Evidence-based Synthesis Program (ESP)

Screening for Post-Traumatic Stress Disorder in Primary Care

A Systematic Review of the Evidence

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Evidence-based Synthesis Program (ESP)

VA Evidence-based Synthesis (ESP) Program Overview

- **Sponsored by VA Office of R&D and Quality Enhancement Research Initiative (QUERI).**
- **Established to provide timely and accurate syntheses/reviews of healthcare topics identified by VA clinicians, managers and policy-makers, as they work to improve the health and healthcare of Veterans.**
- **Builds on staff and expertise already in place at the Evidence-based Practice Centers (EPC) designated by AHRQ. Four of these EPCs are also ESP Centers:**
  - Durham VA Medical Center; VA Greater Los Angeles Health Care System; Portland VA Medical Center; and **Minneapolis VA Medical Center**.

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- **Provides evidence syntheses on important clinical practice topics relevant to Veterans, and these reports help:**
  - Develop clinical policies informed by evidence,
  - Implementation of effective services to improve patient outcomes and to support VA clinical practice guidelines and performance measures, and
  - Guide the direction for future research to address gaps in clinical knowledge.
- **Broad topic nomination process – e.g. VACO, VISNs, field – facilitated by ESP Coordinating Center (Portland) through online process:**

http://www.hsrd.research.va.gov/publications/esp/TopicNomination.cfm

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- **Steering Committee representing research and operations (PCS, OQP, ONS, and VISN) provides oversight and guides program direction.**
- **Technical Expert Panel (TEP)**
  - Recruited for each topic to provide content expertise.
  - Guides topic development; refines the key questions.
  - Reviews data/draft report.
- **External Peer Reviewers & Policy Partners**
  - Reviews and comments on draft report
- **Final reports posted on VA HSR&D website and disseminated widely through the VA.**

http://www.hsrd.research.va.gov/publications/esp/reports.cfm

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Screening for Post-Traumatic Stress Disorder (PTSD) in Primary Care: A Systematic Review

January, 2013

Full-length report available on ESP website:

http://www.hsrd.research.va.gov/publications/esp/ptsd-screening.cfm

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Background

- **PTSD among Veterans**
  - 430,000 Veterans enrolled in VA carry a PTSD diagnosis
  - Lifetime prevalence among OEF/OIF/OND veterans ~ 17%

- **Chronic PTSD is very disabling and is associated with increased morbidity and mortality**
  - Increased rates of suicide, hospitalization, poverty, unemployment.
  - Greater prevalence of numerous chronic diseases (e.g., cardiovascular disease, arthritis, insulin resistance, etc.).
  - Earlier age of onset of chronic diseases and greater all cause mortality.

- **The *VA/DoD Clinical Practice Guideline for Management of Post-Traumatic Stress* (2010):**

The evidence supporting screening with validated scales like the PC-PTSD is II-2. Screening can successfully increase the identification of PTSD in the screened population.

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- **Screening Program**
  - **Purpose:** To increase the detection of unrecognized disease in people who may not otherwise be identified as having the disease.
    - Assumption 1: Recognition of the disease is possible.
    - Assumption 2: Interventions exist to treat the disease or to diminish its adverse impact.
    - Assumption 3: Recognition of the disease can affect the course of the disease via appropriate interventions.
    - Assumption 4: Resources are available to diagnose the disease and to provide treatment.

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Institute of Medicine. *Treatment for posttraumatic stress disorder in military and veteran populations: Initial assessment*. **Washington, DC: The National Academies Press; 2012.**

"Although it is widely believed that screening for PTSD among current and former service members is important for identifying affected people and directing them to treatment as early as possible to prevent chronic suffering and maladjustment, there is no strong evidence to support this belief".

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- **Primary Care important target for screening**
  - Most Veterans with MH problems are seen in Primary Care Clinics.
  - Primary Care Providers are not very good at identifying PTSD.
  - Primary Care patients with PTSD are often undertreated.
  - Increase the rate of Mental Health Treatment uptake.
  - Initiate Treatment earlier in the Illness.

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Key Questions

- **Key Question 1:**
  - What tools are used to screen for PTSD in primary care settings, and what are their characteristics (i.e., length, format/administration, response scale)?

