

Validated screening tools for common mental disorders in low and middle income countries: A systematic review

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Supplementary Document: Tables 1-5.

Table 1. Quality Criteria

1)	Was expectation bias avoided? (Were people administering the diagnostic interview blind to the results of the screening tool, and vice versa?)
2)	Was work-up bias avoided? (Did positive and negative screens have an equal chance of receiving the full diagnostic interview?)
3)	Was a sensible 'normal range' derived from the results? (Was ROC analysis used to identify the most appropriate cut-off point?)
4)	Was the tool appropriately translated, adapted and/or designed for the study setting and population? (If using an existing tool, did authors employ the standardised WHO translation protocol [1]?)
5)	Were confidence intervals given for AUC, sensitivity, specificity and other features of the test?
6)	Was the tool shown to be reproducible both within and/or between observers? (Was test-retest and/or inter-rater reliability assessed?)

Table 2. Disorders for which screening tools were validated by studies included in this review

Common Mental Disorders (63 studies)	Any common mental disorder, comprising one or more of the disorders listed below.
Depressive Disorders (174 studies)	Dysthemia Any depressive disorder Major depressive disorder Antenatal depression Postnatal depression Postnatal major depressive disorder
Anxiety Disorders (24 studies)	Any anxiety disorder Generalised anxiety disorder Social anxiety disorder Panic disorder
Post-traumatic stress disorder (12 studies)	Post-traumatic stress disorder

Table 3. Number of validation studies for each population group

Population		Number of Studies
Child & Adolescent		17
Perinatal	Antenatal	9
	Postnatal	27
Adult	Clinic attendees	34
	HIV+	6
	Physically ill	9
	Mentally ill	8
	Trauma survivors	5
	General population	20
	University students	8
Elderly		15
Total		158 (5 of the 153 studies sampled from populations representing two of the above groups)

Table 4. Number of validation studies by subregion and country

Region (# studies)		Countries Included (# studies)
Africa (40)	Central (1)	Cameroon (1) 7 LMIC countries with 0 studies
	East (19)	Burundi (2), Ethiopia (3), Malawi (1), Rwanda (1), Somalia (1), Uganda (4), Zambia (4), Zimbabwe (3) 11 LMIC countries with 0 studies
	North (3)	Egypt (2), Morocco (1) 5 LMIC countries with 0 studies
	South(8)	Botswana (1), South Africa (7) 3 LMIC countries with 0 studies
	West (9)	Burkina Faso (1), Nigeria (8) 15 LMIC countries with 0 studies
America (46)	Caribbean (0)	17 LMIC countries with 0 studies
	Central (3)	Honduras (1), Mexico (2) 6 LMIC countries with 0 studies
	South(43)	Brazil (33), Chile (1), Colombia (8), Peru (1) 7 LMIC countries with 0 studies
Asia (66)	Central (1)	Tajikistan (1) 4 LMIC country with 0 studies
	East (16)	China (15), Mongolia (1) 1 LMIC country with 0 studies
	South (23)	Bangladesh (1), India (12), Iran(4), Nepal (2), Pakistan (1), Sri Lanka (3) 3 LMIC countries with 0 studies
	Southeast (18)	Malaysia (7), Thailand (7), Vietnam (4) 6 LMIC countries with 0 studies
	West (8)	Lebanon (3), Turkey (5) 8 LMIC countries with 0 studies
Europe (1)	East (0)	6 LMIC countries with 0 studies
	South(1)	Bosnia & Herzegovina (1) 5 LMIC countries with 0 studies
Oceania (0)	16 LMIC countries with 0 studies	
TOTAL (153)		102 LMIC countries with 0 studies

Table 5. Weighted diagnostics odds ratios (DORs) of selected screening tools

Screening Tool	Disorder	Number of Studies	Weighted DOR (excluding outliers)
GHQ-5	*CMD*	*2*	*59.82*
SRQ-20	CMD	14	28.36
GHQ-12	CMD	13	22.59
K-6	CMD	2	15.61
K-10	CMD	2	15.55
GHQ-28	CMD	2	15.31
SSQ	<i>CMD</i>	2	9.37
<i>EPDS</i>	<i>CMD</i>	3	7.01
HADS-D	Depressive disorders	8	33.07
PHQ-9	Depressive disorders	5	27.52
PHQ-2	Depressive disorders	2	22.18
BDI	Depressive disorders	2	16.14
<i>EPDS</i>	<i>Depressive disorders</i>	3	4.95
ZSDS	Major depressive disorder	4	36.47
GDS-15	Major depressive disorder	4	31.97
HADS-D	Major depressive disorder	3	22.77
PHQ-9	Major depressive disorder	11	19.22
CES-D	Major depressive disorder	6	18.79
BDI	Major depressive disorder	4	15.18
<i>K-10</i>	<i>Major depressive disorder</i>	3	8.58
EPDS	*Postnatal major depressive disorder*	*4*	*172.70*
EPDS	*Postnatal depression*	*13*	*148.68*
EPDS	Antenatal depression	4	16.14
HADS-A	*Anxiety disorders*	*8*	*60.09*

Screening tool validity = ***Very strong***, **strong**, fair, *weak*