EUROPEAN JOURNAL OF PSYCHOTRAUMATOLOGY
2025, VOL. 16, NO. 1, 2498191
https://doi.org/10.1080/20008066.2025.2498191

REVIEW ARTICLE

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The diagnostic accuracy of PTSD assessment instruments used in older adults: a systematic review

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ABSTRACT

Background: As the number of older adults increases worldwide, understanding their mental health is crucial, including the impact of traumatic experiences that can lead to posttraumatic stress disorder (PTSD). However, validated screening and diagnostic instruments for PTSD in older adults are limited.

Objective: We sought to provide a comprehensive summary of the diagnostic accuracy of PTSD screening and diagnostic instruments used in older adults ($M_{age} \geq 60$ years).

Method: A systematic search of MEDLINE, EMBASE, PsycINFO and Web of Science databases was conducted for January 1980 through 10 January 2025. Studies that focused on the psychometric properties of PTSD instruments in older adults were included.

Results: Out of 21,197 publications screened, only 40 studies including 24 instruments met the eligibility criteria. Only seven were conducted with participants from the general population or primary care patient samples. There were 14 relevant studies in the last ten years, with only six based on the Diagnostic and Statistical Manual of Mental Disorders-Fifth Edition (DSM-5) criteria. Validation studies conducted in non-Western and/or non-English speaking older adult samples are rare.

Conclusions: There is a shortage of validation studies of PTSD screening and diagnostic tools in the general older adult population. We recommend using the Clinician-Administered PTSD Scale for DSM-5 in clinical practice. It is the gold standard for assessing current and lifetime PTSD in the general population. Further research is required to establish evidence-based clinical cut-off scores and cross-cultural validity for PTSD screening in different populations of older adults. Future studies should also assess measures that consider the multimorbidity in this population (e.g. cognitive impairment and other psychiatric or medical disorders) and are easy to administer in clinical practice.

Precisión diagnóstica de los instrumentos de evaluación del TEPT utilizados en adultos mayores: Una revisión sistemática

Antecedentes: A medida que aumenta el número de adultos mayores en todo el mundo, es crucial comprender su salud mental, incluido el impacto de las experiencias traumáticas que pueden conducir al trastorno de estrés postraumático (TEPT). Sin embargo, los instrumentos validados de tamizaje y diagnóstico para el TEPT en adultos mayores son limitados.

Objetivo: El objetivo de esta revisión sistemática es proporcionar un resumen exhaustivo de la precisión diagnóstica de los instrumentos de tamizaje y diagnóstico del TEPT utilizados en adultos mayores (edad M ≥ 60 años).

Método: Se realizó una búsqueda sistemática en las bases de datos MEDLINE, EMBASE, PsycINFO y Web of Science desde enero de 1980 hasta el 10 de enero de 2025. Se incluyeron todos los estudios centrados en las propiedades psicométricas de los instrumentos de TEPT en adultos mayores.

Resultados: De las 21.197 publicaciones examinadas, sólo 40 estudios que incluían 24 instrumentos cumplían los criterios de selección. Sólo siete se realizaron con participantes de la población general o muestras de pacientes de atención primaria. Hubo 14 estudios relevantes en los últimos diez años, y sólo seis se basaron en los criterios del Manual Diagnóstico y Estadístico de los Trastornos Mentales – Quinta Edición (DSM-5). Los estudios de validación realizados en muestras de adultos mayores no occidentales y/o de habla no inglesa son escasos.

ARTICLE HISTORY
Received 2 September 2024
Revised 20 April 2025
Accepted 21 April 2025

KEYWORDS
PTSD; older adults; diagnostic accuracy; assessment

PALABRAS CLAVE
TEPT; adultos mayores; precisión diagnóstica; evaluación

HIGHLIGHTS

- The psychometric properties of PTSD assessment instruments in older adults are understudied.
- Most extant validation studies of PTSD assessment instruments in older adults have been conducted in samples of predominantly male US military veterans, former prisoners of war, and in Western countries, with a relative lack of research in civilians, females, non-Western, individuals with cognitive decline or interfering morbidities, and/or non-English speaking populations.
- More research of sufficient quality is needed to establish cross-cultural validity and to provide evidence-based cut-off scores in PTSD screening and diagnostic assessment for diverse populations of older adults.
- Future studies should also assess measures that consider the multimorbidity in this

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Supplemental data for this article can be accessed online at https://doi.org/10.1080/20008066.2025.2498191.

Conclusiones: Hay una escasez de estudios de validación de herramientas de tamizaje y diagnóstico de TEPT en la población general de adultos mayores. Recomendamos utilizar la Escala de TEPT administrada por el clínico para el DSM-5 en la práctica clínica. Es el *gold standard* para evaluar el TEPT actual y a lo largo de la vida en la población general. Se requiere más investigación para establecer puntuaciones de corte clínicas basadas en la evidencia y la validez transcultural para la detección del TEPT en diferentes poblaciones de adultos mayores. Los estudios futuros también deberían evaluar medidas que tengan en cuenta la multimorbilidad en esta población (por ejemplo, deterioro cognitivo y otros trastornos psiquiátricos o médicos) y que sean fáciles de administrar en la práctica clínica.

population (e.g. cognitive impairment and other psychiatric or medical disorders) and are easy to administer in clinical practice.

1. Introduction

Human life expectancy has been increasing, and by 2050 the number of individuals aged 60 years and older is expected to double, reaching 2.1 billion, worldwide (World Health Organization, 2021). As the population ages, expertise in mental health of older adults becomes increasingly important. One crucial aspect of mental health in older adults is the impact of current or past traumatic experiences (Cook & Simiola, 2018). Research suggests that the cumulative impact of trauma, over the life course, may increase susceptibility to the development of posttraumatic stress disorder (PTSD) (Krause, 2004; Ogle et al., 2014), therefore, older adults may be especially vulnerable to such outcomes simply because they have lived longer (Ogle et al., 2014). Thus, it is surprising that PTSD has an estimated lifetime prevalence of 7–8% in the general population (de Vries & Olff, 2009; Kessler et al., 2005; Kessler et al., 2017) but a lower prevalence rate of 1–4.5% in the older adult general population of the US and Europe (Kessler et al., 2005; Pietrzak, Goldstein, et al., 2012; Reynolds et al., 2015; Trautmann & Wittchen, 2018). Also, in a large global sample older age was found to be associated with lower ratings of trauma-related symptoms (Havermans, Hoeboer, et al., 2023).

Several factors suggest that the lower reported rate of PTSD prevalence in older adults may be an underestimation. First, older adults may report lower rates of PTSD due to feelings of shame and/or worry about being judged for needing mental health support, preventing them from seeking care (Sirey et al., 2001). Additionally, less familiarity with symptoms and more difficulty with expressing psychological distress may make it challenging to report mental health difficulties (Cook & Simiola, 2017; Thorp et al., 2011). As a result, they may present to primary care clinics with physical complaints instead of seeking formal mental health services (Pless Kaiser et al., 2019; Thorp et al., 2011). Notably, many PTSD symptoms overlap with other psychiatric or medical symptoms. For example, an older adult with significant arthritis or pain may exhibit 'marked diminished interest or participation in significant activities', 'sleep disturbance', and/or 'difficulties with concentration' related to pain (Fishbain et al., 2017). In addition, older adults may have more difficulties accessing care due to physical or cognitive limitations (e.g. not being able to obtain transportation) (Fitzpatrick et al., 2004). The lack of valid PTSD assessment instruments and/or adjusted norms in older adults may contribute to lower rates of estimated PTSD in this population. Some studies have reported higher rates of partial or subthreshold PTSD compared to full PTSD among older adults suggesting that instruments for diagnosing both full and partial PTSD in older adults are needed (Glaesmer et al., 2010; Moye et al., 2022; Van Zelst, De Beurs, Beekman, Deeg, & Van Dyck, 2003). Furthermore, most instruments are based on self-report or anamnestic interviews with complicated wording and response categories that can be challenging for some older adults, particularly those with cognitive impairments (Havermans, van Alphen, et al., 2023). This underscores the importance of using appropriate and sensitive diagnostic instruments to identify PTSD in older adults.