- **Key Question 2:**
  - What are the psychometric properties and utility of the screening tools (sensitivity, specificity, likelihood ratios, predictive values, area under curve, reliability)?

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Key Questions

- **Key Question 3:**
  - What information is there about the implementation issues (e.g., ease of administration, patient satisfaction) related to the use of PTSD screening tools in primary care clinics?

- **Key Question 4:**
  - Do the psychometric properties and utility of each of the screening tools differ according to age, gender, race/ethnicity, substance abuse, or other comorbidities?

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Methods

- **Literature Search**
  - Ovid MEDLINE from 1981 to October 2012; limited to peer-reviewed articles involving human subjects and published in the English language.
  - National Center for PTSD's Published International Literature On Traumatic Stress (PILOTS) database (http://www.ptsd.va.gov/professional/pilots-database/pilots-assessment.asp).
  - Reference lists of relevant articles and existing reviews

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- **Methods**

  Inclusion Criteria:

  1. Evaluation of a tool used to screen for PTSD.
  2. Gold-standard diagnostic assessment of PTSD as a comparator.
  3. Screening of adults in a primary care setting in the United States.
  4. Screening sample size greater than n=50.
  5. Reported outcomes of interest:
     - Diagnostic/Detection accuracy
     - Information related to implementation of a screening tool

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Gold Standard Diagnostic Instruments

Gold Standard	Description
Clinician Administered PTSD Scale (CAPS)	Structured diagnostic interview of PTSD symptoms based on DSM-IV criteria and some associated symptoms.
Structured Clinical Interview for DSM–IV (SCID)	Semi-structured interview that assesses major DSM-IV diagnoses.
Mini-International Neuropsychiatric Interview (MINI)	Brief structured diagnostic interview that assesses major psychiatric disorders within both DSM-IV (Axis I) and ICD-10.
PTSD Symptom Scale – Interview (PSS-I)	Semi-structured interview for the 17 symptoms used to diagnose PTSD according to the DSM-IV.
Composite International Diagnostic Interview (CIDI)	Structured diagnostic interview that assesses multiple DSM-IV (Axis I) and ICD-10 conditions.

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Methods

- **Rating the Body of Evidence for each Screening Tool**
  - Qualitative assessment of the strength of the current evidence base
- **Data Synthesis**
  - Qualitative and semi-quantitative synthesis of the results for each question
  - Identified and highlighted findings from studies involving Veterans and military personnel

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QUality Assessment of Studies of Diagnostic Accuracy included in Systematic reviews (QUADAS)*

1. **Representativeness of those who were screened: Sample Size**
2. **Representativeness of those who were screened: Sampling Method**
3. **Representativeness of Interview Sample viz. Screening Sample**
4. **Quality of Gold Standard Evaluation**
5. **Blind and/or Concurrent Diagnostic Evaluations**

* Whiting (2003). *BMC Medical Research Methodology.*

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LEVELS OF EVIDENCE: Rational Clinical Examination Series*

RCE Level of Evidence Rating	QUADAS Item 1 Screening Sample Size	QUADAS Item 2 Selection method	QUADAS Item 3 Representativeness of Interview Sample viz. Screening Sample	QUADAS Item 4 Quality of gold standard and its administration	QUADAS Item 5 Blinded/concurrent Diagnostic Evaluations
I	Large	Randomly selected or consecutive sample	All of screening sample or randomly selected representative sample	In person by trained diagnostician	Yes
II	Small	Randomly selected or consecutive sample	All of screening sample or randomly selected representative sample	In person by trained diagnostician	Yes
III	Small or Large	Representative sample or convenience/non-representative sample	Random selection or non-representative interview sample	In person or by telephone by trained diagnostician	Yes
IV	Small	Convenience/non-representative sample	Non-random interview sample	Telephone by trained research assistants	No
V	*Not included in Systematic Review*				

*Simel (2008)

