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REVIEW ARTICLE



Assessment of functional impairment related to post-traumatic stress in children and adolescents: a systematic review

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ABSTRACT

Background: Post-traumatic stress disorder (PTSD) often impairs children's and adolescents' functioning across different life domains. Significant functional impairment is a diagnostic criterion for PTSD in both the DSM-5 and the ICD-11, but the methods in terms of domains covered and scoring rules to assess functional impairments are quite inconsistent.

Objective: This systematic review evaluates instruments specifically designed to assess post-traumatic stress symptoms (PTSS), PTSS modules within diagnostic interviews, and generic functional impairment measures used to capture PTSS-related functional impairment in children and adolescents.

Method: A systematic search was conducted across six databases for studies published between January 2010 and November 2025. Eligible papers included the development or psychometric evaluation of PTSS-specific measures, PTSS modules in diagnostic interview, and generic functional impairment measures validated in samples exposed to trauma or adverse childhood experiences. Data were extracted and categorized based on assessed content domains, scoring methods, and psychometric properties, with results stratified by age group (6 years and younger versus 7 years and older).

Results: From 3519 records, 30 papers met the inclusion criteria. Thirteen PTSS-specific instruments, one diagnostic interview module, and one generic functional impairment measure were identified. Together, these instruments assessed 11 different life domains, although considerable variation existed in the domains covered across tools. Scoring methods also varied, with approximately half using dichotomous response formats and the remainder using multi-categorical scales. Psychometric properties of the functional impairment scales were reported in only 20.7% of publications.

Conclusion: Current tools for assessing PTSS-related functional impairment in youth lack standardization. There is a critical need for well-validated instruments that comprehensively capture the presence and severity of PTSS-related functional impairment.

Evaluación del deterioro funcional relacionado con el estrés postraumático en niños y adolescentes: una revisión sistemática

Antecedentes: El trastorno de estrés postraumático (TEPT) suele afectar el funcionamiento de niños y adolescentes en diversos ámbitos de la vida. El deterioro funcional significativo es un criterio diagnóstico para el TEPT tanto en el DSM-5 como en la CIE-11, pero los métodos, en cuanto a los dominios que abarca y las reglas de puntuación para evaluar el deterioro funcional, son bastante inconsistentes.

Objetivo: Esta revisión sistemática evalúa instrumentos diseñados específicamente para evaluar los síntomas de estrés postraumático (SEPT), los módulos de SEPT en entrevistas diagnósticas y las medidas genéricas de deterioro funcional utilizadas para capturar el deterioro funcional relacionado con el SEPT en niños y adolescentes.

Método: Se realizó una búsqueda sistemática en seis bases de datos de estudios publicados entre enero de 2010 y noviembre de 2025. Los artículos elegibles incluyeron el desarrollo o la evaluación psicométrica de medidas específicas para el SEPT, módulos de SEPT en entrevistas diagnósticas y medidas genéricas de deterioro funcional validadas en muestras expuestas a traumas o experiencias adversas en la infancia (ACEs por sus siglas en inglés).

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KEYWORDS

PTSD; PTSS; functional impairment; children; adolescents; trauma; psychometrics

PALABRAS CLAVE

TEPT; SEPT; deterioro funcional; niños; adolescentes; trauma; psicometría

HIGHLIGHTS

- This systematic review identified and evaluated 15 instruments, comprising PTSS-specific measures, diagnostic interview modules, and generic functional impairment tools, used to assess PTSS-related functional impairment in children and adolescents.
- The instruments collectively assessed 11 different life domains; however, substantial variability existed in the domains covered, and scoring methods ranged from dichotomous formats to Likert-type scales.
- Only 20.7% of papers reported psychometric properties for functional impairment items, highlighting the critical need for standardized, developmentally appropriate tools with robust validation in children and adolescents with potentially traumatic experiences.

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Se extrajeron y categorizaron los datos según los dominios de contenido evaluados, los métodos de puntuación y las propiedades psicométricas, con resultados estratificados por grupos de edad (seis años o menos frente a siete años o más).

Resultados: De 3.519 registros, 30 artículos cumplieron los criterios de inclusión. Se identificaron trece instrumentos específicos para SEPT, un módulo de entrevista diagnóstica y una medida genérica de deterioro funcional. En conjunto, estos instrumentos evaluaron once dominios de la vida diferentes, aunque existía una variación considerable en los dominios cubiertos entre las distintas herramientas. Los métodos de puntuación también variaron: aproximadamente la mitad utilizó formatos de respuesta dicotómicos y el resto empleó escalas multi - categóricas. Las propiedades psicométricas de las escalas de deterioro funcional se reportaron en solo el 20,7 % de las publicaciones.

Conclusión: Las herramientas actuales para evaluar el deterioro funcional relacionado con los síntomas de estrés postraumático en jóvenes carecen de estandarización. Existe una necesidad crítica de instrumentos bien validados que capturen de forma integral la presencia y la gravedad del deterioro funcional relacionado con los SEPT.

1. Introduction

Population-based studies demonstrate that a high number of children and adolescents experience one or more potential traumatic events (PTEs) during their lifetime (Landolt et al., 2013; McLaughlin et al., 2013). Approximately 12–21% of children and adolescents with PTE(s) develop post-traumatic stress disorder (PTSD) (Visser et al., 2025; Woolgar et al., 2022). According to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), PTSD is characterized by persistent re-experiencing of traumatic memories, avoidance of stimuli reminiscent of the PTE, negative alterations in cognitions and mood, and alterations in arousal and reactivity (American Psychiatric Association [APA], 2013). In contrast, the International Statistical Classification of Diseases and Related Health Problems, 11th Revision (ICD-11) defines PTSD more narrowly, focusing on re-experiencing the PTE in the present, trauma-related avoidance, and a persistent sense of threat (WHO, 2019). Both the DSM-5 and the ICD-11 criteria require that post-traumatic stress symptoms (PTSS) cause significant functional impairment in key areas of life, such as social, occupational, or educational functioning, for a PTSD diagnosis (APA, 2013; WHO, 2019). It is important to distinguish between trauma-related symptoms more broadly and PTSS as operationalized within diagnostic frameworks such as the DSM-5 and ICD-11. While children may exhibit a wide range of trauma-related reactions following PTEs (Linning & Kearney, 2004), the present review focuses specifically on functional impairment associated with PTSS as defined within these diagnostic systems. The International Classification of Functioning, Disability and Health (ICF) (WHO, 2001) offers a framework to conceptualize functional impairment across multiple life domains.

The relationships between PTSS and functional impairment can be conceptualized within the framework of disablement process models. According to

Nagi's disablement model (Nagi, 1965, 1991) and its later elaboration by Verbrugge and Jette (1994), disability is not an inherent characteristic of a disorder but the outcome of a dynamic process linking pathology to impairments, functional limitations, and ultimately to disability within social roles. In the context of the present review, this final stage of 'disability' corresponds conceptually to what we refer to as PTSS-related functional impairment. Applied to PTSD in children and adolescents, PTSD as a diagnosis is linked to impairments (e.g. hyperarousal), which lead to functional limitations (e.g. problems with concentration) and, depending on contextual and personal factors, result in disability (e.g. difficulties with family members, friends, in school). Verbrugge and Jette (1994) further argue that such difficulties may exert a feedback effect on earlier stages of the disablement process. Applied to PTSD as a mental disorder, this suggests that functional impairment may contribute to the stabilization or exacerbation of PTSS.

Recent research shows that children and adolescents with PTE(s), on average, report impairment in three distinct life domains as a result of PTSS (Bartels et al., 2024). Scheeringa et al. (2005) reported that functional impairment is two to three times more prevalent among young children with PTE(s) than a PTSD diagnosis. Other studies also provided evidence that functional impairment rates are significantly higher compared to PTSD diagnosis rates, with rates for at least one impaired domain of life for about 80% in treatment-seeking children and adolescents with PTE(s) (Sachser et al., 2018). Notably, functional impairment may persist even when children no longer meet the diagnostic criteria for PTSD (Scheeringa et al., 2005). Childhood exposure to PTEs is also linked to functional impairment in adulthood (Cope-land et al., 2018), including poor academic outcomes throughout life (e.g. Strøm et al., 2016).