Research has shown that older adults who suffer from PTSD tend to experience symptoms for a longer period of time than their younger counterparts (Pietrzak, Goldstein, et al., 2012). Possibly because healthcare professionals do not always recognise the PTSD symptoms, and therefore, the older adults do not receive the most effective treatment (e.g. cognitive behavioural therapy or Eye Movement Desensitization and Reprocessing) (Rutherford et al., 2021). It is essential to improve understanding of the instruments that can help screen for and diagnose PTSD in older adults. This will advance clinical and research efforts to effectively and efficiently assess and treat older adults as well as potentially develop interventions that can address their unique needs and increase prognosis. A previous review on this topic (Cook & O'Donnell, 2005) has also described the psychometric properties of PTSD assessment instruments. Our review builds on this by providing an updated and comprehensive evaluation of these instruments, focusing on their diagnostic accuracy and suitability for older adults. This approach aims to provide a more detailed and current evaluation of the tools available for accurately identifying PTSD in this population.

Thus, the objective of this systematic review is to present a comprehensive summary of the psychometric properties and its diagnostic accuracy of PTSD screening and diagnostic instruments used in older adults aged 60 and older. The review aims to recommend the most appropriate instruments and suggest areas for further research to fill gaps in the current evidence.

2. Method

2.1. Search strategy and study selection

This review was registered in PROSPERO CRD42023435611. A systematic search of four databases (MEDLINE, EMBASE, PsychINFO and Web of Science) was conducted for studies that have focused on the psychometric properties of PTSD instruments in older adults published between January 1980 (the year that PTSD was officially acknowledged as a formal psychological condition in the Diagnostic and Statistical Manual of Mental Disorders, 3rd ed. [DSM-III] [American Psychiatric Association, 1980]) to 10 January 2025. The master search strategy was translated for each database and was peer-reviewed by a librarian prior to formal searching (see Appendix 1). Rayyan was used to manage identified studies and facilitate title/abstract and full-text screening (Ouzzani et al., 2016). The search results were sorted as follows: (1) duplicate removal with Endnote and Rayyan, (2) at least two reviewers independently screened remaining titles and abstracts for inclusion; conflicts were resolved by a third reviewer, and (3) relevant full-text articles were reviewed by at least two reviewers; conflicts were resolved by a third reviewer.

2.2. Inclusion and exclusion criteria

Peer-reviewed articles were selected with the following inclusion criteria: (1) article focused on the development or evaluation of psychometric properties of a PTSD assessment instrument; (2) the mean age of the sample was 60 years or older; (3) instrument was based on the DSM or International Classification of Diseases system; (4) article appeared in search results with use of English search terms (regardless of the language in which the article was written).

Articles were excluded if: there was no report of the diagnostic accuracy of a PTSD assessment instrument; article was not available as full-text; publication had not been peer-reviewed (e.g. dissertations/theses, books/book chapters, and study protocols). Review articles were also excluded after a manual check of articles included in the review to ensure they had all been screened.

2.3. Quality rating

The revised Quality Assessment for Diagnostic Accuracy Studies-2 (QUADAS-2) tool (Whiting et al., 2011) was used to assess the risk of bias based on published information. The QUADAS-2 tool evaluates the risk of bias across four core domains: patient selection, the index test, the reference standard, and the flow and timing of assessments. Two independent reviewers applied the QUADAS-2 tool, and consensus was reached through a third reviewer.

2.4. Data extraction

Title/abstract screening and full-text screening were performed by DH, EC, OJ, CR, and KAL. Data extraction was conducted in duplicate by DH, EC, and CR; consensus was reached through discussion among DH, EC, CR, and KAL. KAL supervised all stages of screening and extraction. The following data were extracted: geographical information, number of participants enrolled, age, sex, ethnicity, population group, index test, language of the tool, and diagnostic accuracy (e.g. validity, reliability, sensitivity, specificity, Area Under the ROC Curve (AUC), cut-off point and construct validity). Missing information was coded as NR (not reported).

3. Results

3.1. Study selection

The search retrieved 31,319 articles, of which 10,122 duplicates were removed; then, 21,197 titles and abstracts were independently screened by at least two reviewers to assess eligibility based on inclusion criteria resulting in 415 full-text articles. Cross-referencing identified seven more studies, with four study meeting the inclusion criteria. In total, 40 studies were included in the final main analysis after considering the criterion relating to the mean age of the sample (see Figure 1).

3.2. Study characteristics

Among the 40 studies (see Table 1), 24 instruments were used in a total of 51 validation tests (see Table 2). Some studies evaluated multiple tools or different versions of the same tool. Among older adults, the most frequently researched instruments were the Mississippi Scale for Combat-Related PTSD (M-PTSD) (Cook, Elhai, Cassidy, et al., 2005; Engdahl et al., 1996; Erbes et al., 2006; Hyer et al., 1992; Neal et al., 1995) and the PTSD Checklist (PCL-S) (Cook, Elhai, & Areán, 2005; Cook, Elhai, Cassidy, et al., 2005; Iwasa et al., 2016; Pietrzak, Van Ness, et al., 2012; Suzuki et al., 2017). These were followed by the Impact of Event Scale (IES), the Impact of Event

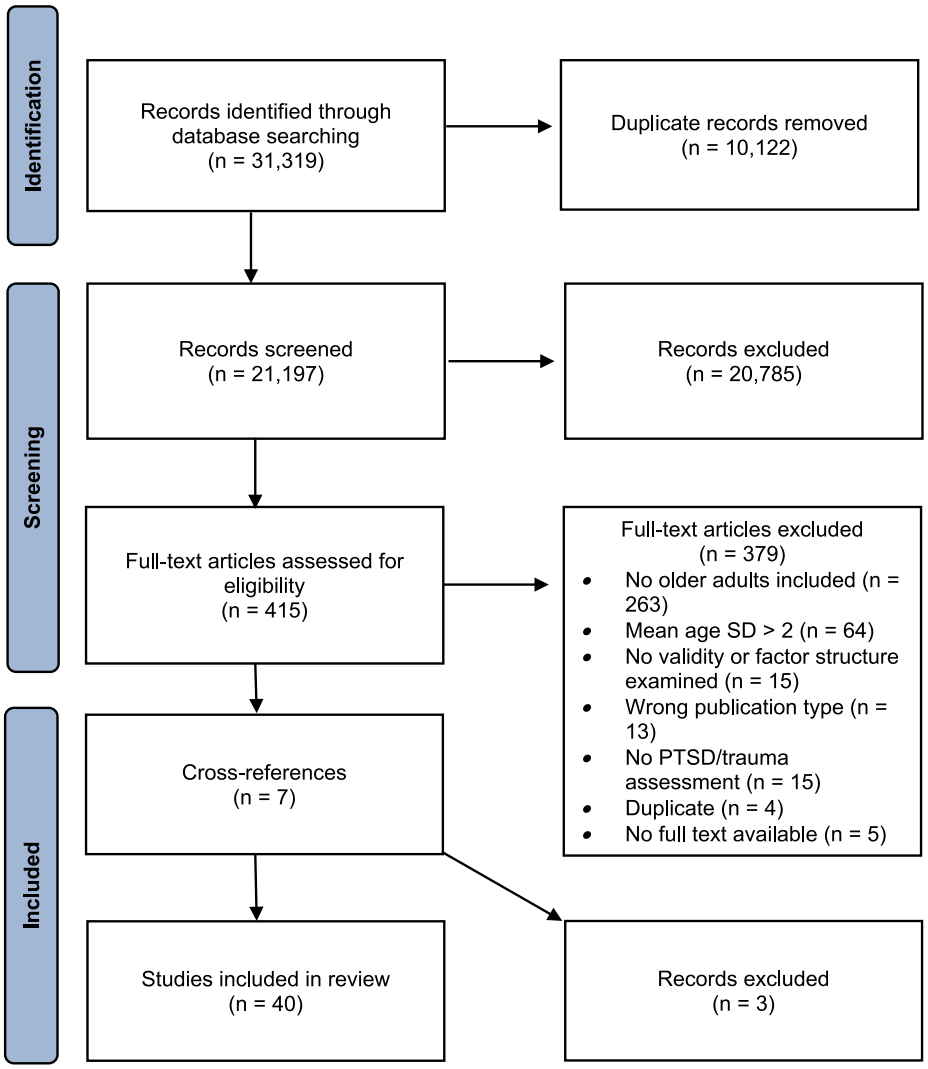

Figure 1. PRISMA flow diagram.

Scale Revised (IES-R) and the PTSD Checklist-Military (PCL-M), where each of them was validated in four studies. The remaining instruments were validated in only one to three studies. Only seven studies (7/40; 18%) assessed an instrument based on the DSM-5 (Gilmour & Romaniuk, 2020); Bovin et al., 2021; Cook et al., 2025; Prins et al., 2016; Rosendahl et al., 2019; Sistad et al., 2024; Tiet & Tiet, 2024). Half of the instruments (12 out of 24) were only validated in veterans or former prisoners of war (POWs). Five studies used the Structured Clinical Interview for DSM Disorders as the reference standard, whereas most studies did not use any reference standard ($n = 19$).