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Search Results

- N=1,998 Abstracts reviewed
- Excluded n=1,844

Full Text Review

- N=154 reviewed
- Excluded n=140

Studies Included

- Final exclusion/hand search
- **N=15 Articles**

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- **<u>KEY QUESTION #1</u>. What tools are used to screen for PTSD in primary care settings, and what are their characteristics?**

  a) 9 Screens evaluated with a gold standard diagnostic tool in primary care setting
     - Also, 3 abbreviated versions of 2 of the screens

  b) All self-administered

  c) Number of items:
     - PTSD specific screens: 1-17 items
     - 5 Screens assess for multiple disorders
       - 1 to 27 items for Total scale

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Screener	Screen Type	# Items	Response Scale	Retest Reliability*
Breslau Scale (Short Screening Scale for PTSD)	PTSD only	7	Yes/No	0.84[a]
Primary Care PTSD Screen (PC-PTSD)	PTSD only	4	Yes/No	0.83[b]
Single-item PTSD Screener (SIPS)	PTSD only	1	3-pt scale: (*Not bothered, Bothered a little, Bothered a lot*)	0.63[c]
Startle, Physiological arousal, Anger, and Numbness (SPAN)	PTSD only	4	5-pt distress scale (0 = Not at all distressing to 4 = Extremely distressing)	--
PTSD Checklist (PCL)	PTSD only	17	5-pt degree of bothered scale (1 = *Not at all* to 5 = *Extremely*)	0.96[d]
My Mood Monitor (M-3)	Several psychiatric disorders	4 of 27 total items	5-pt frequency scale (0 = *Not at all* to 4 = *Most of the time*)	--
Provisional Diagnostic Interview – 4 Anxiety (PDI-4A)	Several psychiatric disorders	1 item (+ 1 other symptom) of 23 total items	5-pt frequency scale: (0=*Never* to 4= *Very often*)	--
Anxiety and Depression Detector (ADD)	Anxiety disorders & depression	1 of 5 total items	Yes/No	--
Generalized Anxiety Disorders -7 (GAD-7)	Anxiety disorders	7	4-pt frequency scale: (0=*Not at all* to 3= *Nearly every day*)	0.83[e]

Study	Screens	Gold Standard	Women only sample	Military/ Veterans	Screening Sample n (Response Rate %)	Interview Sample n (Response Rate %)	Level of Evidence Rating
Andrykowski, 1998	PCL-C	SCID NP PTSD Module	X		84 (79%)	72 (88%)	IV
Dobie, 2002	PCL-C	CAPS	X	X	282 (11%)	282 (11%)	III
Freedy, 2010	SPAN, Breslau, PC-PTSD, PCL-C	CAPS			774 (21%)	411 (53% eligible, 79% contacted)	IV
Gaynes, 2010	M-3	MINI			723 (54%)	647*	I
Gore, 2008	SIPS, PC-PTSD	PSS-I		X	SIP: 3234 (est. 88%) PC-PTSD/PCL: 213 (?)	213*	III
Houston, 2011	PDI-4A	SCID			343‡	‡	IV
Kimerling, 2006	Breslau	CAPS		X	258 (convenience sample)	134 (57%)	III
Kroenke, 2007	GAD-7	SCID			965 (random selection from 92% RR sample)	965*	I
Lang, 2003 & Lang, 2005	PCL-C	CIDI	X	X	211 (56%)	49 randomly selected from 192 (87%) who agreed	II
Means-Christensen, 2006	ADD	CIDI			7,738 (61%)	569 (38% +screens) 232 (21% eligible –screens)	IV
Meltzer-Brody, 2004	SPAN	MINI	X		292 (76%)	32 (36%) with trauma	III
Prins, 2003	PC-PTSD PCL-S	CAPS		X	335 (convenience sample)	167 (50%)	III
Walker, 2002	PCL	CAPS	X		1,225 (62%)	152 (74%) with trauma 116 (75%) no trauma	III
Yeager, 2007	SPAN, PCL	CAPS	(Sample 2 women only)	X	Sample 1: 888 (74%) Sample 2: 191 (69%)	728 (82%) 130 (68%)	I

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- **Key Question 2:**
  What are the psychometric properties and utility of the screening tools (sensitivity, specificity, likelihood ratios, predictive values, area under curve, reliability)?