These findings highlight the need for reliable assessment of PTSS-related functional impairment,

which plays a central role in understanding the long-term impact of trauma and in informing effective clinical care and research efforts in children and adolescents.

Studies examining PTSS-related functional outcomes in children and adolescents with PTE(s) have used different instruments to assess impairment. Impairment is usually assessed either with a limited number of items appended to self-, caregiver-, or interviewer-rated PTSD measures (e.g. Sachser et al., 2022), with PTSS modules within diagnostic interviews (e.g. Sheehan et al., 2010), typically covering a variety of important life domains, or with transdiagnostic generic functioning measures (e.g. Wolf, 2013). For adults, two measures explicitly designed to capture PTSS-related functional impairment exist: the Posttraumatic Stress Related Functioning Inventory (PRFI) (McCaslin et al., 2016) and the Inventory of Psychosocial Functioning (IPF) (Bovin et al., 2018). However, to our knowledge, no measure has yet been designed to specifically assess the level of PTSS-related functional impairment in children and adolescents with PTE(s).

The aim of the present systematic review was to identify and describe scales in PTSS-specific measures that assess PTSS-related functional impairment in children and adolescents. In addition, we aimed to identify and describe PTSS modules in diagnostic interviews that include assessments of functional impairment in children and adolescents. Only instruments that were either developed or psychometrically evaluated in samples of children and adolescents with PTE(s) were included. Given the common practice of using generic functioning scales to examine the relationship between symptoms and impairment, the third aim was to identify and describe generic measures of functional impairment that were psychometrically evaluated in samples of youth with PTE(s). As no general measures have yet been specifically developed for children and adolescents with PTE(s), the inclusion criteria were broadened to encompass psychometric evaluations in samples exposed to adverse childhood experiences (ACEs), defined as significant life events that increase the risk of developing trauma-related symptoms (Frewen et al., 2019). Outcomes focused on construction background, scale content, scoring, and the psychometric properties of these instruments. To account for children's developmental differences, the results are reported separately for children aged 6 years and younger and for those aged 7 years and older.

2. Method

2.1. Design

This systematic review followed the guidelines of the Preferred Reporting Items for Systematic Reviews

and meta-analyses (PRISMA) (Page et al., 2021). The protocol was registered online on PROSPERO on 26 June 2023 (ID: CRD42023431736). An additional search focusing on diagnostic interviews with PTSS modules was conducted during the revision process. This supplementary search was not part of the original PROSPERO registration and is described in detail in Section 2.2.

2.2. Search strategy and eligibility criteria

An electronic systematic literature search for the period from January 2010 to November 2025 was conducted by the first author (AJV) in the following databases: PsycINFO, PsycArticles, MEDLINE, Embase, CINAHL, and PROQUEST. Peer-reviewed original articles published in English were included. For PROQUEST, the search focused specifically on doctoral dissertations and master's theses.

Variants of the following search terms were used for PTSS-specific instruments (i.e. self-, caregiver-, and interviewer-rated instruments): 'PTSD', 'measure*', 'develop*/validate*/psychometric properties', and 'child*/adolescent*'. For PTSS modules in diagnostic interviews, variants of the terms 'diagnostic interview', 'mental disorder', 'PTSD', 'develop*/validate*/psychometric properties', and 'child*/adolescent*' were used. For generic measures of functional impairment, variants of the terms 'PTSD'/adverse childhood experience', 'validate*/psychometric properties', 'functional impairment', and 'child*/adolescent*' were used. The search was applied to title and abstract, except for the search terms 'PTSD' and 'diagnostic interview' in PTSS modules in diagnostic interviews, as these were expected to appear only in full texts. For the complete search strategies, see Supplementary material 1. Systematic reviews and meta-analyses were excluded, as development and validation studies were sought.

For PTSS-specific instruments and PTSS modules in diagnostic interviews, the inclusion criteria were as follows: (1) the paper reported on the development and/or psychometric evaluation of the PTSD instrument or module, based on DSM-5 or ICD-11; (2) instruments designed for children aged 6 years and younger were included if based on DSM-5, given concerns that ICD-11 may not adequately capture PTSD in young children (Vasileva et al., 2018); (3) the sample was not specifically selected for the presence of comorbid somatic or mental disorders, and no additional diagnoses were actively investigated or required for inclusion; (4) all participants had experienced at least one PTE; if this applied only to a subsample of the study and psychometric data were available for that subsample, the paper was included and only the data from the trauma-exposed subsample were considered, and (5) the age range of participants

was between 0 and 25 years. This range was chosen to account for developmental continuity into young adulthood, as individuals up to the age of 25 are often still treated in child and adolescent mental health services (Garratt et al., 2024) and are frequently included in studies targeting adolescents (e.g. Rickwood et al., 2016). Moreover, adolescence is increasingly considered to extend beyond the age of 18 years (Sawyer et al., 2018).

For generic measures of functional impairment, papers were included if they reported a psychometric evaluation of the instrument, with PTSS as the primary outcome. The measure had to be validated in samples of children, adolescents, or young adults (age range 0–25 years) with trauma exposure or ACEs, or provide psychometric properties related to them. The exclusion criteria are provided in Supplementary material 2.

In addition to the preregistered search strategy, a supplementary search was conducted to provide a more comprehensive overview of commonly used diagnostic interviews containing PTSS modules. Given the central role of diagnostic interviews in clinical practice, search terms and eligibility criteria were broadened (e.g. omission of PTSS-specific search terms and inclusion of ICD-10-based interviews). This supplementary search was not part of the original PROSPERO registration. The results of this additional search are reported in Supplementary material 6.

2.3. Data collection, data extraction, and synthesis

All articles identified in the literature search were exported to Covidence (n.d.), where duplicates were removed. Titles and abstracts were screened for eligibility by two authors (AJV and RMH). Full texts of potentially relevant papers were independently assessed by the same authors. Discrepancies were resolved through discussion. In two cases, the last author (LB) was consulted to reach consensus. Data were extracted into a predefined SPSS database (version 29) (IBM Corp., 2022) based on items specified in the PROSPERO protocol. Information on the construction background of the functional impairment items was also extracted, as this decision was made during the data extraction phase.

Data extraction occurred in three stages. In the first stage, data on the type of study and instrument, date of publication, and participant characteristics were extracted. The second stage involved obtaining the complete instruments from the included papers to evaluate whether they assessed functional impairment, as well as their response formats, scoring methods, item content, and information on the construction of the item content (excluding item wording). Item content was extracted from each instrument and thematically analysed to identify recurring patterns

related to functional impairment, informing the systematic derivation of conceptually distinct life domains. These domains were subsequently mapped onto the Activities and Participation component of the ICF (WHO, 2001). In line with the ICF definitions, ‘activity refers to the execution of a task or action by an individual, and ‘participation’ to involvement in a life situation. Data on the instruments’ psychometric properties were extracted in the third stage. Results are reported separately for children aged 6 years and younger and for those aged 7 years and older; however, the articles by Grace et al. (2021) and Haselgruber et al. (2025), which included samples aged 6 years and older, are reported in the ≥ 7 years category, as the majority of participants were older children and the samples did not represent a preschool population.

If instruments or data were inaccessible, study authors were contacted to request further information. As this review aims to provide an overview of how PTSS-specific measures, PTSS modules in diagnostic interviews, and generic functional impairment measures are assessing functional impairment, no risk of bias assessment was conducted.

