

Section and Topic	#	Checklist item <sup>a</sup>	Location
<b>TITLE</b>			
Title	1	Identify the report as a systematic review and include as applicable the following (in any order): outcome domain of interest, population of interest, name/type of OMIs of interest, and measurement properties of interest.	Pg 1
<b>ABSTRACT</b>			
<b>OPEN SCIENCE</b>			
Funding <sup>b</sup>	2.2	Specify the primary source of funding for the review.	Pg 2
Registration	2.3	Provide the register name and registration number.	Pg 5
<b>BACKGROUND</b>			
Objectives	2.4	Provide an explicit statement of the main objective(s) or question(s) the review addresses.	Pg 3
<b>METHODS</b>			
Eligibility criteria	2.5	Specify the inclusion and exclusion criteria for the review.	Pg 3
Information sources	2.6	Specify the information sources (e.g., databases, registers) used to identify studies and the date when each was last searched.	Pg 3
Risk of bias	2.7	Specify the methods used to assess risk of bias in the included studies.	Pg 3
Measurement properties	2.8	Specify the methods used to rate the results of a measurement property.	Pg 3
Synthesis methods	2.9	Specify the methods used to present and synthesize results.	Pg 3
<b>RESULTS</b>			
Included studies	2.10	Give the total number of included OMIs and study reports.	Pg 3
Synthesis of results	2.11	Present the syntheses of results of OMIs, indicating the certainty of the evidence.	Pg 3
<b>DISCUSSION</b>			
Limitations of evidence	2.12	Provide a brief summary of the limitations of the evidence included in the review (e.g., study risk of bias, inconsistency, and imprecision).	Pg 3
Interpretation	2.13	Provide a general interpretation of the results and important implications.	Pg 3
<b>PLAIN LANGUAGE SUMMARY</b>			
Plain language summary	3	If allowed by the journal, provide a plain language summary with background information and key findings.	N/A
<b>OPEN SCIENCE</b>			
Registration and protocol	4a	Provide registration information for the review, including register name and registration number, or state that the review was not registered.	Pg 5
	4b	Indicate where the review protocol can be accessed, or state that a protocol was not prepared.	Pg 5

Section and Topic	#	Checklist item <sup>a</sup>	Location
	4c	Describe and explain any amendments to information provided at registration or in the protocol.	Pg 5
Support	5	Describe sources of financial or non-financial support for the review, and the role of the funders in the review.	Pg 2
Competing interests	6	Declare any competing interests of review authors.	Pg 2
Availability of data, code, and other materials	7	Report which of the following are publicly available and where they can be found: template data collection forms; data extracted from included studies; data used for all analyses; analytic code; any other materials used in the review.	Appendix 4
<b>INTRODUCTION</b>			
Rationale	8	Describe the rationale for the review in the context of existing knowledge.	Pg 4
Objectives	9	Provide an explicit statement of the objective(s) or question(s) the review addresses and include as applicable the following (in any order): outcome domain of interest, population of interest, name/type of OMIs of interest, and measurement properties of interest.	Pg 4
<b>METHODS</b>			
Followed guidelines	10	Specify, with references, the methodology and/or guidelines used to conduct the systematic review.	Pg 5
Eligibility criteria	11	Specify the inclusion and exclusion criteria for the review.	Pg 5-6
Information sources	12	Specify all databases, registers, preprint servers, websites, organizations, reference lists and other sources searched or consulted to identify studies. Specify the date when each source was last searched or consulted.	Pg 6
Search strategy	13	Present the full search strategies for all databases, registers, and websites, including any filters and limits used.	Pg 6, Appendix 3
Selection process	14	Specify the methods used to decide whether a study met the inclusion criteria of the review, e.g., including how many reviewers screened each record and each report retrieved, whether they worked independently, and if applicable, details of automation tools/AI used in the process.	Pg 6
Data collection process	15	Specify the methods used to collect data from reports, e.g., including how many reviewers collected data from each report, whether they worked independently, any processes for obtaining or confirming data from study investigators, and if applicable, details of automation tools/AI used in the process.	Pg 7
Data items	16	List and define which data were extracted (e.g., characteristics of study populations and OMIs, measurement properties' results, and aspects of feasibility and interpretability). Describe methods used to deal with any missing or unclear information.	Pg 7
Study risk of bias assessment	17	Specify the methods used to assess risk of bias in the included studies, e.g., including details of the tool(s) used, how many reviewers assessed each study and whether they worked independently, and if applicable, details of automation tools/AI used in the process.	Pg 7
Measurement properties	18	Specify the methods used to rate the results of a measurement property for each individual study and for the summarized or pooled results, e.g., including how many reviewers rated each study and whether they worked independently.	Pg 7
Synthesis methods	19a	Describe the processes used to decide which studies were eligible for each synthesis.	Pg 7
	19b	Describe any methods used to synthesize results.	Pg 7
	19c	If applicable, describe any methods used to explore possible causes of inconsistency among study results (e.g., subgroup analysis).	N/A