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	Disease Present	Disease Absent	
Test Positive	True Positives **a**	False Positives **b**	All Positives
Test Negative	False Negatives **c**	True Negatives **d**	All Negatives
	Total Diseased in Population	Total Normal in Population	Sensitivity = a/a+c Specificity = d/b+d PPV = a/a+b NPV = d/d+c

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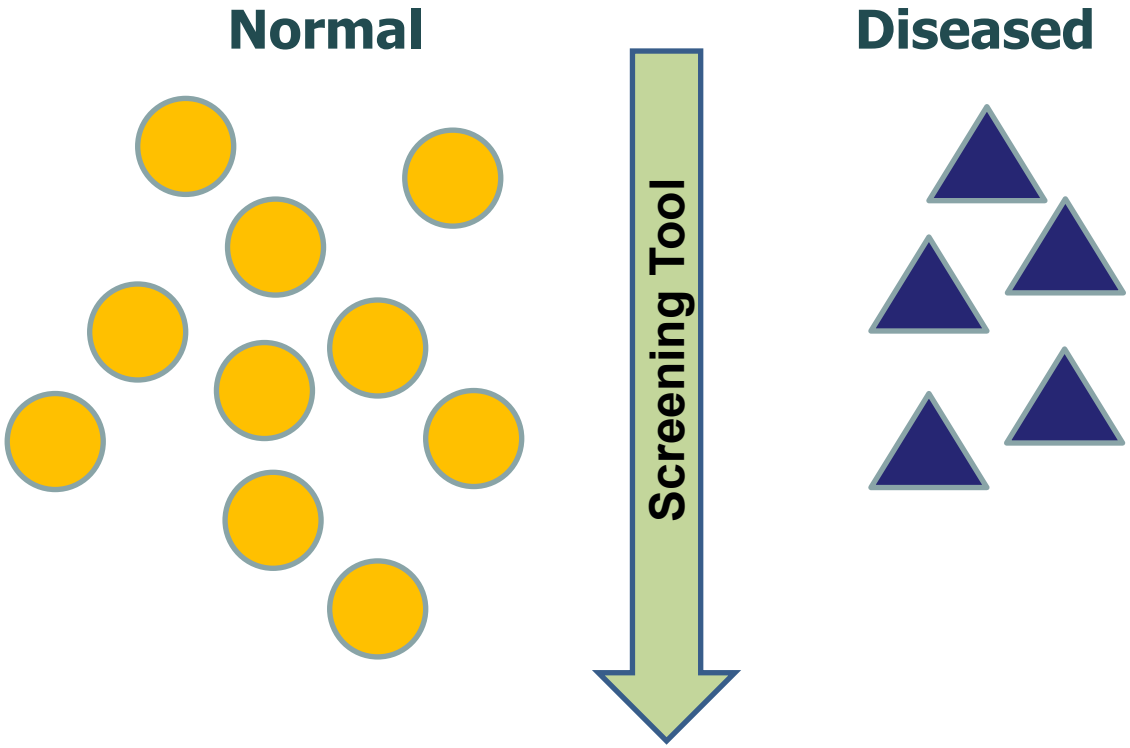
- **Process of Screening**: Classifies those in the population into those who probably have the disease and those who probably do not have the disease.