3. Results

The search yielded 3519 records after deduplication. A total of 3313 papers were excluded during the title and abstract screening, leaving 206 records for full text screening (see PRISMA diagram in Figure 1). A total of 28 publications on the development and/or psychometric evaluation of PTSS-specific self-, caregiver-, and interviewer-rated instruments were included, along with one publication on the development and/or psychometric evaluation of PTSS modules in diagnostic interviews for mental disorders and one publication assessing the psychometric properties of generic measures of functional impairment. PRISMA flowcharts detailing the search results for each type of instrument are provided in Supplementary material 3–5. For children aged 6 years and younger, two PTSS-specific instruments, one PTSS module in a diagnostic interview and one generic measure of functional impairment were included, while for children and adolescents aged 7 years and older, 13 PTSS-specific instruments were included [with the Global Psychotrauma Screen – Child (GPS-C) and Global Psychotrauma Screen – Teen (GPS-T) analysed as separate instruments, and the International Trauma Questionnaire – Child and Adolescent Version (ITQ-CA) and International Trauma Questionnaire – Caregiver Version (ITQ-CG) likewise analysed separately, owing to content differences], no PTSS modules in diagnostic interviews and one generic measure of functional impairment were included. Table 1 presents the key characteristics of the included measurement instruments.

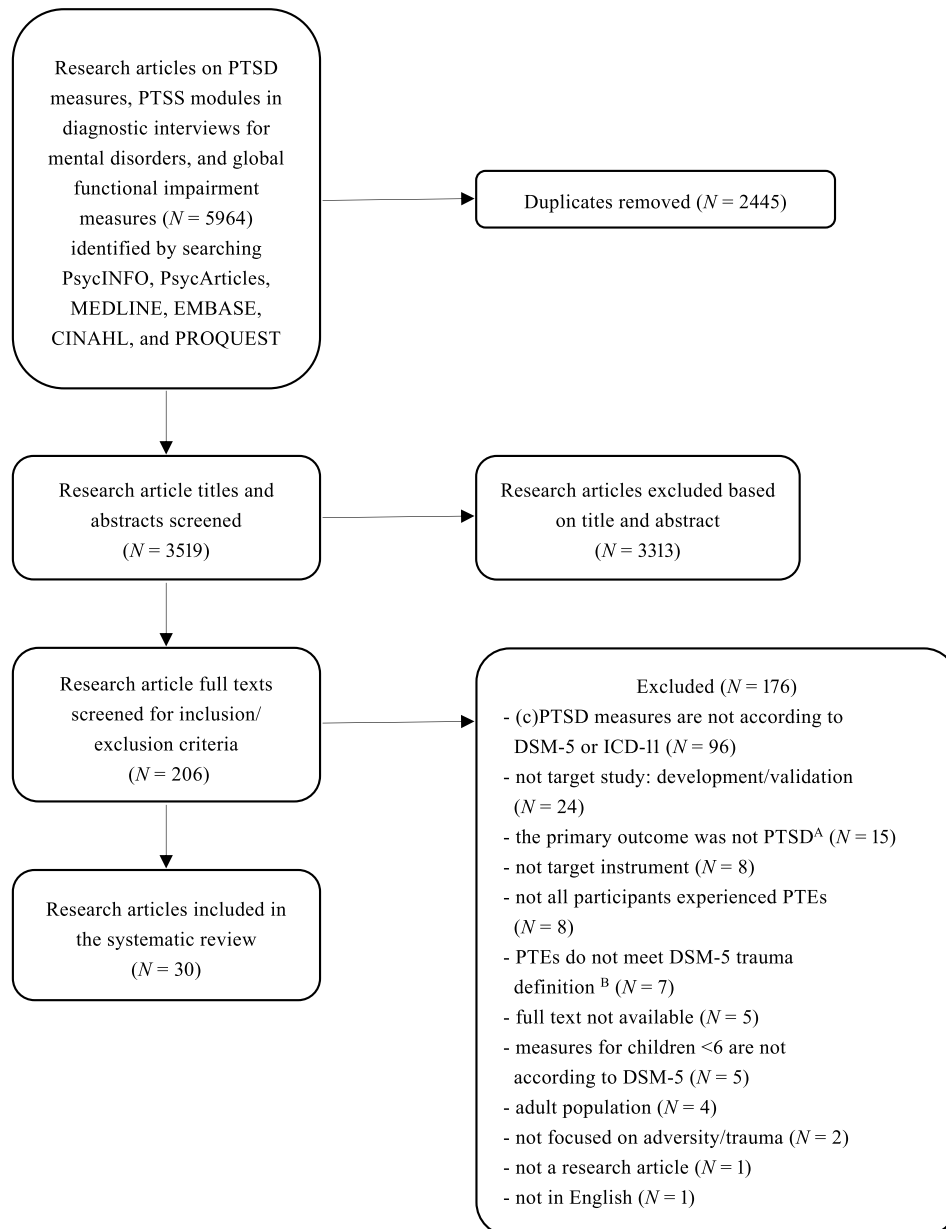


Figure 1. PRISMA flowchart. ^AThe sample was specifically selected for the presence of comorbid somatic or mental disorders, and additional diagnoses were actively investigated or required for inclusion. ^BThis exclusion criterion applied only to post-traumatic stress symptoms (PTSS)-specific instruments and PTSS modules in diagnostic interviews. Generic measures of functional impairment were eligible if validated in samples with adverse childhood experiences. PTSD = post-traumatic stress disorder; DSM-5 = Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; ICD-11 = International Classification of Diseases, 11th revision; PTE = potential traumatic event.

3.1. Domains of functional impairment

Figure 2 lists the included instruments and the functional domains addressed by each instrument. The Posttraumatic Stress Interview for Children (KID-PIN) and GPS-C do not assess PTSS-related functional impairment, and the GPS-T assesses the construct using a single global item; therefore, these instruments are not represented in Figure 2.

Based on thematic analysis of all impairment items, 11 conceptually distinct life domains were identified. These domains were subsequently mapped onto the Activities and Participation component of the ICF framework (see Figure 2 and Supplementary material 8).

Overall, substantial heterogeneity was observed in domain coverage across instruments. Whereas certain domains were assessed consistently, others were captured only sporadically or were entirely omitted. The domain ‘School (or daycare)’ was most consistently represented. ‘Family’ and ‘Friends/Peers’ were also frequently assessed. In contrast, domains such as ‘Developmental progression’, ‘Doing chores’, ‘Going out in public’, and ‘Religion/Spirituality’ were rarely included.

The ‘Home’ domain was added to differentiate items that could not clearly be assigned to ‘Family’ (e.g. ‘get along with people you live with’) (Grasso et al., 2015). Items that did not reflect functional

Table 1. Overview of included publications.

Authors (year)	Measure	Type of instrument	Description of study	N	% Female	Age (years)		Type of trauma	Does the instrument assess functional impairment?
						Range	M (SD)		
Instruments for children aged < 7 years									
Müller et al. (2021)	CATS	PTSS-specific self- and caregiver-rated instrument. Version for 3–6 years (CR) and 7–17 years (SR & CR)	Report on the psychometric properties of CATS in a sample of young refugees as a function of interpreter involvement	47 ^b	0.0	–	17.16 (0.95)	NR	Yes
Nilsson et al. (2021)	CATS	PTSS-specific self- and caregiver-rated instrument. Version for 3–6 years (CR) and 7–17 years (SR & CR)	Report on the psychometric properties of CATS in a sample of Swedish children	42 ^b	69.0	–	14.60 (2.83)	NR	Yes
Redican et al. (2024)	CATS	PTSS-specific self- and caregiver-rated instrument. Version for 3–6 years (CR) and 7–17 years (SR & CR)	Validation of the Ukrainian caregiver-report version of CATS	252 ^b	46.7	3–6	5.03 (0.80)	Exposure to war	Yes
Sachser et al. (2017)	CATS	PTSS-specific self- and caregiver-rated instrument. Version for 3–6 years (CR) and 7–17 years (SR & CR)	International development and psychometric properties of CATS	US: 706 [SR: 249, CR (7–17 y): 267, CR (3–6 y): 190]	SR: 71.5 CR (7–17 y): 62.9 CR (3–6 y): 57.9	SR: 7–17 CR (7–17 y): 17 y; 7–17 CR (3–6 y): 3–6	SR: 12.29 (3.33) CR (7–17 y): 10.75 (3.36) CR (3–6 y): 4.52 (1.13)	NR	Yes
Grace et al. (2021)	GPS-C	PTSS-specific self-rated instrument, child version	Semantic adaption of GPS-C and GPS-T in the USA	Germany: 212 (SR: 117, CR: 95) Norway: 171 (SR: 109, CR: 62) Subsample of 24 children and adolescents, 24 parents	SR: 48.7 CR (7–17 y): 40.0 SR: 72.5 CR (7–17 y): 62.9 50.0	SR: 7–17 CR (7–17 y): 17 y; 7–17 6–10	SR: 14.23 (2.85) CR (7–17 y): 13.41 (3.20) SR: 14.13 (2.47) CR (7–17 y): 13.75 (2.60) –	NR	No
Gigengack et al. (2020)	DIPA	Diagnostic interview for mental disorders. Interview with caregiver	Report on the accuracy of psychometric properties of the Dutch DSM-5-based version of DIPA	136	39.7	1–7	4.43 (1.83)	Accidental	Yes
Wolf (2013)	Functional Problems Score ^a	Generic measure of functional impairment. Interviewer-rated by clinician	Dissertation on the examination of the role of face, ethnicity, and cultural actors in children who have experienced trauma in children and adolescents from the National Child Traumatic Stress Network Core Data Set. Development and the report of psychometric properties of the Functional Problem Score	10,115	53.1	0–21	–	Diverse	Yes
Instruments for children and adolescents aged ≥ 7 years									
Barroca et al. (2022)	CAPS-CA-5	PTSS-specific interviewer-rated instrument. Interview with child/adolescent	Translation and validation of CAPS-CA-5 for Portuguese children and adolescents	101	51.5	7–18	13.60 (2.93)	NR	Yes