Section and Topic	#	Checklist item <sup>a</sup>	Location
	19d	If applicable, describe any sensitivity analyses conducted to assess robustness of the synthesized results.	N/A
Certainty assessment	20	Describe any methods used to assess certainty (or confidence) in the body of evidence.	Pg 7
Formulating recommendations	21	If appropriate, describe any methods used to formulate recommendations regarding the suitability of OMIs for a particular use.	Pg 7, 12
<b>RESULTS</b>			
Study selection	22a	Describe the results of the search and selection process, from the number of records identified in the search to the number of study reports included in the review, ideally using a flow diagram. If applicable, also report the final number of OMIs included and the number of study reports relevant to each OMI. [T]	Pg 8
	22b	Cite study reports that might appear to meet the inclusion criteria, but which were excluded, and explain why they were excluded.	Fig 1
Omi characteristics	23a	Present characteristics of each included OMI, with appropriate references. [T]	Pg 8-11, Table 3-4
	23b	If applicable, present interpretability aspects for each included OMI. [T]	NA
	23c	If applicable, present feasibility aspects for each included OMI. [T]	Pg 8-11, Table 3
Study characteristics	24	Cite each included study report evaluating one or more measurement properties and present its characteristics. [T]	Pg 8-11, Table 2
Risk of bias in studies	25	Present assessments of risk of bias for each included study. [T]	Deferred due to breadth. Summarized for OMIs in Table 4
Results of individual studies	26	For all measurement properties, present for each study: (a) the reported result and (b) the rating against quality criteria, ideally using structured tables or plots. [T]	Deferred due to breadth. Summarized for OMIs in Table 4

Section and Topic	#	Checklist item <sup>a</sup>	Location
Results of syntheses	27a	Present results of all syntheses conducted. For each measurement property of an OMI, present: (a) the summarized or pooled result and (b) the overall rating against quality criteria. [T]	Pg 8-11, Table 4
	27b	If applicable, present results of all investigations of possible causes of inconsistency among study results.	N/A
	27c	If applicable, present results of all sensitivity analyses conducted to assess the robustness of the synthesized results.	N/A
Certainty of evidence	28	Present assessments of certainty (or confidence) in the body of evidence for each measurement property of an OMI assessed. [T]	Pg 8-11, Table 4
Recommendations	29	If appropriate, make recommendations for suitable OMIs for a particular use.	Table 5
<b>DISCUSSION</b>			
Discussion	30a	Provide a general interpretation of the results in the context of other evidence.	Pg 11-13
	30b	Discuss any limitations of the evidence included in the review.	Pg 12-13
	30c	Discuss any limitations of the review processes used.	Pg 12-13
	30d	Discuss implications of the results for practice, policy, and future research.	Pg 12-13

It is strongly recommended that this checklist is used in conjunction with the PRISMA-COSMIN for OMIs 2024 Explanation and Elaboration (E&E) document for important clarification on the checklist items. The PRISMA-COSMIN for OMIs 2024 statement checklist is distributed under the terms of the Creative Commons license.

<sup>a</sup> If an item is marked with [T], a template for data visualization is available. These templates can be downloaded from [www.prisma-cosmin.ca](http://www.prisma-cosmin.ca).

<sup>b</sup> Item #2.1 in the PRISMA-COSMIN for OMIs 2024 Abstracts checklist refers to the title. Item #2.1 in the Abstracts checklist is identical to item #1 in the Full Report checklist.

*From:* Elsmann EBM, Mokkink LB, Terwee CB, Beaton D, Gagnier JJ, Tricco AC, et al. Guideline for reporting systematic reviews of outcome measurement instruments (OMIs): PRISMA-COSMIN for OMIs 2024. *Quality of Life Research* (2024), doi: <https://doi.org/10.1007/s11136-024-03634-y>.