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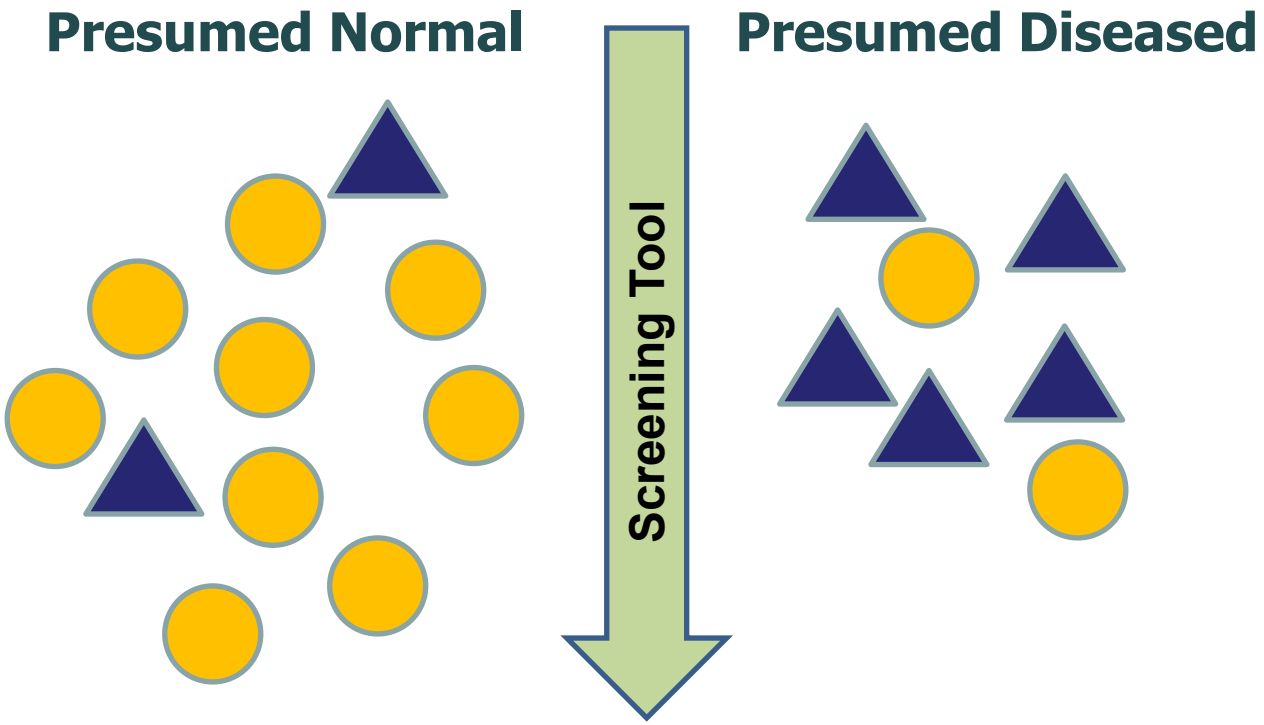
Probably have the disease vs. **probably do not** have the disease.



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Metric	Definition
Prevalence	Frequency of condition in a population.
Cut Score	Divides population into positive and negative cases.
Sensitivity	Correct classification of people with the condition
Specificity	Correct classification of people without the condition
Positive Predictive Value (PPV)	Proportion of positive screens that are true positives.
Negative Predictive Value (NPV)	Proportion of negative screens that are true negatives.
Likelihood Ratio – Positive (LR+)	Ratio between the probability of a positive screen given the disease is present and the probability of a positive screen given the disease is not present.
Likelihood Ratio – Negative (LR-)	Ratio between the probability of a negative screen given the disease is present and the probability of a negative screen given the disease is not present.
Area Under the Curve (AUC)	Area under a Receiver Operating Characteristic curve. ROC curve plots false positives (x-axis) vs. true positives (y-axis).

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Metric	Calculation	Relation to other Metrics
Prevalence	$\frac{True\ Positives}{Total\ Sample}$	Impacts the predictive values (positive, negative) of screening; if prevalence is low, PPV decreases and NPV increases.
Cut Score	**Based on desired sensitivity/specificity trade-off.**	Increasing the cut score typically increases specificity and decreases sensitivity.
Sensitivity	$\frac{True\ Positives}{(True\ Positives + False\ Negatives)}$	Higher sensitivity results in higher LR+, and lower LR-.
Specificity	$\frac{True\ Negatives}{(True\ Negatives + False\ Positives)}$	Higher specificity results in lower LR- and higher LR+.
Positive Predictive Value (PPV)	$\frac{True\ Positives}{(True\ Positives + False\ Positives)}$	**Increases with higher base rates.**
Negative Predictive Value (NPV)	$\frac{True\ Negatives}{(True\ Negatives + False\ Negatives)}$	**Decreases with higher base rates.**
Likelihood Ratio – Positive (LR+)	$\frac{True\ Positives}{False\ Positives}$ or $\frac{Sensitivity}{(1-specificity)}$	Increases with increased sensitivity or increased specificity.
Likelihood Ratio – Negative (LR-)	$\frac{False\ Negatives}{True\ Negatives}$ or $\frac{(1-Sensitivity)}{Specificity}$	Decreases with increased specificity or increased sensitivity.
Area Under the Curve (AUC)	Parametric and nonparametric methods available depending on assumptions	Shows trade-off between sensitivity and specificity, not necessarily how test performs at cut score to be used in practice.

