symptoms in a risk-sample of adolescents. *Child Abuse & Neglect*, *72*, 110–119. https://doi.org/10.1016/j.chiabu.2017.07.017

Rasmussen, D. J., Karsberg, S., Karstoft, K.-I., & Elklit, A. (2013). *Victimization and PTSD in an Indian youth sample from Pune City*. https://doi.org/10.4236/ojepi.2013.31003.

Reuben, A., Moffitt, T. E., Caspi, A., Belsky, D. W., Harrington, H., Schroeder, F., Hogan, S., Ramrakha, S., Poulton, R., & Danese, A. (2016). Lest we forget: Comparing retrospective and prospective assessments of adverse childhood experiences in the prediction of adult health. *Journal of Child Psychology and Psychiatry*, *57*(10), 1103–1112. https://doi.org/10.1111/jcpp.12621

Sachser, C., Berliner, L., Risch, E., Rosner, R., Birkeland, M. S., Eilers, R., Hafstad, G. S., Pfeiffer, E., Plener, P. L., & Jensen, T. K. (2022). The child and adolescent trauma screen 2 (CATS-2) – validation of an instrument to measure DSM-5 and ICD-11 PTSD and complex PTSD in children and adolescents. *European Journal of Psychotraumatology*, *13*(2), 2105580. https://doi.org/10.1080/20008066.2022.2105580

Salazar, A. M., Keller, T. E., Gowen, L. K., & Courtney, M. E. (2013). Trauma exposure and PTSD among older adolescents in foster care. *Social Psychiatry and Psychiatric Epidemiology*, *48*(4), 545–551. https://doi.org/10.1007/s00127-012-0563-0

Sayed, S., Iacoviello, B. M., & Charney, D. S. (2015). Risk factors for the development of psychopathology following trauma. *Current Psychiatry Reports*, *17*(8), 70. https://doi.org/10.1007/s11920-015-0612-y

Scheeringa, M. S., Wright, M. J., Hunt, J. P., & Zeanah, C. H. (2006). Factors affecting the diagnosis and prediction of PTSD symptomatology in children and adolescents. *American Journal of Psychiatry*, *163*(4), 644–651. https://doi.org/10.1176/ajp.2006.163.4.644

Schepp, S., Fegert, J. M., Rassenhofer, M., Regner, S., Witt, A., & Pfeiffer, E. (2024). Evaluation of ANKOMMEN as a group intervention based on life story work for adolescents in residential care in Germany: A single-arm pilot study. *Child and Adolescent Psychiatry and Mental Health*, *18*(1), 135.

Schmid, M., Dölitzsch, C., Pérez, T., Jenkel, N., Schmeck, K., Kölch, M., & Fegert, J. M. (2014). Welche Faktoren beeinflussen Abbrüche in der Heimerziehung–welche Bedeutung haben limitierte prosoziale Fertigkeiten? *Kindheit und Entwicklung*, *23*(3), 161–173. https://doi.org/10.1026/0942-5403/a000142

Schmid, M., Kölch, M., Fegert, J. M., & Schmeck, K. (2013). *Zusammenfassung der wichtigsten Ergebnisse des Modellversuches Abklärung und Zielerreichung in stationären Massnahmen (MAZ.)*. https://www.equals.ch/files/modellversuch-maz/maz_zusammenfassung_de.pdf

Schultz, D., Barnes-Proby, D., Chandra, A., Jaycox, L. H., Maher, E., & Pecora, P. (2012). Toolkit for adapting cognitive behavioral intervention for trauma in schools (CBITS) or supporting students exposed to trauma (SSET) for implementation with youth in foster care. *Rand Health Quarterly*, *2*(1), 13.

Skar, A.-M. S., Jensen, T. K., & Harpviken, A. N. (2021). Who reports what? A comparison of child and caregivers' reports of child trauma exposure and associations to post-traumatic stress symptoms and functional impairment in child and adolescent mental health clinics. *Research on Child and Adolescent Psychopathology*, *49*(7), 919–934. https://doi.org/10.1007/s10802-021-00788-y

Stein, B. D., Jaycox, L. H., Kataoka, S. H., Wong, M., Tu, W., Elliott, M. N., & Fink, A. (2003). A mental health intervention for schoolchildren exposed to violence: A randomized controlled trial. *JAMA*, *290*(5), 603–611. https://doi.org/10.1001/jama.290.5.603

Sterzing, P. R., Auslander, W. F., Ratliff, G. A., Gerke, D. R., Edmond, T., & Jonson-Reid, M. (2020). Exploring bullying perpetration and victimization among adolescent girls in the child welfare system: Bully-only, victim-only, bully-victim, and noninvolved roles. *Journal of Interpersonal Violence*, *35*(5–6), 1311–1333. https://doi.org/10.1177/0886260517696864

Trickey, D., Siddaway, A. P., Meiser-Stedman, R., Serpell, L., & Field, A. P. (2012). A meta-analysis of risk factors for post-traumatic stress disorder in children and adolescents. *Clinical Psychology Review*, *32*(2), 122–138. https://doi.org/10.1016/j.cpr.2011.12.001

Vasileva, M., Fegert, J. M., & Petermann, F. (2015). Posttraumatische Belastungsstörungen bei Kindern in der Heimerziehung und in Pflegeverhältnissen. *Nervenheilkunde*, *34*(1/2), 34–42. https://doi.org/10.1055/s-0038-1627550

Vasileva, M., & Petermann, F. (2017). Mental health needs and therapeutic service utilization of young children in foster care in Germany. *Children and Youth Services Review*, *75*, 69–76. https://doi.org/10.1016/j.childyouth.2017.02.022

Vibhakar, V., Allen, L. R., Gee, B., & Meiser-Stedman, R. (2019). A systematic review and meta-analysis on the prevalence of depression in children and adolescents after exposure to trauma. *Journal of Affective Disorders*, *255*, 77–89. https://doi.org/10.1016/j.jad.2019.05.005

Wingenfeld, K., Spitzer, C., Mensebach, C., Grabe, H., Hill, A., Gast, U., Schlosser, N., Höpp, H., Beblo, T., & Driessen, M. (2010). The German version of the childhood trauma questionnaire (CTQ): Preliminary psychometric properties. *Psychotherapie, Psychosomatik, medizinische Psychologie*, *60*(11), 442–450. https://doi.org/10.1055/s-0030-1253494