Table S2. Study Scales

● Anxiety
○ Beck Anxiety Inventory (BAI)
○ General Anxiety Disorder-7 (GAD-7)
○ State Trait Anxiety Inventory (STAI)
○ Depression and Anxiety Stress Scales-21 (DASS-21)
○ Depression and Anxiety Stress Scales-42 (DASS-42)
○ Hospital Anxiety and Depression Scale (HADS)
● Burnout
○ Maslach Burnout Inventory - Human Services Survey (MBI-HSS)
○ Maslach Burnout Inventory - Student Survey (MBI-SS)
○ Oldenburg Burnout Inventory (OLBI)
● General Well-being
○ <i>Brief Symptom Inventory (BSI)</i>
○ <i>General Well-Being Schedule</i>
○ General Health Questionnaire - 12 (GHQ-12)
○ General Health Questionnaire - 28 (GHQ-28)
○ Medical Student Well-Being Index (MSWBI)
○ <i>Subjective Wellbeing scale by Moum et al.</i>
○ Symptom Checklist-90-Revised (SCL-90-R)
● Mindfulness
○ Five Facets of Mindfulness Questionnaire (FFMQ)
○ Mindful Attention Awareness Scale (MAAS)
● Mood/Affect
○ Beck Depression Inventory (BDI)
○ Beck Depression Inventory-II (BDI-II)
○ Center for Epidemiologic Studies Depression Scale (CES-D)
○ Depression and Anxiety Stress Scales-21 (DASS-21) - repeat
○ Depression and Anxiety Stress Scales-42 (DASS-42) - repeat
○ Hospital Anxiety and Depression Scale (HADS) - repeat
○ <i>Patient Health Questionnaire-2 (PRIME-MD)</i>
○ Patient Health Questionnaire-9 (PHQ-9)
○ Positive and Negative Affect Schedule (PANAS)
● Quality of Life
○ <i>Professional Quality of Life Scale (ProQOL)</i>
○ <i>SF-8 Health Survey</i>
○ Satisfaction with Life Scale (SWLS)
○ World Health Organization Quality of Life Brief Version (WHOQOL-BREF)
● Resilience/Coping
○ Brief COPE
○ Connor-Davidson Resilience Scale (CD-RISC)
○ <i>Resilience Scale 25 (RS-25)</i>
○ Ways of Coping Checklist (WCCL)
● Self-Esteem
○ General Self-Efficacy Scale (GSES)
○ Rosenberg Self-Esteem Scale (RSES)
● Sleep
○ Epworth Sleep Scale (ESS)

○ Pittsburgh Sleep Quality Index (PSQI)
● Social Support/Loneliness
○ Multidimensional Scale of Perceived Social Support (MSPSS)
○ UCLA Loneliness Scale
● Stress
○ Bandura-Rosenthal Metrics for Assessing Stress (BAROMAS)
○ <i>Kessler Psychological Distress Scale (K10)</i>
○ Medical Student Stress Questionnaire-20 (MSSQ-20)
○ Medical Student Stress Questionnaire-40 (MSSQ-40)
○ Medical Student Stress Questionnaire-40-Revised (MSSQ-40-R)
○ Perceived Medical School Stress (PMSS)
○ Perceived Stress Scale-4 (PSS-4)
○ Perceived Stress Scale-10 (PSS-10)
○ <i>Perceived Stress Scale-14 (PSS-14)</i>
○ <i>Visual Analogue Scale (VAS) for Stress</i>
○ <i>Trier Inventory of Chronic Stress (TICS)</i>
● Substance Use
○ <i>Michigan Alcohol Screening Test (MAST)</i>
○ <i>Diagnostic Interview Schedule for substance use</i>
● Work engagement
○ Utrecht Work Engagement Scale (UWES)
○ <i>Work-Related Behaviour and Experience Patterns (AVEM)</i>