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1. Intermediate Length Screens
2. PCL
3. Short and non-PTSD specific screens

Screen	Author, Year	Cut Points Used	PTSD Base rate	Sensitivity	Specificity	PPV	NPV	AUC	LR+	LR-
Breslau	Freedy 2010	≥4	32.1%	84.5%	76.4%	31.3%	97.5%	0.88	3.58	0.20
		≥5		70.7%	88.0%	42.9%	95.9%		5.90	0.33
	Kimerling 2006	≥4	25%	85%	84%	64%	94%	--	5.31	0.18
		≥5		76%	91%	74%	92%		8.44	0.26
PC-PTSD	Freedy 2010	3	32.1%	85%	82%	38%	98%	0.92	4.72	0.18
	Gore 2008	2	21%	91%	84%	37%	99%	0.89	2.89	--
		3		70%	92%	46%	97%		3.64	--
		4		47%	98%	71%	95%		24.9	--
	Prins 2003	3	24.5%	78%	87%	65%	92%	--	6.00	0.25
		4		54%	93%	71%	86%		7.17	0.49
		3 (women)	25.0%	70%	85%	61%	91%		4.38	0.36
SPAN	Freedy 2010	3	32.1%	76%	72%	25%	96%	0.84	2.67	0.34
		4		53%	85%	31%	93%		3.52	0.56
	Meltzer-Brody 2004	3	8.6% clinic patients	80%	29%	80%	28%	0.75	1.12	0.70
		4	28.4% with trauma history	76%	43%	83%	33%		1.33	0.56
		5		72%	71%	90%	42%		2.52	0.39
	Yeager 2007	3	11.3%	77%	73%	27%	96%	0.84	2.87	0.32
		4		74%	78%	30%	96%		3.41	0.32
		5		74%	82%	34%	96%		4.09	0.32

Screen	Author, Year	Cut Points Used	PTSD Base rate	Sensitivity	Specificity	PPV	NPV	AUC	LR+	LR-
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		4		47%	98%	71%	95%		24.9	--
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Screen	Author, Year	Cut Points Used	PTSD Base rate	Sensitivity	Specificity	PPV	NPV	AUC	LR+	LR-
PCL	Andrykowski 1998	30 40 50 *DSM-IV*	Current PTSD: 6% Lifetime: 9%	100% 60% 60% 60%	83% 93% 99% 97%	24% 33% 75% 60%	100% 97% 97% 97%	--	5.88 8.57 60.0 20.0	0.00 0.43 0.40 0.41
	Dobie 2002	38 44 50	36%	79% 68% 58%	79% 86% 92%	68% 73% 79%	87% 83% 80%	0.86	3.78 4.69 7.54	0.26 0.38 0.45
	Freedy 2010	43 46	32.1%	80% 75%	82% 88%	37% 44%	97% 96%	0.93	4.54 6.11	0.24 0.29
	Lang 2005	*6 item* *17 item – 30* *17 item – 50*	16%	92% 96% 54%	72% 59% 94%	36% 30% 62%	98% 99% 92%	0.89 0.90 0.90	3.29 2.34 9.00	0.11 0.07 0.49
	Lang 2003	30 40 50	31%	78% 61% 39%	71% 94% 94%	55% 80% 75%	86% 82% 22%	0.89	2.69 10.17 6.50	0.31 0.41 0.65
	Prins, 2003 (PCL-S)	48	26%	84%	90%	62%	94%	--	8.40	0.18
	Walker 2002	30 45 50	--	82% 36% 21%	76% 95% 98%	28% 43% 50%	97% 93% 91%	0.84	3.40 6.59 8.57	0.24 0.68 0.81
	Yeager 2007	31 44 50	11.3%	81% 63% 53%	81% 91% 95%	35% 47% 57%	97% 95% 94%	0.88	4.31 7.02 10.32	0.23 0.41 0.50