3.3. Risk of bias and applicability

Based on QUADAS-2 quality criteria, all included studies had a low risk of bias in all four domains (see Table 3). Notably, all studies used a consecutive sample, eliminating the possibility of high risk of bias that was usually associated with recruiting non-consecutive or non-random samples. However, for 15 studies (37.5%), it was unclear whether the index test results were interpreted with any knowledge of the reference standard. 10 studies used confirmatory factor analysis; in these cases, risk of bias based on the use of a reference standard (domain 3) was not assessed.

3.4. Characteristics of each screening instrument

3.4.1. BPSSS

The Brief Post-traumatic Stress Screening Scale [BPSSS] is a five-item instrument to perform routine screening for older women's posttraumatic stress symptomatology (Lagana & Schuitevoerder, 2009). Lagana and Schuitevoerder (2009) found very good internal consistency for the scale. Factor analysis showed one factor, but no information was provided regarding ROC analysis.

3.4.2. PC-PTSD(-5)

The Korean version of the Primary Care Post-Traumatic Stress Disorder Screen [PC-PTSD-K] (Prins

Table 1. Characteristics of the included studies.

Study	Tool(s)	DSM	Language of tool	Study setting (country)	Target population	Nationality/ethnicity	Sample size (*N*)	Gender (% female)	Age (years)
Asukai et al. (2002)	IES-R	DSM-IV	Japanese	Japan	Trauma-exposed (earthquake, arsenic poisoning, metro attack)	White 99.3% Other 0.7%	732	9.7%	Mean = 55.88
Baumert et al. (2004)	IES-R	DSM-IV	German	Germany	Survivors of a life-threatening cardiac event	NR	129	12.4%	Mean = 60.5
Bovin et al. (2021)	PC-PTSD	DSM-5	English	USA	Veterans	White 75.1% Other 24.9%	396	15.9%	Mean = 61.4
Carvalho et al. (2014)	PCL-M	DSM-IV	Portuguese	Portugal	Veterans	NR	86	0%	Mean = 64.29
Cook et al. (2025)	PCL-5	DSM-5	English	USA	Veterans	White 85.1% Black 8.3% Hispanic 3.6% Other 3%	3001	96.2%	Mean = 73.2
Cook, Elhai, and Areán (2005)	PCL-S	DSM-IV	English	USA	Primary care patients	African American 51.6% Caucasian 38.7% Hispanic 3.2% Asian 2.7% Native American 1.1% Other racial back-grounds 2.7%	142	63.6%	Mean = 74.81
Cook, Elhai, Cassidy, et al. (2005)	M-PTSD, PCL-S	DSM-III DSM-IV	English	USA	Veterans	Caucasian 77.1% African American 17.1% Asian or American Indian 5.8%	35	0%	Mean = 69.43
Engdahl et al. (1996)	IES, MMPI-2 Pk, M-PTSD	DSM-III DSM-III DSM-III	English	USA	Veterans and POWs	White 99.1% Native American 0.6% Hispanic 0.3%	330	NR	Median = 71
Erbes et al. (2006)	SCID-PTSD, M-PTSD	DSM-III DSM-III	English	USA	Veterans and POWs (standard condition)	White 99.2% Native American 0.5% Hispanic 0.3%	372	0%	Median = 70
Erbes et al. (2006)	SCID-PTSD, M-PTSD	DSM-III DSM-III	English	USA	Veterans and POWs (less standard conditions)	White 93.2% Black 4.4% Other 2.3%	420	0%	Median = 68
Fujii et al. (2008)	SQD-*P*	DSM-IV	Japanese	Japan	Earthquake survivors	NR	68	77.9%	Mean = 71.2 (male); Mean = 77.9 (female)
Gilmour and Romaniuk (2020)	CAPS-5	DSM-5	English	Australia	Vietnam Veterans	NR	267	0%	Mean = 68.72
Hovens, Van der Ploeg, Klaarenbeek, et al. (1994)	CAPS-I	DSM-III	Dutch	Netherlands	Veterans and POWs	NR	100	33%	Mean = 60.3
Hovens et al. (1993)	Dutch PTSD Scale	DSM-III	Dutch	Netherlands	WWII Resistance veterans	NR	987	15%	Range = 60–65
Hudson et al. (2008)	PCL-C	DSM-IV	English	UK	Medical/Psychiatric hospital patients	White 96% Black Caribbean 4%	100	58%	Mean = 82
Hyer et al. (1996)	CAPS-I	DSM-III	English	USA	WWII and Korean Conflict combat veterans	White 83% Other 17%	125	NR	Mean = 69.6
Hyer et al. (1992)	MMPI-PTSD, M-PTSD	DSM-III DSM-III	English	USA	Vietnam Veterans	White 65–100%	105	NR	Mean range = 61.2–68.2
Iwasa et al. (2016)	PCL-S	DSM-IV	Japanese	Japan	Evacuees of the Fukushima Daiichi accident	NR	18,214	51.9%	Mean = 73.7
Jang et al. (2016)	PC-PTSD, SIPS	DSM-IV DSM-IV	Korean	Korea	Vietnam Veterans	NR	140	0%	Range = 60+
Kimerling et al. (2014)	CIDI 3.0 -PTSD	DSM-IV	English	USA	Vietnam Veterans	White 86.3% African American 5.6% Other 4.3%	160	100%	Mean = 66.7
Krammer et al. (2013)	TSI	DSM-III	German	Switzerland	Former Swiss placement and institutional children	NR	116	40.5%	Mean = 77.0
Lagana and Schuitevoerder (2009)	BPSSS	DSM-IV	English	USA	General population		94	100%	Mean = 70.93

(*Continued*)

Table 1. Continued.

Study	Tool(s)	DSM	Language of tool	Study setting (country)	Target population	Nationality/ethnicity	Sample size (*N*)	Gender (% female)	Age (years)
						White 50% Mexican American 14.9% African American 9.6% Armenian 8.5% Asian American 8.5% Other 8.5%			
Magruder et al. (2015)	PCL-M	DSM-IV	English	USA	Veterans	White 90.6% Other 9.4%	5141	0%	Mean = 61.1
Mystakidou et al. (2007)	IES-R	DSM-IV	Greek	Greece	Cancer patients	NR	82	53.7%	Mean = 62.3
Neal et al. (1995)	IES, MMPI-PTSD, M-PTSD	DSM-III DSM-III DSM-III	English	England	WWII POWs	Caucasian 100%	30	3.3%	Mean = 75.4
Overstreet et al. (2023)	PCL-C	DSM-IV	English	USA	Veterans	NR	279,897	7.8%	Mean = 65.7
Pietrzak, Van Ness et al. (2012)	PCL-S	DSM-IV	English	USA	Hurricane survivors	White 76.7% Other 23.3%	206	46.7%	Mean = 69.2
Préville et al. (2014)	PTSS Scale	DSM-IV	French	Canada	Primary care patients	NR	1765	57.3%	Mean = 73.2
Prins et al. (2016)	PC-PTSD	DSM-5	English	USA	Veterans	White 57.4% African American 12.1% Hispanic 9.6% Asian 5.5% Other 15.4%	398	4%	Mean = 63.3
Rosendahl et al. (2019)	PCL-5, PTSS-10, PTSS-14	DSM-5	German	Germany	Intensive care sepsis patients	NR	83	39.8%	Median = 64
Schinka et al. (2007)	PCL-C	DSM-IV	English	USA	Hurricane survivors	White 100%	142	50%	Mean = 77.2
Shevlin et al. (2000)	IES	DSM-III	English	UK	WWII and Korean War veterans	NR	731	0%	Mean = 72
Sistad et al. (2024)	PCL-5	DSM-5	English	USA	Veterans	White 71.6% Black 15.9% Asian 3.4% Native American 0.8 Other 7.8%	385	15.3%	Mean = 61.2
Suzuki et al. (2017)	PCL-S	DSM-IV	Japanese	Japan	Evacuees of the Fukushima Daiichi accident	NR	48	52.1%	Mean = 62.5
Thoma et al. (2025)	ITQ	ICD-11	German	Switzerland	General older adult population	NR	1526	72%	Mean = 72.34
Tiet and Tiet (2024)	PC-PTSD	DSM-5	English	USA	Veterans	White 54.91% Black 14.84% Native American/Alaska 8.86% Asian 6.74% Other 19.08%	519	4.05%	Mean = 63.2
Van Zelst, De Beurs, Beekman, Deeg, Bramsen, et al. (2003)	SRIP	DSM-IV	Dutch	Netherlands	Community dwelling older people	NR	1721	54%	Mean = 74.1 (male); Mean = 73.5 (female)
Wawer et al. (2020)	IES-R	DSM-IV	French	France	ICU discharge patients	NR	174	29%	Mean = 62
Witteveen et al. (2005)	SRIP IES	DSM-IV DSM-III	Dutch	Netherlands	War-related trauma victims	NR	74	33.8%	Mean = 60.2
Yarvis et al. (2012)	PCL-M	DSM-IV	English	Canada	Veterans (currently working as peacekeeper)	NR	456	0%	Mean = 60.53
Yeager and Magruder (2014)	PCL-M	DSM-IV	English	USA	Veterans	White 61.7% Other 38.3%	332	20.9%	Range = 65+