Tanaka et al. (2024)	CAPS-CA-5	PTSS-specific interviewer-rated instrument. Interview with child/adolescent	Cross-cultural validation of CAPS-CA-5-J in Japan	68	80.8	7–18	–	Diverse	Yes
Kemp et al. (2025)	CATS	PTSS-specific self- and caregiver-rated instrument	Examination of CATS factor structure, measurement invariance, and concurrent validity in a clinical sample	259	63	8–16	11.7 (2.4)	Diverse	Yes
Müller et al. (2021)	CATS	PTSS-specific self- and caregiver-rated instrument. Version for 3–6 years (CR) and 7–17 years (SR & CR)	Report on the psychometric properties of CATS in a sample of young refugees as a function of interpreter involvement	47 ^b	0.0	–	17.16 (0.95)	NR	Yes
Nilsson et al. (2021)	CATS	PTSS-specific self- and caregiver-rated instrument. Version for 3–6 years (CR) and 7–17 years (SR & CR)	Report on the psychometric properties of CATS in a sample of Swedish children	42 ^b	69.0	–	14.60 (2.83)	NR	Yes
Redican et al. (2024)	CATS	PTSS-specific caregiver-rated instrument. Version for 3–6 years and 7–17 years	Validation of the Ukrainian caregiver-report version of CATS	833 ^b	50.0	7–17	11.61 (3.14)	Exposure to war	Yes
Sachser et al. (2017)	CATS	PTSS-specific self- and caregiver-rated instrument. Version for 3–6 years (CR) and 7–17 years (SR & CR)	International development and psychometric properties of CATS	US: 706 [SR: 249, CR (7–17 y): 267, CR (3–6 y): 190]	SR: 71.5 CR (7–17 y): 62.9 CR (3–6 y): 57.9	SR: 7–17 CR (7–17 y): 17 y: 7–17 CR (3–6 y): 3–6	SR: 12.29 (3.33) CR (7–17 y): 10.75 (3.36) CR (3–6 y): 4.52 (1.13)	NR	Yes
				Germany: 212 (SR: 117, CR: 95)	SR: 48.7 CR (7–17 y): 40.0	SR: 7–17 CR (7–17 y): 17 y: 7–17	SR: 14.23 (2.85) CR (7–17 y): 13.41 (3.20)	NR	
				Norway: 171 (SR: 109, CR: 62)	SR: 72.5 CR (7–17 y): 62.9	SR: 7–17 CR (7–17 y): 17 y: 7–17	SR: 14.13 (2.47) CR (7–17 y): 13.75 (2.60)	NR	
Kooij et al. (2025)	CATS-2	PTSS-specific self- and caregiver-rated instrument	Report on the psychometrics of the Dutch version of CATS-2	SR: 587 CR: 658	SR: 70.9 CR: 58.4	7–21	SR: 14.71 (3.23) CR: 12.81 (3.06)	Diverse	Yes
Sachser et al. (2022)	CATS-2	PTSS-specific self- and caregiver-rated instrument	Validation of CATS-2 in an international sample	SR: 283, CR: 255	59.0	7–17	12.20 (3.16)	Diverse	Yes
Gindt et al. (2021)	CPC	PTSS-specific self- and caregiver-rated instrument	Validation of the French version of CPC in French school-aged children	SR: 176, CR: 122	SR: 49.0 CR: unknown	SR: 7–17 CR: unknown	SR: 11.68 (2.63) CR: unknown	Interpersonal	Yes
Foa et al. (2018)	CPSS-5-SR and CPSS-5-I	PTSS-specific self-rated instrument and PTSS-specific interviewer-rated instrument. Interview with child/adolescent	Report on the psychometrics of CPSS-5-SR and CPSS-5-I in a sample of US children and adolescents	64	51.6	8–18	14.06 (2.47)	Diverse	Yes

(Continued)

Table 1. Continued.

Authors (year)	Measure	Type of instrument	Description of study	N	% Female	Age (years)		Type of trauma	Does the instrument assess functional impairment?
						Range	M (SD)		
Rooney et al. (2022)	CPSS-5-SR	PTSS-specific self-rated instrument	Report on the psychometric properties of the Spanish CPSS-5-SR in El Salvador	1296	55.2	8–21	12.73 (2.67)	Diverse	Yes
Grace et al. (2021)	GPS-C and GPS-T	PTSS-specific self-rated instruments, child and teen version	Semantic adaption of GPS for children and adolescents in the USA	Subsample of 24 children and adolescents, 24 parents	50.0	6–17	–	–	GPS-C: No GPS-T: Yes
Koutsopoulou et al. (2024)	GPS-T	PTSS-specific self-rated instrument	Validation of GPS-T for adolescents in Greece	122	57.4	11–17	14.8, SD missing	Diverse	Yes
Haselgruber et al. (2020b)	ITQ	PTSS-specific self-rated instrument	Validation of ICD-11 PTSD and complex PTSD in Austrian foster children in using ITQ	136	42.6	10–18	14.28 (2.25)	NR	Yes
Afsharzada et al. (2025)	ITQ-CA	PTSS-specific self-rated instrument	Validation of the Dari version of ITQ-CA among Afghan children and adolescents exposed to trauma	235	28.9	12–17	14.74 (1.79)	NR	Yes
Haselgruber et al. (2020a)	ITQ-CA	PTSS-specific self-rated instrument	Report on the symptom structure of ICD-11 cPTSD in Austrian foster children using ITQ-CA	135	31.1	10–unknown	14.27 (2.34)	Diverse	Yes
Kazlauskas et al. (2020)	ITQ-CA	PTSS-specific self-rated instrument	Report on the structure of ICD-11 PTSD and complex PTSD in Lithuanian adolescents using ITQ-CA	932	56.8	12–16	14.25 (1.27)	Diverse	Yes
Parhoon et al. (2024)	ITQ-CA	PTSS-specific self-rated instrument	Report on the psychometric properties of the Farsi version of the ITQ-CA in Iranian children and adolescents	130	59.2	7–17	13.38 (2.61)	Earthquake	Yes
Redican et al. (2022)	ITQ-CA	PTSS-specific self-rated instrument	Report on the prevalence and predictors of ICD-11 PTSD and complex PTSD in young people from Northern Ireland	507	46.5	11–19	15.29 (2.51)	Diverse	Yes
Haselgruber et al. (2025)	ITQ-CG	PTSS-specific caregiver rated instrument	Construction and validation of ITQ-CG	223	55.2	6–17	13.18 (2.04)	Diverse	Yes
Ibrahim et al. (2021)	KID-PIN	PTSS-specific interviewer-rated instrument	Development and validation of KID-PIN among displaced children in the Middle East	86 ^b	47.7	8–16	12.93 (2.07)	NR	No
Grasso et al. (2015)	STRESS	PTSS-specific self-rated instrument	Development and report on preliminary psychometrics of STRESS in a sample of US youth	229	54.6	7–17	11.35 (2.87)	Diverse	Yes
Kaplow et al. (2020)	UCLA PTSD-RI-5	PTSS-specific interviewer-rated instrument. Version for interview with child/adolescent, and version for interview with caregiver	Validation of UCLA PTSD-RI-5 in a sample of US youth	Study part 1: 486 Study part 2: 41	54.0 59.0	7–18 7–17	13.32 (2.90) 12.44 (2.99)	Diverse Diverse	Yes
Kucukardali et al. (2025)	UCLA PTSD-RI-5	PTSS-specific interviewer-rated instrument. Version for interview with child/adolescent	Psychometric evaluation of UCLA PTSD-RI-5 in a Turkish clinical sample of trauma-exposed children	208	62	7–18	13.89 (2.96)	Diverse	Yes
Modrowski et al. (2021)	UCLA PTSD-RI-5	PTSS-specific interviewer-rated instrument. Version for interview with child/adolescent, and version for interview with caregiver	Report on a Bayesian structural equation modelling factor analysis of UCLA PTSD-RI-5 in a polyvictimised sample of US adolescents	455	24.6	12–19	15.95 (1.33)	NR	Yes