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	Dobie 2002	38	36%	79%	79%	68%	87%	0.86	3.78	0.26
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Screen	Author, Year	Cut Points Used	PTSD Base rate	Sensitivity	Specificity	PPV	NPV	AUC	LR+	LR-
PCL-2	Lang, 2005	**4**	16%	96%	58%	10%	99%	0.88	2.29	0.07
PCL-6	Lang, 2005	**14**	16%	92%	72%	36%	98%	0.86	3.29	0.11
M-3	Gaynes, 2010	2	6.3% PTSD 35% any disorder	88%	76%	20%	99%	--	3.69	0.16
PDI-4A	Houston, 2011	PTSD item and functioning item both rated at least *sometimes*	4.9%	71%	72%	12%	98%	--	2.54	0.40
ADD	Means-Christensen 2006	*PTSD item only* (Yes/No) *3 items* (1 specific to PTSD)	18.5%	62% 96%	83% 35%	48% 27%	89% 97%	-- 	3.54 1.47	0.46 0.11
GAD-7	Kroenke, 2007	GAD-7 ≥8 GAD-2 ≥3	8.6%	76% 59%	75% 81%	22% 23%	97% 95%	0.83 0.80	3.1 3.1	0.32 0.51

Evidence-based Synthesis Program (ESP)

- **Only 4 studies used multiple instruments in same sample and provided comparative statistics.**

Evidence-based Synthesis Program (ESP)

Author, Year (Sample size) Level of Evidence Rating#	Screen	Cut Score	PTSD Base rate	Sensitivity	Specificity	PPV	NPV	AUC (SE or 95% CI)	LR+	LR-
Freedy, 2010 (n=411) **IV**	PC-PTSD	3	32.1%	85%	82%	38%	98%	0.92 (0.028)	4.72	0.18
	SPAN	4		53%	85%	31%	93%	0.84 (0.032)	3.52	0.34
	PCL-C	43		80%	82%	37%	97%	0.93 (0.024)	4.54	0.24
	Breslau	5		71%	88%	43%	96%	0.88 (0.029)	5.90	0.33
Gore, 2008 (n=213 PC-PTSD; n=3,234 SIPS) **III**	PC-PTSD	2 3	9% (estimated)	91% 70%	84% 92%	37% 46%	99% 97%	0.89 (0.84-0.94)	2.89 3.64	--
	SIPS	*a little* *a lot*		76% 36%	79% 96%	26% 49%	97% 94%	0.77 (0.70-0.84)	2.28 9.90	--
Prins, 2003 (n=188) **III**	PC-PTSD	3	26%	77%	85%	63%	91%	--	5.13	0.27
	PCL-S	48		84%	90%	62%	94%	--	8.40	0.18
Yeager, 2007 (n=758) **I**	SPAN	4 5 6	11.3%	75% 74% 73%	78% 82% 85%	30% 34% 39%	96% 96% 96%	0.84 (0.023)	3.41 4.09 4.91	0.32 0.32 0.32
	PCL	31 43		81% 67%	81% 90%	35% 47%	97% 96%	0.88 (0.018)	4.31 6.97	0.23 0.36

Evidence-based Synthesis Program (ESP)

KQ2 Summary:

- **AUC's ranged from 0.75-0.93.**
- **Performance of moderate length screens (Breslau, PC-PTSD, SPAN) comparable.**
  - Weak evidence SPAN performed less well.
- **PCL optimal cut-score varies, needs calibration.**
  - Intermediate length screens may be more transferable.
- **Non-PTSD specific screens less precise for PTSD, but this may be clinically useful.**

Evidence-based Synthesis Program (ESP)

- **Key Question 3:**
  - What information is there about the implementation issues (e.g., ease of administration, patient satisfaction) related to the use of PTSD screening tools in primary care clinics?