Note: CAPS-I = The Clinician-Administered PTSD Scale; CAPS-5 = The Clinician-Administered PTSD Scale for DSM-5; IES = The Impact of Event Scale; IES-R = The Impact of Event Scale-Revised; MMPI-PTSD = The Minnesota Multiphasic Personality Inventory PTSD subscale; MMPI-2 Pk = the Minnesota Multiphasic Personality Inventory-2 Posttraumatic Stress Disorder-Keane scale; M-PTSD = The Mississippi Scale for Combat-Related PTSD; PCL-C = The PTSD Checklist- civillian; PCL-M = The PTSD Checklist-military; PCL-S = The PTSD Checklist-specific; PC-PTSD-K = The Korean version of the Primary Care Post-Traumatic Stress Disorder Screen; PTSS Scale = The Post-Traumatic Stress Syndrome Scale; SIPS-K = The Korean version of the Single Item PTSD Screener; SRIP = The Self-Rating Inventory for Posttraumatic Stress Disorder; SQD-P = The Screening Questionnaire for Disaster Mental Health subscale PTSD; TSI = The Trauma Symptom Inventory.

Table 2. Results of measurement properties.

Tool (references)	Reliability	Structural validity	ROC-analysis
BPSSS			
(Lagana & Schuitevoerder, 2009)	*Cronbach's alpha:* 0.86 *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* *One-factor model* $\lambda^2 = 0.58$	*Sensitivity:* NR *Specificity:* NR *AUC:* NR *Cut-off:* NR *Gold standard:* NR
CAPS-I			
(Hovens, Van der Ploeg, Klaarenbeek, et al., 1994) (Hyer et al., 1996)	*Cronbach's alpha:* 0.89 *Test-retest:* NR *Inter-rater variability: 0.89* *Cronbach's alpha:* α = 0.95 *Test-retest:* NR *Inter-rater variability:* κ = 0.75	*Construct validity:* *CAPS is correlated with M-PTSD* r = 0.73 *CAPS is correlated with MMPI* r = 0.74 *Construct validity:* NR	*Sensitivity: 0.74* *Specificity: 0.84* *AUC:* NR *Cut-off:* NR *Gold standard:* Clinical diagnosis *Sensitivity:* 0.90 *Specificity:* 0.95 *AUC:* NR *Cut-off:* 65 *Gold standard:* SCID-TREE
CAPS-5			
(Gilmour & Romaniuk, 2020)	*Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* Six-factor anhedonia model CFI = 0.92 The six-factor anhedonia model is correlated with DASS-21 *r* = 0.63–0.69	*Sensitivity:* NR *Specificity:* NR *AUC:* NR *Cut-off:* NR *Gold standard:* NR
CIDI 3.0 PTSD module			
(Kimerling et al., 2014)	*Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* NR	*Sensitivity:* 0.64 *Specificity:* 0.91 *AUC:* 0.77 *Cut-off:* NR *Gold standard:* CAPS-IV
Dutch PTSD Scale			
(Hovens et al., 1993)	*Cronbach's alpha:* α = 0.88 *Test-retest:* 0.91 *Inter-rater variability:* NR	*Construct validity:* Six factor model λ > 1.0	*Sensitivity:* 0.84 *Specificity:* 0.79 *AUC:* 0.82 *Cut-off:* 59 *Gold standard:* SCID
IES			
(Engdahl et al., 1996) (Neal et al., 1995) (Shevlin et al., 2000) (Witteveen et al., 2005)	*Cronbach's alpha:* α = 0.94 *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* α = 0.91 *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* One-factor model NFI = 0.99 *Construct validity:* IES is correlated with CAPS-I r = 0.63 *Construct validity:* Model 3 NFI = 0.94 CFI = 0.96 IES is correlated with GHQ-28 r = 0.52 *Construct validity:* NR	*Sensitivity:* 0.78 *Specificity:* 0.82 *AUC: NR* *Cut-off:* 38 *Gold standard:* SCID *Sensitivity:* 0.67 *Specificity:* 0.57 *AUC:* NR *Cut-off:* 35 *Gold standard:* CAPS-I *Sensitivity:* NR *Specificity:* NR *AUC:* NR *Cut-off:* NR *Gold standard:* NR *Sensitivity:* 0.77 *Specificity:* 0.51 *AUC:* 0.71 *Cut-off: 36* Gold standard: CAPS-I
IES-R			
(Mystakidou et al., 2007) (Asukai et al., 2002) (Baumert et al., 2004) (Wawer et al., 2020)	*Cronbach's alpha:* α = 0.85 *Test-retest:* 0.94–0.96 *Inter-rater variability:* NR *Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* α > 0.8 for subscales intrusion and avoidance and α = 0.66 for hyperarousal *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* Three-factor structure λ > 1.0 IES-R-Gr subscales are correlated with HAD depression and anxiety subscales *r* = 0.49–0.64 *Construct validity:* Six-factor first-order model (model 3) CFI = 0.99 *Construct validity:* NR *Construct validity:* NR	*Sensitivity:* NR *Specificity:* NR *AUC:* NR *Cut-off:* NR Gold standard: NR *Sensitivity:* NR *Specificity:* NR *AUC:* NR *Cut-off:* NR Gold standard: SCID & CAPS *Sensitivity:* NR *Specificity:* NR *AUC:* NR *Cut-off:* NR Gold standard: NR *Sensitivity:* 0.63 *Specificity:* 0.95 *AUC:* 0.90 *Cut-off: 35* Gold standard: NR
ITQ			
(Thoma et al., 2025)	*Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* Two-factor second-order model CFI = 0.98	*Sensitivity:* NR *Specificity:* NR *AUC:* NR *Cut-off:* NR Gold standard: NR

(*Continued*)

Table 2. Continued.