Ramos et al. (2022)	UCLA PTSD-RI-5	PTSS-specific interviewer-rated instrument. Version for interview with child/adolescent, and version for interview with caregiver	Report on psychometric properties of the parent-report version of UCLA PTSD-RI-5 in a Portuguese sample	457	61.1	7–17	11.30 (2.98)	Diverse	Yes
Takada et al. (2018)	UCLA PTSD-RI-5	PTSS-specific interviewer-rated instrument. Version for interview with child/adolescent, and version for interview with caregiver	Report on feasibility and psychometric properties of UCLA PTSD-RI-5 in Japanese youth	318	50.9	6–18	–	NR	Yes
Wolf (2013)	Functional Problems Score ^a	Generic measure of functional impairment, interviewer-rated by clinician	Dissertation on the examination of the role of face, ethnicity, and cultural actors in children who have experienced trauma in children and adolescents from the National Child Traumatic Stress Network Core Data Set. Development and the report of psychometric properties of the Functional Problem Score	10,115	53.1	0–21	–	Diverse	Yes

Note: ^aInstrument sourced from National Child Traumatic Stress Network (2019).

^bSubsample.

CATS = Child and Adolescent Trauma Screen; GPS-C = Global Psychotrauma Screen – Child; GPS-T = Global Psychotrauma Screen – Teen; DIPA = Diagnostic Infant and Preschool Assessment; CAPS-CA-5 = Clinician-Administered PTSD Scale for Children and Adolescents for DSM-5; CATS-2 = Child and Adolescent Trauma Screen-2; CPC = Child Posttraumatic Stress Checklist; CPSS-5 = Child PTSD Symptom Scale for DSM-5; ITQ = International Trauma Questionnaire; ITQ-CA = International Trauma Questionnaire – Child and Adolescent Version; ITQ-CG = International Trauma Questionnaire – Caregiver Version; KID-PIN = Posttraumatic Stress Interview for Children; STRESS = Structured Trauma-Related Experiences and Symptoms Screener; UCLA PTSD-RI-5 = UCLA PTSD Reaction Index – DSM-5; PTSS = post-traumatic stress symptoms; PTSD = post-traumatic stress disorder; cPTSD = complex post-traumatic stress disorder; SR = self-report; CR = caregiver report; DSM-5 = Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition; ICD-11 = International Classification of Diseases, 11th revision; y = years; NR = not reported.

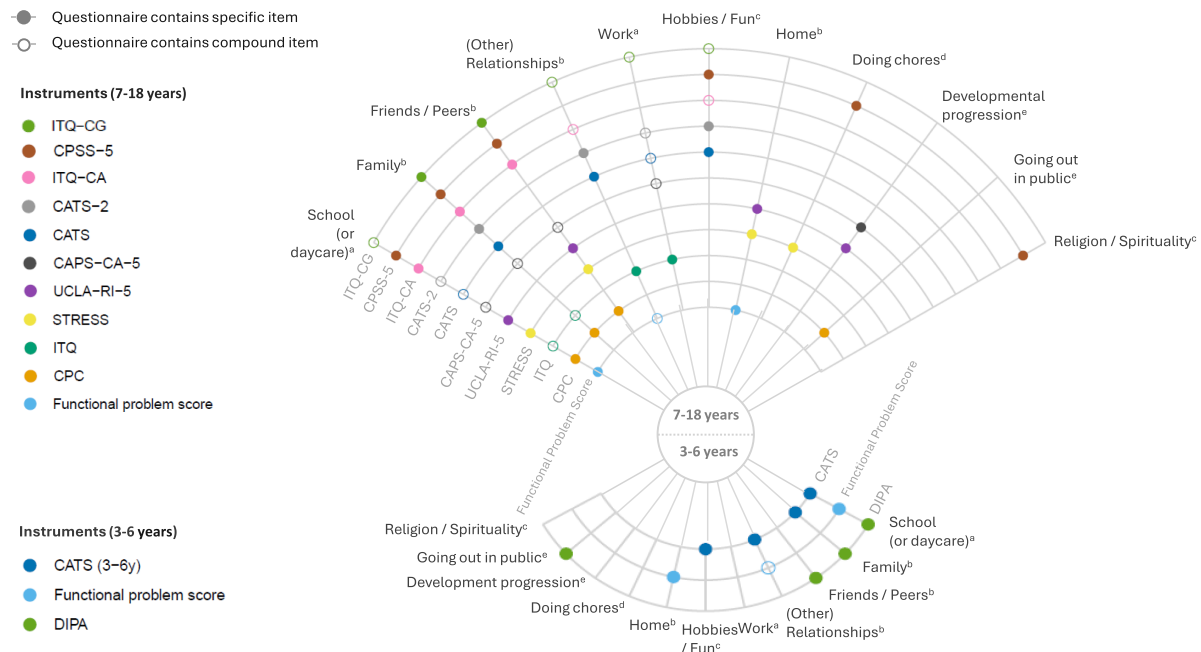


Figure 2. Domains of functional impairment assessed by included instruments. ^aInternational Classification of Functioning, Disability and Health (ICF): Major life areas; ^bICF: Interpersonal interactions and relationships; ^cICF: Community, social and civic life; ^dICF: Domestic life; ^enot attributed to a single ICF domain. ITQ-CG = International Trauma Questionnaire – Caregiver Version; CPSS-5 = Child PTSD Symptom Scale for DSM-5; ITQ-CA = International Trauma Questionnaire – Child and Adolescent Version; CATS = Child and Adolescent Trauma Screen; CAPS-CA-5 = Clinician-Administered PTSD Scale for Children and Adolescents for DSM-5; UCLA PTSD-RI-5 = UCLA PTSD Reaction Index for Children/Adolescents – DSM-5; STRESS = Structured Trauma-Related Experiences and Symptoms Screener; ITQ = International Trauma Questionnaire; CPC = Child Posttraumatic Stress Checklist; DIPA = Diagnostic Infant and Preschool Assessment.

impairment, including clinical symptoms of PTSD (e.g. ‘happiness’), and broad collective categories (e.g. ‘other important areas’), were assigned to the category ‘Other’. These items were not included in Figure 2 but can be found in Supplementary material 7.

In several instruments, functional impairment was assessed using compound items that simultaneously referred to multiple domains. A detailed overview of all impairment items and their categorization into domains is provided in Supplementary material 7.