1. Few studies reported implementation information.
   - Shorter screens ~ 5 min. or less. Longest ~10 min.

2. Gayes (2010) **M-3** only process evaluation.
   - Only 1% patients had insufficient time for 27 items.
   - 83% providers reviewed results < 1 min.
   - About 2/3 patients felt it facilitated MH discussion with providers.
   - Of those with MH conditions, 75% patients and 80% providers felt screen facilitated talk about MH issues.
   - No providers felt it was too cumbersome to include in their practice.

- **Key Question 4:**
  - Do the psychometric properties and utility of each of the screening tools differ according to age, gender, race/ethnicity, substance abuse, or other comorbidities?

Author, Year Level of Evidence Rating#	Screen	Cut Score M	Cut Score W	PTSD Base Rate	Sensitivity M	Sensitivity W	Specificity M	Specificity W	AUC M	AUC W	LR+ M	LR+ W	LR- M	LR- W
Freedy, 2010 IV	PC-PTSD	3	3	32.1% M: 20.0% W: 35.8%	100%	83%	87%	83%	+ Gender Difference		7.69	4.88	0.00	0.20
	SPAN	3	3		89%	74%	78%	72%	No difference		4.05	2.64	0.14	0.36
	PCL-C	46	43		86%	79%	95%	81%	+ Gender Difference		17.2	4.11	0.15	0.27
	Breslau Scale	4	4		100%	83%	78%	77%	+ Gender Difference		4.55	3.61	0.00	0.22
Means-Christenson, 2006 IV	ADD			20.4% Whites: 15.5% Non-whites: 23.9% M≈W	--		Whites: 86% Non-whites: 76%		--		--		--	
Prins, 2003 III	PC-PTSD	3		24.5% M: 25% W: 24%	94%	70%	92%	84%	--		11.75	4.38	0.07	0.36
Yeager, 2007 I	SPAN	5 6		11.3% Blacks:13.5% Whites:10.0% M: 11.9% W: 9.1%,	--		--		No gender or race differences		--		--	
	PCL	31 43			--		--		Age X Race Interaction		--		--	

Evidence-based Synthesis Program (ESP)

KQ4 Summary:

- Limited evidence evaluating screens by age, gender, race and none looked at specific comorbidities in primary care.
- Weak evidence that PC-PTSD and Breslau scale perform better in men than women.
- SPAN and PCL no evident gender differences.
- Weak evidence PCL less good for African American Men < 50 yo.

Evidence-based Synthesis Program (ESP)

Summary and Recommendations:

- Information about potential benefits and harms of screening for PTSD on the health of veterans is needed.
- Information is needed about the performance of screens given specific comobidities (e.g., TBI).
- There is weak and inconsistent evidence of screen performance by gender, race, and age. Evidence base should be expanded.

Evidence-based Synthesis Program (ESP)

- The fewer the number of items, the greater the trade-off of sensitivity vs. specificity for each point in the screen.

- Screens that consist of 1 or 2 questions do not sufficiently balance sensitivity with specificity or LR+ with LR- to be as useful as slightly longer screens.

Evidence-based Synthesis Program (ESP)

- **Longer scales, like the PCL, are finely graded across the scoring spectrum.**
  - To be useful as a screen, however, requires calibration to the target population.
- **Studies are needed that examine the impact of MH screening on the clinical processes in primary care clinics.**
- **Non-PTSD specific screens may have some clinical utility in primary care settings.**

Evidence-based Synthesis Program (ESP)

- **Limitations:**
  - Variation in gold standards across studies limiting comparability.
  - Utility of a screening tool is contextually dependent. This could not be assessed in the current review.
  - Applicability to DSM-5 requires additional information.

Evidence-based Synthesis Program (ESP)

DSM 5

- **NCPTSD: re-validating PC-PTSD, PCL** and **CAPS.**
  - Brian Marx, Frank Weathers, Annabel Prins running evaluation studies.
- **CAPS-5 and PCL-5 are complete.**

- **PC-PTSD-5 currently being validated in VA primary care using the MINI. More specific trauma stem to items may increase precision. Will have 5 questions.**

Evidence-based Synthesis Program (ESP)

Questions?

If you have further questions, feel free to contact:

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The full report and cyberseminar presentation is available on the ESP website:

http://www.hsrd.research.va.gov/publications/esp/