Tool (references)	Reliability	Structural validity	ROC-analysis
MMPI-PTSD			
(Hyer et al., 1992)	*Cronbach's alpha:* NR	*Construct validity:* NR	*Sensitivity:* 0.83
(Neal et al., 1995)	*Test-retest:* NR	*Construct validity:*	*Specificity:* 0.79
	Inter-rater variability: NR	MMPI-PTSD is correlated with CAPS-I	*AUC:* NR
	Cronbach's alpha: NR	$r = 0.71$	*Cut-off:* 34
	Test-retest: NR		*Gold standard:* NR
	Inter-rater variability: NR		*Sensitivity:* 0.89
			Specificity: 0.62
			AUC: NR
			Cut-off: 17
			Gold standard: CAPS-I
MMPI-2 Pk			
(Engdahl et al., 1996)	*Cronbach's alpha:*	*Construct validity:*	*Sensitivity:* 0.60
	$\alpha = 0.93$	One-factor model	*Specificity:* 0.84
	Test-retest: NR	NFI = 0.99	*AUC:* 0.82
	Inter-rater variability: NR		*Cut-off:* 14
			Gold standard: SCID
M-PTSD			
(Engdahl et al., 1996)	*Cronbach's alpha:*	*Construct validity:*	*Sensitivity:* 0.66
(Neal et al., 1995)	$\alpha = 0.93$	One-factor model	*Specificity:* 0.87
(Hyer et al., 1992)	*Test-retest:* NR	NFI = 0.99	*AUC:* 0.85
(Cook, Elhai, Cassidy, et al., 2005)	*Inter-rater variability:* NR	*Construct validity:*	*Cut-off:* 91
(Erbes et al., 2006)	*Cronbach's alpha:* NR	M-PTSD is correlated with CAPS-I	*Gold standard:* SCID
(standard conditions)	*Test-retest:* NR	$r = 0.81$	*Sensitivity:* 0.78
(Erbes et al., 2006)	*Inter-rater variability:* NR	*Construct validity:* NR	*Specificity:* 0.57
(less standard conditions)	*Cronbach's alpha:*	*Construct validity:* NR	*AUC:* NR
	$\alpha = 0.85$	*Construct validity:* NR	*Cut-off:* 81
	Test-retest: NR	*Construct validity:* NR	*Gold standard:* CAPS-I
	Inter-rater variability: NR		*Sensitivity:* 1.00
	Cronbach's alpha:		*Specificity:* 0.93
	$\alpha = 0.78$		*AUC:* NR
	Test-retest: NR		*Cut-off:* 100
	Inter-rater variability: NR		*Gold standard:* NR
	Cronbach's alpha: NR		*Sensitivity:* NR
	Test-retest: NR		*Specificity:* NR
	Inter-rater variability: NR		*AUC:* NR
	Cronbach's alpha: NR		*Cut-off:* NR
	Test-retest: NR		*Gold standard:* NR
	Inter-rater variability: NR		*Sensitivity:* 0.69
			Specificity: 0.89
			AUC: NR
			Cut-off: 89
			Gold standard: SCID-IV
			Sensitivity: 0.71
			Specificity: 0.88
			AUC: NR
			Cut-off: 89
			Gold standard: SCID-IV
PCL-C			
(Hudson et al., 2008)	*Cronbach's alpha:* NR	*Construct validity:* NR	*Sensitivity:* 0.90
(Schinka et al., 2007)	*Test-retest:* NR	*Construct validity:*	*Specificity:* 0.87
(Overstreet et al., 2023)	*Inter-rater variability:* NR	Four-factor model	*AUC:* 0.94
	Cronbach's alpha: NR	CFI = 0.90	*Cut-off:* 36
	Test-retest: NR	*Construct validity:*	Gold standard: CAPS-IV
	Inter-rater variability: NR	Five-factor dysphoric arousal model	*Sensitivity:* NR
	Cronbach's alpha: NR	CFI = 0.98	*Specificity:* NR
	Test-retest: NR		*AUC:* NR
	Inter-rater variability: NR		*Cut-off:* NR
			Gold standard: NR
			Sensitivity: NR
			Specificity: NR
			AUC: NR
			Cut-off: NR
			Gold standard: NR
PCL-M			
(Yarvis et al., 2012)	*Cronbach's alpha:*	*Construct validity:*	*Sensitivity:* NR
(Carvalho et al., 2014)	$\alpha = 0.93$	Four-factor 1st order model	*Specificity:* NR
(Yeager & Magruder, 2014)	*Test-retest:* NR	CFI = 0.99	*AUC:* NR
(Magruder et al., 2015)	*Inter-rater variability:* NR	PCL-M is correlated with the CES-D	*Cut-off:* NR
	Cronbach's alpha: NR	$r = 0.73$	Gold standard: NR
	Test-retest: NR	*Construct validity: NR*	*Sensitivity:* 0.83
	Inter-rater variability: NR	*Construct validity: NR*	*Specificity:* 0.93
	Cronbach's alpha: NR	*Construct validity:*	*AUC:* 0.94
	Test-retest: NR	PCL-M is correlated with the VET-R	*Cut-off:* 49
	Inter-rater variability: NR	$r = 0.9$	Gold standard: CAPS-IV
	Cronbach's alpha: 0.96		*Sensitivity:* 0.76
	Test-retest: NR		*Specificity:* 0.80
	Inter-rater variability: NR		*AUC:* 0.87
			Cut-off: 24
			Gold standard: CAPS-IV
			Sensitivity: 0.81–0.85
			Specificity: 0.80–0.83
			AUC: 0.89
			Cut-off: 31–33
			Gold standard: CIDI
PCL-S			
(Cook, Elhai, Cassidy, et al., 2005)	*Cronbach's alpha:*	*Construct validity:* NR	*Sensitivity:* NR
(Cook, Elhai, & Areán, 2005)	$\alpha = 0.87$	*Construct validity:*	*Specificity:* NR
(Iwasa et al., 2016)	*Test-retest:* NR	PCL-S is correlated with the CES-D	*AUC:* NR

(Pietrzak, Van Ness et al., 2012) (Suzuki et al., 2017)	*Inter-rater variability:* NR *Cronbach's alpha:* α = 0.85 *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* α = 0.95 *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* α = 0.80–0.88 *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* α = 0.92 *Test-retest:* 0.85 *Inter-rater variability:* NR	*r* = 0.53 *Construct validity:* Five-factor model CFI = 0.96 *Construct validity:* Five-factor model CFI = 0.95 *Construct validity:* NR	*Cut-off:* NR *Gold standard:* NR *Sensitivity:* 0.96 *Specificity:* 0.92 *AUC:* 0.98 *Cut-off:* 37 Gold standard: PCL-S *Sensitivity:* NR *Specificity:* NR *AUC:* NR *Cut-off:* NR Gold standard: NR *Sensitivity: 0.96* *Specificity: 0.95* *AUC:* 0.98 *Cut-off:* 37–39 Gold standard: Clinical Diagnosis *Sensitivity:* 0.67 *Specificity:* 0.85 *AUC:* 0.83 *Cut-off:* 52 Gold standard: IES-R
PCL-5 (Rosendahl et al., 2019) (Sistad et al., 2024) (Cook et al., 2025)	*Cronbach's alpha:* 0.92 *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* 0.95 *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* PCL-5 is correlated with CAPS-5 ρ = 0.90 *Construct validity:* NR *Construct validity:* Eight-factor model CFI = 0.96	*Sensitivity:* 0.50 *Specificity:* 0.96 *AUC:* 0.94 *Cut-off:* 33 Gold standard: CAPS-5 *Sensitivity:* 0.82 *Specificity:* 0.76 *AUC:* 0.90 *Cut-off: 32* Gold standard: CAPS-5 *Sensitivity:* NR *Specificity:* NR *AUC:* NR *Cut-off:* NR Gold standard: NR
PC-PTSD (Jang et al., 2016)	*Cronbach's alpha:* α = 0.76 *Test-retest:* 0.97 *Inter-rater variability:* NR	*Construct validity:* NR	*Sensitivity:* 0.90 *Specificity:* 0.87 *AUC:* 0.92 *Cut-off: 3* *Gold standard:* SCID
PC-PTSD-5 (Bovin et al., 2021) (Prins et al., 2016) (Tiet & Tiet, 2024)	*Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR *Cronbach's alpha:* NR *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* NR *Construct validity:* NR *Construct validity:* NR	*Sensitivity:* 0.90 *Specificity:* 0.80 *AUC:* 0.93 *Cut-off:* 3 *Gold standard:* CAPS-5 *Sensitivity:* 0.95 *Specificity:* 0.85 *AUC:* 0.94 *Cut-off: 3* *Gold standard: MINI* *Sensitivity:* 0.94 *Specificity:* 0.84 *AUC:* NR *Cut-off: 3* *Gold standard:* NR
PTSS Scale (Préville et al., 2014)	*Cronbach's alpha:* α = 0.82 *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* Measurement model of PTSS comprising 3 dimensions $\chi^2 = 2.1$	*Sensitivity:* 0.94 *Specificity:* 0.92 *AUC:* 0.98 *Cut-off:* 10 *Gold standard:* IES-R
PTSS-10 (Rosendahl et al., 2019)	*Cronbach's alpha:* 0.83 *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* PTSS-10 is correlated with CAPS-5 ρ = 0.77	*Sensitivity:* 0.60 *Specificity:* 0.96 *AUC:* 0.93 *Cut-off:* 35 Gold standard: CAPS-5
PTSS-14 (Rosendahl et al., 2019)	*Cronbach's alpha:* 0.88 *Test-retest:* NR *Inter-rater variability:* NR	*Construct validity:* PTSS-14 is correlated with CAPS-5 ρ = 0.82	*Sensitivity:* 0.80 *Specificity:* 0.92 *AUC:* 0.94 *Cut-off:* 40 Gold standard: CAPS-5
SIPS-K (Jang et al., 2016)	*Cronbach's alpha:* NR *Test-retest:* 0.91 *Inter-rater variability:* NR	*Construct validity:* NR	*Sensitivity:* 0.85 *Specificity:* 0.90 *AUC:* 0.89 *Cut-off:* item 'bothered a lot' *Gold standard:* SCID

(*Continued*)

Table 2. Continued.