3.1.1. Instruments for children aged 6 years and younger

Among four identified instruments, three assess functional impairment. Among the identified measures, the domain ‘School (or daycare)’ was consistently assessed. The domains ‘Family’ and ‘(Other) Relationships’ were also frequently assessed, although not by all instruments. In contrast, domains such as ‘Friends/Peers’, ‘Hobbies/Fun’, ‘Home’, and ‘Going out in public’ were covered only by individual instruments. Several domains identified in the overall analysis, namely ‘Work’, ‘Developmental progression’, ‘Doing chores’, and ‘Religion/Spirituality’ were not assessed in this age group. The Diagnostic Infant and Preschool Assessment (DIPA) additionally includes items on parental accommodation, which

was not classified as functional impairment, as the construct represents caregiver behaviour rather than the child’s functional limitations. A detailed overview of domain coverage is presented in Figure 2. The GPS-C does not assess PTSS-related functional impairment.

3.1.2. Instruments for children and adolescents aged 7 years and older

Among 14 instruments found, 12 assess functional impairment. The Child and Adolescent Trauma Screen (CATS), Child and Adolescent Trauma Screen-2 (CATS-2), Child Posttraumatic Stress Checklist (CPC), and UCLA PTSD Reaction Index for Children/Adolescents – DSM-5 (UCLA PTSD-RI-5) are available in both self-report and caregiver-report versions. As the functional impairment items are identical across informants, each instrument was treated as a single questionnaire rather than as separate measures. The Child PTSD Symptom Scale for DSM-5 (CPSS-5) is available as a self-report and an interviewer version, with slight differences in item content that still cover the same domains (Supplementary material 7). Similarly, the International Trauma Questionnaire (ITQ), which includes separate assessments for PTSD and complex PTSD (cPTSD), evaluates functional impairment in both sections with nearly identical items assigned to the same domains (see Supplementary material 7). GPS-T assesses

functional impairment using a single global item, thereby limiting domain-specific differentiation.

The domain 'School (or daycare)' was consistently represented across measures assessing impairment. The domains 'Family' and 'Friends/Peers' were frequently included, whereas domains such as '(Other) relationships', 'Hobbies/Fun', and 'Work' were covered less consistently.

In comparison, the domains 'Home', 'Developmental progression', 'Doing chores', 'Going out in public', and 'Religion/Spirituality' were rarely addressed. A detailed overview of domain coverage is presented in Figure 2. KID-PIN and GPS-C do not assess PTSS-related functional impairment.

3.2. Scoring

3.2.1. Instruments for children aged 6 years and younger

The three instruments assessing functional impairment in young children apply different scoring formats. CATS (3–6 years) uses a dichotomous response format (33.3%), whereas DIPA and the Functional Problem Score employ a multi-category response format (66.6%), specifically a five-point Likert scale in DIPA and a three-point Likert scale in the Functional Problem Score.

3.2.2. Instruments for children and adolescents aged 7 years and older

Among the instruments assessing functional impairment in older children and adolescents, seven (58.3%) use a dichotomous response format: CATS (7–17 years), CATS-2, CPSS-5, ITQ-CA, ITQ-CG, the Structured Trauma-Related Experiences and Symptoms Screener (STRESS), and UCLA PTSD-RI-5. The other five instruments (41.7%) apply a multi-category response format. Specifically, the Clinician-Administered PTSD Scale for Children and Adolescents for DSM-5 (CAPS-CA-5), CPC, and ITQ use five-point Likert scales; the Functional Problem Score employs a three-point Likert scale; and GPS-T includes a single global item rated on a 10-point scale.

3.3. Psychometric performance

3.3.1. Instruments for children aged 6 years and younger

One publication (14.3%) (Wolf, 2013) reported the psychometric properties of the functional impairment items within the Functional Problem Score. These include evidence of construct validity for the Functional Problem Score through correlation analyses with PTSD symptom subscales and a hierarchical regression analysis predicting functional impairment. In addition, the publication reported psychometric properties related to responsiveness. The other six publications (85.7%)

(Gigengack et al., 2020; Grace et al., 2021; Müller et al., 2021; Nilsson et al., 2021; Redican et al., 2024; Sachser et al., 2017) did not provide psychometric properties for the functional impairment items. Although Redican et al. (2024) reported the prevalence of only the most frequently endorsed functional impairment domain (general happiness: 66.3%, $n = 167$), prevalence rates for the remaining domains were not provided. Moreover, none of the other studies reported any functional impairment scores.

3.3.2. Instruments for children and adolescents aged 7 years and older

Six publications (20.7%) reported psychometric properties for functional impairment items (Barroca et al., 2022; Grasso et al., 2015; Haselgruber et al., 2020b, 2025; Koutsopoulou et al., 2024; Wolf, 2013). Barroca et al. (2022) reported reliability and construct validity for the combined distress and impairment items of CAPS-CA-5. Internal consistency was acceptable (Cronbach's $\alpha = .66$), which may be considered adequate given the small number of items included in the scale. Item-total correlations ranged from $r = .37$ to $r = .56$. Evidence of construct validity was provided through correlations with related constructs: impairment scores were positively associated with depressive symptoms ($r = .29$), stress ($r = .26$), and anxiety symptoms ($r = .17$), and with the number of negative coping strategies ($r = .38$). A weak negative correlation was found with positive coping strategies ($r = -.09$). Grasso et al. (2015) provided evidence of construct validity for the STRESS functional impairment items. Youth meeting probable criteria for PTSD ($M[\text{functional impairment}] = 2.10$, $SD = 1.70$) endorsed significantly more functional impairment items than youth not meeting PTSD criteria ($M[\text{functional impairment}] = 0.80$, $SD = 1.20$), $t(227) = -7.09$, $p < .001$). In addition, differences in impairment were found across PTSD symptom subgroups, indicating an association between symptom severity and functional impairment. Haselgruber et al. (2020b) reported on the psychometric evaluation of the ITQ functional impairment items. Structural validity was assessed through factor analysis and latent class analysis. As evidence of construct validity, the authors reported the percentage of participants endorsing each impairment item, both overall and separately for three identified latent classes (cPTSD, PTSD, and low symptoms), demonstrating the highest impairment rates among individuals with cPTSD. Haselgruber et al. (2025) provided evidence of construct validity for the functional impairment scores of ITQ. Using latent class analysis, the authors identified four classes and demonstrated significant differences in PTSS-related functional impairment ($F(3, 82.98) = 17.053$, $p < .001$) across classes. Members of the cPTSD class reported the highest levels of functional impairment.

Overall, 80.7% of caregivers reported PTSD-related functional impairment in their children. No significant sex differences were found between boys and girls ($F = 0.253$). Koutsopoulou et al. (2024) provided evidence of convergent and discriminative validity for the GPS-T functioning item. Convergent validity was supported by significant correlations between GPS-T functioning and Generalized Anxiety Disorder-7 (GAD-7) as well as Patient Health Questionnaire-9 (PHQ-9) ($r = .410$). Known-groups validity was supported by significant differences in functioning across symptom severity groups ($F(3, 57.21) = 14.76$, $p = .001$, $\eta^2 = .273$), with the low-severity group showing significantly lower impairment than the other groups. The mean GPS-T functioning score was 7.02 ($SD = 2.28$). Wolf (2013) provided evidence of construct validity for the Functional Problem Score through correlation analyses with PTSD symptom subscales and a hierarchical regression analysis predicting functional impairment. The publication also reported psychometric properties related to responsiveness.

Apart from Haselgruber et al. (2020b, 2025), and Koutsopoulou et al. (2024), only Rooney et al. (2022) and Redican et al. (2024) reported functional impairment data for the sample. However, in Redican et al. (2024), reporting was limited to the prevalence of a single functional impairment domain, and only Koutsopoulou et al. (2024) reported an aggregated impairment score. Overall, 79.3% of the articles reporting on instruments for children and adolescents aged 7 years or older do not report any psychometric properties for these items. Of these, two publications (Grace et al., 2021; Ibrahim et al., 2021) evaluate instruments that do not assess functional impairment at all.

3.4. Construction background of the functional impairment items

Table 2 shows the construction background of the functional impairment items. Across instruments, most functional impairment items were developed based on face validity, typically derived from the clinical and research experience of the working group and/or adapted from existing questionnaires. For several instruments, the original publications did not explicitly describe the development process of the functional impairment items. In these cases, additional information was obtained through direct communication with the instrument developers. Where no further clarification was available, the development background was categorized as not specified.