Tool (references)	Reliability	Structural validity	ROC-analysis
SRIP			
(Van Zelst et al., 2003)	*Cronbach's alpha:* NR	*Construct validity:* NR	*Sensitivity:* 0.74
(Witteveen et al., 2005)	*Test-retest:* NR	*Construct validity: NR*	*Specificity:* 0.81
	Inter-rater variability: NR		*AUC:* 0.85
	Cronbach's alpha: NR		*Cut-off:* 39
	Test-retest: NR		*Gold standard:* CIDI
	Inter-rater variability: NR		*Sensitivity:* 0.86
			Specificity: 0.69
			AUC: 0.84
			Cut-off: 52
			Gold standard: CAPS-I
SQD-*P*			
(Fujii et al., 2008)	*Cronbach's alpha:*	*Construct validity:* NR	*Sensitivity:* NR
	α = 0.77		*Specificity:* NR
	Test-retest: NR		*AUC:* 0.91
	Inter-rater variability: NR		*Cut-off:* 6 (possible PTSD)
			Gold standard: CAPS-IV
TSI			
(Krammer et al., 2013)	*Cronbach's alpha:*	*Construct validity:*	*Sensitivity:* NR
	α = 0.73–0.86	Briere three-factor model	*Specificity:* NR
	Test-retest: NR	CFI < 0.08	*AUC:* NR
	Inter-rater variability: NR	Gambetti et al. three-factor model	*Cut-off:* NR
		CFI < 0.08	*Gold standard:* NR

et al., 1999) is a four-item screener developed to detect PTSD in primary care settings. The instrument was validated in a Korean older adult population (Jang et al., 2016). The internal consistency was good, and the test-retest reliability was excellent. Using a cut-off point of 3, the tool showed very good sensitivity and specificity. However, its structural validity has not been assessed.

The PC-PTSD was revised based on the DSM-5 [PC-PTSD-5] (Prins et al., 2016). However, no study evaluated the internal consistency or construct validity of the instrument in older adults. Three studies assessed the psychometric properties of the instrument and recommended a cut-off value of 3 with very good sensitivity and specificity (Bovin et al., 2021; Prins et al., 2016; Tiet & Tiet, 2024).

3.4.3. PTSS scale

The Post-Traumatic Stress Syndrome Scale [PTSS Scale] measures the number of traumatic events and symptom severity and is based on the IES-R index (Préville et al., 2014). The PTSS Scale has good internal consistency. Additionally, the ROC analysis in Canadian primary care patients showed excellent accuracy, sensitivity, and specificity for a cut-off score of 10. The PTSS Scale comprises 3 dimensions (number of lifetime traumatic events, the frequency of reactions and symptoms of distress) in the older adult population (Préville et al., 2014).

3.4.4. PTSS-10/14

The Post-Traumatic Stress Scale-10 [PTSS-10] was developed to screen for PTSD according to the DSM-III-R criteria (Stoll et al., 1999). Only one study evaluated the psychometric properties and found that the PTSS-10 has good internal consistency (Rosendahl et al., 2019). A cut-off value of 35 was recommended, which has been found to have good sensitivity and very high specificity (Rosendahl et al., 2019). However, its structural validity has not been assessed.

The Post-Traumatic Stress Scale-14 [PTSS-14} was developed to screen for PTSD reflecting the PTSD criteria defined in DSM-IV (Twigg et al., 2008). Only one study assessed the psychometric properties and found that the PTSS-10 exhibits good internal consistency (Rosendahl et al., 2019). The study of Rosendahl et al recommended a cut-off value of 40, which has been found to have very high sensitivity and specificity.

3.4.5. SIPS-K

The Korean version of the Single Item PTSD Screener [SIPS] (Gore et al., 2008) was developed to screen for PTSD in primary care settings. However, only one study evaluated the SIPS using a Korean older adult population (Jang et al., 2016). This study did not mention the internal consistency of the tool, but the test-retest score was excellent. The optimal cut-off point for the SIPS was at the response option 'bothered a lot' (Jang et al., 2016, p. 406), resulting in a very good sensitivity and specificity. The structural validity of the SIPS was not reported.

3.4.6. SRIP

The Self-Rating Inventory for Posttraumatic Stress Disorder [SRIP] is a screening instrument for PTSD in community-dwelling older adults (Hovens, Van der Ploeg, Bramsen, et al., 1994). Two studies, that were included in this review, were conducted to evaluate the Dutch version of the SRIP (Van Zelst, De Beurs, Beekman, Deeg, Bramsen, et al., 2003; Witteveen et al., 2005). However, the studies did not mention the tool's reliability, and no factor analysis was carried out. The ROC-curve displays a reasonable discriminating power, good sensitivity and very good

Table 3. Risk of bias and applicability concerns of included studies.

	Domain 1: Patient Selection		Domain 2: Index Test(s)			Domain 3: Reference Standard		Domain 4: Timing and Flow	
	Risk of Bias	Concerns Regarding Applicability	Index Test	Risk of Bias	Concerns Regarding Applicability	Reference Standard	Risk of Bias	Concerns Regarding Applicability	Risk of Bias
Asukai et al. (2002)	Low	Low	IES-R	Low	Low	SCID PTSD Module CAPS*	Low	Low	Low
Baumert et al. (2004)	Low	Low	IES-R	Low	Low	Psychophysiological acoustic startle reflex (ASR) paradigm	Low	Low	Low
Bovin et al. (2021)	Low	Low	PC-PTSD-5	Low	Low	CAPS-5	Low	Low	Low
Carvalho et al. (2014)	Low	Low	PCL-M	Low	Low	CAPS	Low	Low	Low
Cook et al. (2025)	Low	Low	PCL-5	Low	Low	N/A**	N/A	N/A	N/A
Cook, Elhai, and Areán (2005)	Low	Low	PCL-S	Low	Low	N/A	N/A	N/A	Low
Cook, Elhai, Cassidy, et al. (2005)	Low	Low	M-PTSD	Low	Low	N/A	N/A	N/A	Low
Engdahl et al. (1996)	Low	Low	PCL-S IES MMPI-2 Pk M-PTSD	Low	Low	SCID PTSD Module*	Low	Low	Low
Erbes et al. (2006)	Low	Low	SCID	Low	Low	M-PTSD	Low	Low	Low
Fujii et al. (2008)	Low	Low	SQD-*P*	Low	Low	CAPS-IV*	Low	Low	Low
Gilmour and Romaniuk (2020)	Low	Low	CAPS-5	Low	Low	N/A**	N/A	N/A	N/A
Hovens, Van der Ploeg, Bramsen, et al. (1994)	Low	Low	CAPS-1	Low	Low	Mississipi PTSD Scale MMPI-PTSD IES	Low	Low	Low
Hovens et al. (1993)	Low	Low	Dutch PTSD Scale	Low	Low	SCID DSM-III-R*	Low	Low	Low
Hudson et al. (2008)	Low	Low	PCL-C	Low	Low	CAPS-IV*	Low	Low	Low
Hyer et al. (1996)	Low	Low	CAPS-1	Low	Low	SCID-DTREE*	Low	Low	Low
Hyer et al. (1992)	Low	Low	MMPI M-PTSD	Low	Low	N/A	N/A	N/A	Low
Iwasa et al. (2016)	Low	Low	PCL-S	Low	Low	N/A**	N/A	N/A	Low
Jang et al. (2016)	Low	Low	PC-PTSD SIPS	Low	Low	SCID*	Low	Low	Low
Kimerling et al. (2014)	Low	Low	CIDI	Low	Low	CAPS PCL-C	Low	Low	Low
Krammer et al. (2013)	Low	Low	TSI	Low	Low	N/A**	N/A	N/A	Low
Lagana and Schuitevoerder (2009)	Low	Low	BPSSS	Low	Low	N/A	N/A	N/A	Low
Magruder et al. (2015)	Low	Low	PCL-M	Low	Low	N/A	N/A	N/A	Low
Mystakidou et al. (2007)	Low	Low	IES-R	Low	Low	N/A**	N/A	N/A	Low
Neal et al. (1995)	Low	Low	IES MMPI M-PTSD	Low	Low	CAPS-1*	Low	Low	Low
Overstreet et al. (2023)	Low	Low	PCL-C	Low	Low	N/A**	N/A	N/A	Low
Pietrzak, Van Ness et al. (2012)	Low	Low	PCL-S	Low	Low	Clinical Diagnosis Based on DSM-IV*	Low	Low	Low
Préville et al. (2014)	Low	Low	PTSS Scale	Low	Low	IES-R*	Low	Low	Low
Prins et al. (2016)	Low	Low	PC-PTSD	Low	Low	MINI DSM-5 PTSD module*	Low	Low	Low
Rosendahl et al. (2019)	Low	Low	PTSS-10 PTSS14 PCL-5	Low	Low	CAPS-5*	Low	Low	Low

(*Continued*)

Table 3. Continued.

	Domain 1: Patient Selection		Domain 2: Index Test(s)			Domain 3: Reference Standard			Domain 4: Timing and Flow	
	Risk of Bias	Concerns Regarding Applicability	Index Test	Risk of Bias	Concerns Regarding Applicability	Reference Standard	Risk of Bias	Concerns Regarding Applicability	Concerns Regarding Applicability	Risk of Bias
Schinka et al. (2007)	Low	Low	PCL-C	Low	Low	N/A**	N/A	N/A	Low
Shevlin et al. (2000)	Low	Low	IES	Low	Low	N/A**	N/A	N/A	Low
Sistad et al. (2024)	Low	Low	PCL-5	Low	Low	CAPS-5	Low	Low	Low
Suzuki et al. (2017)	Low	Low	PCL-S	Low	Low	IES-R	Low	Low	Low
Thoma et al. (2025)	Low	Low	ITQ	Low	Low	N/A**	N/A	Low	Low
Tiet and Tiet (2024)	Low	Low	PC-PTSD	Low	Low	MINI DSM-5 PTSD module*	Low	Low	Low
Van Zelst et al. (2003)	Low	Low	SRIP	Low	Low	DSM-IV criteria in the CIDI*	Low	Low	Low
Wawer et al. (2020)	Low	Low	IES-R	Low	Low	N/A	N/A	Low	Low
Witteveen et al. (2005)	Low	Low	IES SRIP	Low	Low	CAPS*	Low	Low	Low
Yarvis et al. (2012)	Low	Low	PCL-M	Low	Low	N/A**	N/A	N/A	Low
Yeager and Magruder (2014)	Low	Low	PCL-M	Low	Low	CAPS	Low	Low	Low

Note: N/A = not applicable; * = No information with regard to blinding of the assessments available; ** No reference standard as it's a CFA.

specificity, with a recommended cut-off score of 39 in a sample of community dwelling older adults (Van Zelst, De Beurs, Beekman, Deeg, & Van Dyck, 2003). The study of Witteveen et al. (2005) recommended a cut-off value of 52 with very good sensitivity and good specificity in a sample of war-related trauma victims.

3.4.7. SQD-P

The Screening Questionnaire for Disaster Mental Health subscale PTSD [SQD-P] is a simple interview-format scale that screens for disaster mental health issues. The scale has been translated into Japanese in a study including older adults. It has shown good internal consistency and high efficiency with a cutoff point of 6 or higher to indicate possible PTSD (Fujii et al., 2008). There was no factor analysis performed.

3.5. Characteristics of each diagnostic instrument

3.5.1. CAPS(-5)

The Clinician-Administered PTSD Scale [CAPS] (Blake, 1990) is the gold-standard interview for current and lifetime PTSD assessment. The initial psychometric studies used the Clinician-Administered PTSD Scale (CAPS-I) which was based on the DSM-III criteria (Hovens, Van der Ploeg, Klaarenbeek, et al., 1994; Hyer et al., 1996). The studies found that the CAPS-I had excellent internal consistency and good inter-rater reliability. The recommended standard cut-off score was found to be effective at detecting PTSD symptoms. At a cut-off score of 65, the sensitivity was very good, and specificity was excellent. However, the study did not report the area under the ROC curve.

The CAPS was revised with the release of DSM-5 [CAPS-5] (Weathers et al., 2018). However, the original four-factor structure of the DSM-5 model showed slightly less than adequate fit. On the other hand, there is moderate-quality evidence supporting a sufficient six-factor anhedonia model structure (Gilmour & Romaniuk, 2020). Notably, reliability and ROC analysis of the CAPS-5 has not been evaluated in older adults.

3.5.2. CIDI 3.0 PTSD module

The PTSD module of the CIDI version 3.0 is a structured interview designed to assess PTSD based on the DSM-IV (Kessler & Üstün, 2004). The internal consistency and factor analysis were not studied in older adults. The ROC analysis in a sample of female Vietnam-era Veterans showed excellent specificity and good sensitivity with a high level of accuracy (Kimerling et al., 2014).

3.5.3. Dutch PTSD scale

The Dutch PTSD scale, based on the DSM-III, was designed to evaluate PTSD in older adult World War II veterans (Hovens et al., 1993). Hovens et al. (1993) reported that the scale had very good internal consistency and excellent test-retest reliability. The ROC analysis revealed that it had high sensitivity and good specificity, with a cut-off value of >59. However, the AUC score was not reported. Additionally, factor analysis conducted on a large sample of veterans identified six factors.

3.5.4. IES(-R)

The Impact of Event Scale [IES] is a questionnaire designed to measure intrusion and avoidance symptoms that may occur after a traumatic event (Horowitz et al., 1979). Excellent internal consistency was reported in two studies (Engdahl et al., 1996; Shevlin et al., 2000), yet the factor structure has been found to vary, with some studies suggesting a one-factor model while others suggested a two-factor model with additional cross-factor loadings (Engdahl et al., 1996; Shevlin et al., 2000). A cut-off value of 35 has been recommended by Neal et al. (1995) using ROC analysis. Engdahl et al. (1996) suggested a cut-off value of 38 for a community sample of POW, which has been found to have good sensitivity and very good specificity. In addition, a cut-off value of 36 was recommended in a sample of war-related trauma victims (Witteveen et al., 2005).

The Impact of Event Scale-Revised [IES-R] is an updated version of the 15-item IES, designed to include 7 extra items that align with the DSM-IV standards (Weiss, 2007). The study of Baumert et al. (2004) found that the IES-R had a good internal consistency for subscales intrusion and avoidance. Factor analysis in a sample of Japanese trauma-exposed older adults identified a six-factor first-order model (Asukai et al., 2002). A cut-off value of 35 was recommended, which has been found to have good sensitivity and very high specificity (Wawer et al., 2020). Mystakidou et al. (2007) translated the IES-R into Greek to evaluate the psychometric properties in cancer patients, and found that the IES-R had good internal consistency and excellent test-retest reliability. Factor analysis showed three factors, but no information was provided regarding ROC analysis.

3.5.5. ITQ

The German version of the International Trauma Questionnaire [ITQ] was used to assess probable PTSD and CPTSD based on the ICD-11 (Cloitre et al., 2018). The reliability and ROC analysis were not evaluated in older adults. However, factor analysis suggested a two-factor second-order model (Thoma et al., 2025).

3.5.6. MMPI-PTSD(-2 Pk)

The Minnesota Multiphasic Personality Inventory [MMPI] PTSD subscale was created to evaluate PTSD (Keane et al., 1984). However, the internal consistency and factor structure of the scale were not studied in older adults. Hyer et al. (1992) suggested a cut-off score of 34, which showed very good sensitivity and good specificity in a sample of veterans. On the other hand, in another sample of POW, a cut-off score of 17 is recommended, with very good sensitivity and acceptable specificity (Neal et al., 1995).

The MMPI-PTSD was revised into the Minnesota Multiphasic Personality Inventory-2 Posttraumatic Stress Disorder-Keane [MMPI-2 PK] scale (Butcher, 2010). Only one study has investigated the psychometric properties of MMPI-2 PK (Engdahl et al., 1996). The study found that the instrument has excellent internal consistency and supports a one-factor model structure. The authors suggest a cut-off value of 14, which provides acceptable sensitivity and very good specificity.

3.5.7. M-PTSD

The Mississippi Scale for Combat-Related PTSD [M-PTSD] is a self-report measure that assesses combat-related PTSD in veteran populations (Keane et al., 1988). According to several studies, the tool has good to excellent internal consistency (Cook, Elhai, Cassidy, et al., 2005; Engdahl et al., 1996; Hyer et al., 1992). Only one study evaluated the construct validity, which suggested a one-factor model as the best fit (Engdahl et al., 1996). The tool has several cut-off scores recommended by various studies. A cut-off score of 100 was recommended by Hyer et al. (1992), with excellent sensitivity and specificity. Neal et al. (1995) adapted the cut-off score for a POW sample and suggested a cut-off of 81, which has been found to have good sensitivity and acceptable specificity. Engdahl et al. (1996) applied a ROC analysis in a sample of World War II (WWII) veterans and POWs and recommended a cut-off value of 91 with acceptable sensitivity and very good specificity. A cut-off value of 89 was recommended by Erbes et al in a sample of veterans and POWs with good sensitivity and very good specificity (Erbes et al., 2006).