4. Discussion

This systematic review highlights three central findings regarding the current assessment of PTSS-

related functional impairment in children and adolescents: (1) substantial heterogeneity in the conceptualization and operationalization of the construct; (2) limited psychometric evaluation of functional impairment items; and (3) a predominance of expert-driven rather than empirically grounded item development.

To our knowledge, this is the first systematic review to examine how PTSS-related functional impairment is assessed in PTSS-specific instruments (self-, caregiver-, or interviewer-rated), PTSS modules in clinical interviews, and generic transdiagnostic tools for children and adolescents. The findings are consistent with long-standing concerns that PTSD-related functional impairment remains poorly operationalized and lacks a gold-standard method of assessment (Benfer & Litz, 2023; Rodriguez et al., 2012). Notably, our approach also revealed that several commonly used instruments for assessing PTSS do not capture functional impairment, despite its role as a diagnostic criterion.

Among instruments assessing PTSS-related functional impairment, domain coverage varied considerably. While school (or daycare) functioning was consistently represented, other domains were included inconsistently or only comparatively rare. This pattern suggests that functional impairment is primarily

Table 2. Development background of functional impairment items.

	Developed based on face validity (derived from experience of the working group and/or based on existing questionnaires)	Development not specified
Instruments for children aged < 7 years		
CATS (3–6 years)	X	
DIPA	X ^a	
Functional problem score	X ^b	
Instruments for children and adolescents aged ≥ 7 years		
CAPS-CA-5		X
CATS (7–17 years)	X	
CATS-2	X	
CPC	X ^a	
CPSS-5		X
GPS-T	X	
ITQ		X
ITQ-CA		X
ITQ-CG	X	
STRESS	X	
UCLA-RI-5	X ^c	
Functional problem score	X ^b	

Note: Information was obtained through verbal communication with the developers on ^a 26 June 2024, ^b 27 June 2024, and ^c 21 November 2024. CATS = Child and Adolescent Trauma Screen; DIPA = Diagnostic Infant and Preschool Assessment; CAPS-CA-5 = Clinician Administered PTSD Scale for Children and Adolescents for DSM-5; CPC = Child Posttraumatic Stress Checklist; CPSS-5 = Child PTSD Symptom Scale for DSM-5; GPS-T = Global Psychotrauma Screen – Teen; ITQ = International Trauma Questionnaire; ITQ-CA = International Trauma Questionnaire – Child and Adolescent Version; ITQ-CG = International Trauma Questionnaire – Caregiver Version; STRESS = Structured Trauma-Related Experiences and Symptoms Screener; UCLA PTSD-RI-5 = UCLA PTSD Reaction Index for Children/Adolescents – DSM-5.

conceptualized in relation to functioning within socially structured roles defined by expectations of the external system (e.g. school and family contexts). In contrast, life domains that may be more individually experienced or internally meaningful aspects of participation, such as engaging in hobbies and leisure activities or going out in public, are rarely assessed. This imbalance may reflect an externally oriented understanding of functioning that prioritizes observable role performance over subjective participation experiences.

A further striking observation concerns the absence of certain developmentally relevant domains across the included instruments. In particular, none of the identified measures assesses difficulties in romantic relationships. This omission is noteworthy given evidence from adult PTSD research indicating that intimate relationships represent a vulnerable domain in which trauma-exposed individuals frequently experience functional impairment (Rodriguez et al., 2012). Although romantic relationships may be less relevant in younger children, they become developmentally salient during adolescence (e.g. Furman & Shaffer, 2003) and therefore warrant consideration in age-appropriate assessments of PTSS-related functional impairment. This example illustrates how the relevance of specific life domains shifts across developmental stages in childhood and adolescence. Instruments that cover a wide age range, for example, the CATS-2, which is designed for youth aged 7–17 years, may therefore face inherent challenges in adequately capturing developmentally specific domains. It remains an open question whether such instruments sufficiently differentiate between age-related variations in functional domains, potentially leading to the underrepresentation of domains that are highly relevant at certain developmental stages but less so at others.

The assignment of instrument content to the main ICF domains, as shown in Figure 2, indicates that these domains are not conceptually specific enough to fully represent PTSS-related functional impairment. For example, the domain ‘Going out in public’ identified in this review could be assigned to the broad ICF category d9 (‘Community, social and civic life’), which may not fully capture the trauma-specific avoidance, hypervigilance, or distress-related difficulties that characterize PTSS-related impairment in this context. Furthermore, mapping the identified life domains on to more fine-grained ICF subcategories (see Supplementary material 8) was limited by two main issues. First, several ICF categories were too broad or unspecific to meaningfully reflect the identified content. Secondly, some domains could not be uniquely assigned to a single subcategory, but instead overlapped with multiple categories, depending on interpretation. For instance, ‘Going out in public’

could plausibly be linked to d470–d489 (‘Moving around using transportation’) as well as to d910 (‘Community life’), illustrating the ambiguity of the mapping process. Given these limitations, the domains identified in this review provided a more analytically useful framework for categorizing PTSS-related functional impairment, as they more precisely reflect the thematic content of the impairment items included in the instruments examined in this systematic review.

In addition to these conceptual challenges, the introduction of cPTSD in the ICD-11 (WHO, 2019) further underscores the need to reflect on how functional impairment is operationalized across trauma-related diagnoses. Within the present review, CATS-2, ITQ-CA, and its caregiver version, ITQ-CG, represented the only instruments specifically assessing both ICD-11 PTSD and cPTSD in children and adolescents. ITQ-CA assesses symptoms of PTSD and disturbances in self-organization (DSO), which together constitute cPTSD. Notably, the functional impairment items are identical for both the PTSD and the DSO symptom clusters. Similarly, although CATS-2 assesses both PTSD and ICD-11 cPTSD symptom criteria, functional impairment is measured using the same set of domains. Given the differences in symptom profiles between PTSD and cPTSD, this raises the question of whether the same functional domains adequately capture impairment associated with distinct symptom constellations. Our findings, which demonstrate limited differentiation and considerable heterogeneity in the assessment of PTSS-related functional impairment across instruments, suggest that current measurement approaches may not fully reflect the potentially diverse functional consequences of different symptom presentations.

Another notable limitation across many instruments is the use of compound items to assess functional impairment. Compound items make it difficult to determine which specific life domains are impacted, posing challenges for both clinical and research applications.

A closer examination of the item content reveals that many instruments focus solely on identifying life domains affected by functional impairment, without capturing the specific difficulties encountered within those domains. In addition, some instruments include items that did not represent functional impairment. For instance, CATS, CATS-2, CPSS-5, ITQ-CA, and ITQ-CG include ‘happiness’ as an impairment item, which more accurately reflects the opposite of the DSM-5 PTSD symptom ‘persistent inability to experience positive emotions’ (APA, 2013).

The Functional Problem Score, the only included generic measure of functional impairment, has the advantage of providing a relatively detailed assessment of the construct.

However, in addition to functioning, the instrument also assesses symptoms such as irritable behaviour, angry outbursts, or self-destructive behaviour. Thus, the measure is limited in its ability to assess PTSS-related functional impairment in children and adolescents with PTE(s) owing to conflation of psychopathological symptoms with functioning. This limitation arises from the fact that the instrument was designed as a generic impairment measure and was not specifically developed to assess PTSS-related functional impairment.

An additional challenge with generic functional impairment measures and with PTSS modules in diagnostic interviews for assessing PTSS-related functional impairment is their limited validation in trauma-exposed samples, which often led to their exclusion in this review. Only DIPA was included as a diagnostic interview with a PTSS module, and only the Functional Problem Score was included as a generic measure of functional impairment. Recognizing the crucial role of diagnostic interviews in clinical practice for establishing diagnoses, the authors provide a more comprehensive review of commonly used diagnostic interviews with PTSS modules in Supplementary material 6.