3.5.8. PCL

The PTSD Checklist [PCL] is one of the most widely used tools used to measure the symptoms of PTSD according to the DSM-IV (Weathers, 1993). There are three versions: PCL-M (military), PCL-C (civilian) and PCL-S (specific), which only vary slightly in the instructions and wording of the phrase referring to the index event. Psychometric properties were evaluated in five studies for the PCL-S. The internal consistency was found to be very good to excellent in several studies (Cook, Elhai, & Areán, 2005; Cook, Elhai,

Cassidy, et al., 2005; Hyer et al., 1992; Iwasa et al., 2016; Pietrzak, Van Ness, et al., 2012; Suzuki et al., 2017) and findings suggested a five-factor model (Iwasa et al., 2016; Pietrzak, Van Ness, et al., 2012). Two studies have supported a cut-off value of 37, which has excellent sensitivity and specificity (Cook, Elhai, & Areán, 2005; Pietrzak, Van Ness, et al., 2012). However, the study of Suzuki et al recommended a cut-off value of 52 with good sensitivity and high specificity (Suzuki et al., 2017).

Three studies evaluated the PCL-C's psychometric properties (Hudson et al., 2008; Overstreet et al., 2023; Schinka et al., 2007), yet internal consistency was not studied in older adults. Confirmatory factor analysis revealed the strongest support for a four-factor model in a sample of hurricane survivors (Schinka et al., 2007) and a five-factor dysphoric arousal model in a sample of veterans (Overstreet et al., 2023). Using a cut-off value of 36, the ROC analysis showed very good sensitivity and specificity (Hudson et al., 2008).

Four studies evaluated the PCL-M's psychometric properties (Carvalho et al., 2014; Magruder et al., 2015; Yarvis et al., 2012; Yeager & Magruder, 2014), which suggested the four-factor 1st order model as the best fit (Yarvis et al., 2012). The internal consistency of PCL-M was found to be excellent in Yarvis et al. (2012) and Magruder et al (2015). Different cut-off values were recommended by various studies with very good sensitivity and specificity. The cut-off values of 24 and 31–33 were recommended for American veterans (Magruder et al., 2015; Yeager & Magruder, 2014), and a cut-off value of 49 was recommended for a sample of Portuguese veterans (Carvalho et al., 2014).

The PCL was revised with the release of DSM-5 [PCL-5] (Weathers et al., 2013, 2018). Two studies found that the instrument has excellent internal consistency (Cook et al., 2025; Rosendahl et al., 2019) and one study supported an eight-factor model structure (Cook et al., 2025). The cut-off value of 32 with high sensitivity and specificity was recommended for veterans (Sistad et al., 2024) and a cut-off value of 33 with acceptable sensitivity and very good specificity was suggested for a sample of intensive care patients (Rosendahl et al., 2019).

3.5.9. TSI

The Trauma Symptom Inventory [TSI] is a self-report questionnaire designed to assess complex symptoms of PTSD (Briere, 1995). Krammer et al. (2013) conducted a study to evaluate the German version of the TSI in older adults who had experienced childhood trauma. When tested using equation models, the data did not provide enough support for the three-factor models created by Briere (1995) and Gambetti et al. (2011). Additionally, the reliability and ROC analysis of the TSI have not been evaluated for older adults.

4. Discussion

Although many PTSD screening and diagnostic instruments have been validated in adults, studies conducted in samples of older adults are relatively rare. This systematic review summarised the psychometric properties of 24 instruments that have been used to detect PTSD in older adults across 40 research studies of sufficient quality.

A large number of studies ($n = 19$; 48%) consisted of small, selective samples, consisting of less than 150 participants. Additionally, most focused on U.S. male combat veterans, former prisoners of war, and Western populations. As a result, there is limited information on the assessment of PTSD in older adults within the general non-Western population; the present review identified only two studies conducted in non-Western samples that were published in the last ten years. One study was conducted in South Korean Vietnam Veterans (Gilmour & Romaniuk, 2020; Jang et al., 2016) and the study by Iwasa et al. (2016) was conducted in evacuees of the Fukushima Daiichi accident (Japan). Both studies assessed instruments based on the DSM-IV. Thus, studies in non-Western samples are a significant gap in research. Finally, the finding that only six studies assessed an instrument based on the DSM-5 warrants a call for more research. Given the significant changes in diagnostic classification between DSM-IV and DSM-5 versions and the fact that less is known about PTSD symptom presentation in older adults, validation studies of DSM-5-based instruments in older adults are needed. Furthermore, no validated instruments were found for use in older adults with cognitive impairment and at the end of life, which is consistent with existing literature (Glick et al., 2018; Havermans, van Alphen, et al., 2023).

For now, several studies have suggested using a lower cut-off score for older adults compared to younger adults (Cook, Elhai, & Areán, 2005; Glaesmer et al., 2010; Moye et al., 2022; Pietrzak, Van Ness, et al., 2012; Van Zelst, De Beurs, Beekman, Deeg, & Van Dyck, 2003), as older adults may have difficulty expressing psychological difficulties and/or distress compared to the general population. In addition, many older adults have multimorbidity, resulting in overlapping symptoms that make it challenging to diagnose PTSD (Havermans, van Alphen, et al., 2023). This could lead to a failure to provide individuals who might need psychological help with potentially beneficial treatment (Pless Kaiser et al., 2019).

The traditional diagnostic accuracy model involves comparing the results of the test being evaluated (index test) with those of the reference standard

(gold standard), and it is considered to be the most reliable method for determining the presence or absence of a particular condition or disease (Rutjes et al., 2007). The CAPS-5 is considered the gold standard in PTSD assessment in the general population. However, there is currently no validated gold standard that is more specific for the older adult population, making it challenging to validate existing assessment tools. A validated instrument can aid in diagnosing PTSD earlier, thereby improving the likelihood that one will receive treatment sooner (Van Zelst, De Beurs, Beekman, Deeg, Bramsen, et al., 2003). However, it is important to consider the suitability of tools for this population in terms of ease of administration and accessibility to all. For example, training is required to administer the CAPS-5, which is often not feasible in clinical practice (Oslin et al., 2019). Furthermore, the presence of multiple health conditions in this population must be taken into consideration. The existence of more validated instruments could also facilitate more research work on the unique manifestations of PSTD, and the distinctive challenges associated with dealing with such a psychological disorder at an age where physical issues/conditions are most likely to co-occur, in older adults. These lines of research could improve our understanding of the struggles older persons with PTSD might face, and the effective ways to help them (which might differ from those that were useful for younger adults), thereby improving the care they could receive.

Several limitations of the current systematic review should be noted. Firstly, the inclusion criteria were restricted such that only papers that appeared in the search results using English search terms were evaluated so studies using non-English key words were not retrieved. Furthermore, it is important to note that the studies included in this review have some notable limitations (e.g. small and selective samples, mainly Western populations and males). These could affect the generalizability of the findings to larger populations and other cultural contexts. Lastly, it is important to note that the number of validation studies for most of the instruments included in this review was limited. The majority of the instruments were validated by only one or two studies, meaning that these results can mainly be interpreted as preliminary. This also highlights the need for more validation studies to be conducted in the future to ensure that the results obtained are reliable and valid.

We recommend updating existing measurement tools to align with the current diagnostic criteria for PTSD in both DSM-5 and ICD-11. Alternatively, new scales and interviews can be developed to capture these criteria optimally. Additionally, more comprehensively validated diagnostic cut-off values and algorithms should be established to better identify those needing treatment. Given the limitations of the studies included, we suggest that more efforts should also be expended on future validation studies of available and new assessment instruments and to expand validation samples to include larger, linguistically-varied and more culturally diverse groups while balancing sociodemographic variables. In clinical practice we recommend using the CAPS-5 as it is the gold standard for assessing current and lifetime PTSD in the general population.

5. Conclusions

There is a general lack of research on the accuracy and reliability of PTSD screening and diagnostic instruments in the older adult general population. Validation studies conducted in specific older adult populations are either mostly absent (i.e. studies on cognitively impaired individuals and for use in end of life) or rare (i.e. studies that have used a non-Western sample) as well. The inclusion of older adults in research can be challenging due to mental, physical, and social obstacles (e.g. shame). More research is needed to establish a gold standard and to determine the most appropriate cut-off scores for this population. Additionally, future studies should also assess measures that are based on the DSM-5 or the ICD-11 and are easy to administer in clinical practice. Addressing these recommendations could provide important evidence for the suitability of PTSD screening and diagnostic tools for an often overlooked group (i.e. older adults), which could, in turn, result in more individuals getting the help and treatment they would need.

Disclosure statement

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

Funding

Dr. Lawrence was supported by a Mentored Research Scientist Career Development Award (K01AG070279) from the National Institute on Aging at the National Institutes of Health (NIH). This content does not necessarily represent the official views of the NIH.

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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