Notably, scoring methods vary significantly. Slightly more than half of the instruments use dichotomous response categories, which provide a straightforward measure of the presence of functional impairment but fail to capture its severity. Summing binary items may create the impression of a dimensional score, but it results in a weak dimensional measure, as it does not adequately differentiate between mild impairment across multiple domains and severe impairment in fewer domains. In contrast, multi-categorical response options allow for the generation of sum scores, which offer more nuanced insights into the overall intensity of impairment, both globally and within specific life domains. Despite the potential benefits of summed scores for both clinical and research purposes, only one paper provided such scores. An additional four papers reported functional impairment data for the sample; however, this reporting was limited to domain-specific percentages rather than aggregated impairment scores.

The reporting of psychometric properties for functional impairment items was similarly limited. Only a minority of publications provided impairment-specific reliability or validity data. Moreover, item development procedures were frequently based on face validity – incorporating expert input or adapting content from existing measures – while several instruments did not report their construction process at all. Notably, none of the instruments identified in the original search incorporated input from children and adolescents with PTE(s), or their caregivers, regarding which content should be assessed. This lack of

involvement of affected children, adolescents, and their caregivers contrasts with current recommendations for patient-centred instrument development (Vogt et al., 2004) and may further contribute to the limited conceptual precision observed across measures.

The absence of a specific instrument designed to assess PTSS-related functional impairment, together with the relative scarcity of other currently used instruments identified in this review, raises the question of why this construct has received comparatively limited attention. This gap may reflect broader historical and structural developments in mental health research and practice. Over recent decades, the establishment of disorder-specific, evidence-based treatment manuals has increasingly shifted attention towards symptom reduction as the primary treatment target and outcome, alongside a reduced emphasis on individualized functional analysis (Hofmann & Hayes, 2019a, 2019b). Within this syndromal framework, functional impairment has often been treated as a diagnostic threshold criterion rather than as a distinct construct requiring detailed operationalization. As a consequence, instrument development has largely centred on symptom assessment, with functional impairment included as a secondary component, if at all (Benfer & Litz, 2023; McCaslin et al., 2016). Such developments may have contributed to the limited availability of instruments specifically targeting PTSS-related functional impairment in youth.

When moving beyond PTSD to other mental disorders, a similar pattern of assessing functional impairment can be observed. In many child and adolescent mental health instruments, symptom assessment is followed by brief global impairment items rather than by a comprehensive, stand-alone operationalization of functioning [e.g. the Patient Health Questionnaire for Adolescents (PHQ-A) (Johnson et al., 2002) and the ADHD Rating Scale-5 (ADHD-RS-5) (DuPaul et al., 2016)]. This structure mirrors current diagnostic classifications systems, such as DSM-5 (APA, 2013) and ICD-11 (WHO, 2019), which require the presence of clinically significant functional impairment in addition to symptom criteria for the assignment of mental disorders. Accordingly, the position of functional impairment as a secondary component of assessment is not unique to PTSS-related instruments but reflects a broader structural feature of diagnostic systems for mental disorders.

At the same time, generic measures of functioning, such as the World Health Organization Disability Assessment Schedule (WHODAS 2.0) (Üstün, 2010), adopt a domain-based and comprehensive approach to the assessment of functional impairment across health conditions. However, these instruments were primarily developed in the context of physical health

conditions and are not trauma specific. This highlights the absence of a developmentally sensitive instrument specifically tailored to assess PTSD-related functional impairment in youth.

Taken together, our findings underscore the conceptual and methodological heterogeneity in the assessment of PTSS-related functional impairment in children and adolescents. The construct of PTSS-related functional impairment has long been recognized as poorly operationalized, with no gold-standard method for its assessment – a gap that has prompted calls for the development of more effective measurement tools (Benfer & Litz, 2023; Rodriguez et al., 2012).

4.1. Clinical implications

A thorough assessment of PTSS-related functional impairment in children and adolescents is crucial, as these impairments are often the primary reason for referrals to mental health specialists (Angold et al., 1999). They also represent a mandatory diagnostic criterion for PTSD in both ICD-11 and DSM-5. Given that only a limited number of instruments were validated in trauma-exposed populations, clinicians may consider prioritizing instruments with demonstrated validation in such samples. In light of the variability in scoring formats identified in this review, instruments employing multi-categorical response options may provide a more nuanced assessment of impairment severity. Given that many instruments primarily identify affected life domains without assessing the specific nature of the difficulties within them, clinicians may consider exploring in greater detail the concrete challenges that children and adolescents experience within these domains and whether PTSS contributes to impairments beyond those captured by standardized items. Furthermore, given the high rates of comorbidity in youth with PTSD (Luoni et al., 2018), careful clinical evaluation may be warranted to determine whether functional impairments are primarily related to PTSS or might instead be explained by co-occurring conditions. While some instruments can help to disentangle PTSS-related impairment from other sources, others may not; thus, clinical judgement and complementary assessment remain essential. In younger children, functional assessments are particularly valuable, as they may identify difficulties in daily life even when symptom reporting is limited (Cohen & Scheeringa, 2009). Importantly, identified impairments should be explicitly integrated into treatment planning, as they often reflect the child's or adolescent's most pressing everyday challenges (Angold et al., 1999; Benfer & Litz, 2023). From a disablement process perspective, functional impairment may not only represent a consequence of PTSS but also contribute to their

maintenance through feedback mechanisms (Verbrugghe & Jette, 1994). Clinically, this underscores the importance of addressing PTSS-related functional impairment directly within treatment, as improvements in everyday functioning may, in turn, reduce symptom persistence.

4.2. Research implications

This review highlights key areas for future research to address gaps in the assessment of PTSS-related functional impairment in children and adolescents. There is an urgent need to develop instruments specifically designed for this population that comprehensively assess both affected life domains and the specific difficulties within them. Such instruments should incorporate input from children, adolescents, and caregivers with experiences of PTSS-related functional impairment to ensure content validity. In addition, certain domains that are gaining relevance – such as the digital world – have not yet been captured by existing instruments, indicating a potential need for updates. Multi-categorical response scales should be employed to capture the intensity of impairment. Given the heterogeneity in domain coverage across instruments, modular or personalized assessment approaches may represent a promising direction for future research. Rather than relying on fixed questionnaires, flexible item pool-based frameworks could allow for selecting not only individually relevant life domains but also specific difficulties within those domains. Such approaches, as exemplified by process-based assessment approaches (e.g. Ciarrochi et al., 2022), may better accommodate the diversity of PTSS-related functional impairment.

In addition, existing instruments, particularly PTSS modules in diagnostic interviews and generic functional impairment measures, require further validation in trauma-exposed populations. Future validation studies should also report the psychometric properties of functional impairment items to ensure reliable and valid assessments.

While the present review focused specifically on PTSS-related functional impairment, future research should examine how functional impairment is conceptualized and assessed in relation to other trauma-related syndromes, which may present with distinct patterns of impairment.

4.3. Strengths and limitations

This review followed PRISMA guidelines (Page et al., 2021), with the protocol registered on PROSPERO. Two independent raters assessed eligibility of papers against prespecified eligibility criteria. By including different types of measures of PTSS-related functional impairment, this review provides researchers and

clinicians with valuable insights into content, scoring methods, psychometric properties, and construction backgrounds, addressing a critical gap in the literature. However, some limitations must be acknowledged. Measures not developed for or validated in children and adolescents with PTE(s) were excluded, potentially overlooking tools validated in general populations. In addition, psychometric properties were often inconsistently reported, and details on item content construction were frequently missing. While authors were contacted for clarification, some potentially key data could not be retrieved.

4.4. Conclusion

PTSS-related functional impairment is prevalent among children and adolescents with PTE(s), frequently affecting multiple life domains such as school and social relationships. Despite its clinical relevance, this systematic review highlights substantial variability and limitations in the available instruments. While several instruments address important life domains, inconsistencies in content, scoring methods, and a lack of psychometric evaluation remain major challenges. The findings emphasize the need for developmentally appropriate instruments that incorporate input from children and adolescents with PTE(s), comprehensively assess functional impairment, capture its severity, and provide robust psychometric evaluation.

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Author contributions

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No potential conflict of interest was reported by the authors.

Data availability statement

The data underlying this article are available upon reasonable request to the corresponding author.

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