*Italicized scales had no included psychometric studies*

Table S3. Full Search Strategies

MEDLINE via OVID	
1.	"State Trait Anxiety Inventory" OR "STAI" OR "Depression, Anxiety, and Stress Scale" OR "DASS-21" OR "DASS-48" OR "Beck Anxiety Inventory" OR "BAI" OR "General Anxiety Disorder 7" OR "GAD-7" OR "Maslach Burnout Inventory" OR "MBI" OR "Oldenburg Burnout Inventory" OR "OLBI" OR "Symptom Checklist-90-Revised" OR "SCL-90-R" OR "General Health Questionnaire" OR "GHQ-12" OR "GHQ-28" OR "Brief Symptom Inventory" OR "BSI" OR "Subjective Wellbeing Scale" OR "Medical Student Well-Being Index" OR "MSWBI" OR "General Well-Being Schedule" OR "Five Facets of Mindfulness Questionnaire" OR "FFMQ" OR "Mindful Attention Awareness Scale" OR "MAAS" OR "Beck Depression Inventory" OR "BDI" OR "Positive and Negative Affect Schedule" OR "PANAS" OR "Center for Epidemiologic Studies Depression Scale" OR "CES-D" OR "Patient Health Questionnaire" OR "PHQ-9" OR "PHQ-2" OR "PRIME-MD" OR "Hospital Anxiety and Depression Scale" OR "HADS" OR "Professional Quality of Life Scale" OR "ProQOL" OR "WHOQOL-BREF" OR "Satisfaction with Life Scale" OR "SWLS" OR "Short Form Health Survey" OR "SF-8" OR "Ways of Coping Checklist" OR "WCCL" OR "Brief COPE" OR "Connor Davidson Resilience Scale" OR "CD-RISC" OR "Resilience Scale 25" OR "RS-25" OR "Rosenberg Self-Esteem Scale" OR "RSES" OR "General Self-Efficacy Scale" OR "GSES" OR "Pittsburgh Sleep Quality Index" OR "PSQI" OR "Epworth Sleep Scale" OR "ESS" OR "UCLA Loneliness Scale" OR "Multidimensional Scale of Perceived Social Support" OR "MSPSS" OR "Perceived Stress Scale" OR "PSS-4" OR "PSS-10" OR "PSS-14" OR "Perceived Medical School Stress" OR "PMSS" OR "Visual Analogue Scale" OR "VAS" OR "Medical Student Stress Questionnaire" OR "MSSQ" OR "Trier Inventory of Chronic Stress" OR "TICS" OR "Kessler Psychological Distress Scale" OR "K10" OR "Bandura-Rosenthal Metrics for Assessing Stress" OR "BAROMAS" OR "Michigan Alcohol Screening Test" OR "MAST" OR "Work-Related Behaviour and Experience Patterns" OR "AVEM" OR "Utrecht Work Engagement Scale" OR "UWES"
2.	exp Students, Medical/ or exp Education, Medical, Undergraduate/ or "medical student*" or "medical learner*" or "clerkship student*" or "preclerkship student*" or "medical education"
3.	instrumentation.sh. OR Validation Studies.pt. OR exp reproducibility of results/ OR reproducib*.ti,ab. OR exp psychometrics/ OR psychometr*.ti,ab. OR clinimetr*.ti,ab. OR clinometr*.ti,ab. OR exp observer variation/ OR observer variation.ti,ab. OR exp discriminant analysis/ OR reliab*.ti,ab. OR valid*.ti,ab. OR coefficient.ti,ab. OR "internal consistency".ti,ab. OR (cronbach*.ti,ab. AND (alpha.ti,ab. OR alphas.ti,ab.)) OR "item correlation".ti,ab. OR "item correlations".ti,ab. OR "item selection".ti,ab. OR "item selections".ti,ab. OR "item reduction".ti,ab. OR "item reductions".ti,ab. OR agreement.tw. OR precision.tw. OR imprecision.tw. OR "precise values".tw. OR test-retest.ti,ab. OR (test.ti,ab. AND retest.ti,ab.) OR (reliab*.ti,ab. AND (test.ti,ab. OR retest.ti,ab.)) OR stability.ti,ab. OR interrater.ti,ab. OR inter-rater.ti,ab. OR intrarater.ti,ab. OR intra-rater.ti,ab. OR intertester.ti,ab. OR inter-tester.ti,ab. OR intratester.ti,ab. OR intra-tester.ti,ab. OR interobserver.ti,ab. OR inter-observer.ti,ab. OR intraobserver.ti,ab. OR intra-observer.ti,ab. OR intertechnician.ti,ab. OR inter-technician.ti,ab. OR intratechnician.ti,ab. OR intra-technician.ti,ab. OR interexaminer.ti,ab. OR inter-examiner.ti,ab. OR intraexaminer.ti,ab. OR intra-examiner.ti,ab. OR interassay.ti,ab. OR inter-assay.ti,ab. OR intraassay.ti,ab. OR intra-assay.ti,ab. OR interindividual.ti,ab. OR inter-individual.ti,ab. OR intraindividual.ti,ab. OR intra-individual.ti,ab. OR interparticipant.ti,ab. OR inter-participant.ti,ab. OR intraparticipant.ti,ab. OR intra-participant.ti,ab. OR kappa.ti,ab. OR kappa's.ti,ab. OR kappas.ti,ab. OR "coefficient of variation".ti,ab. OR repeatab*.tw. OR ((replicab*.tw. OR repeated.tw.) AND (measure.tw. OR measures.tw. OR findings.tw. OR result.tw. OR results.tw. OR test.tw. OR tests.tw.)) OR generaliza*.ti,ab. OR generalisa*.ti,ab. OR concordance.ti,ab. OR (intraclass.ti,ab. AND correlation*.ti,ab.) OR discriminative.ti,ab. OR "known group".ti,ab. OR exp factor analysis, statistical/ OR "factor analysis".ti,ab. OR "factor analyses".ti,ab. OR "factor structure".ti,ab. OR "factor structures".ti,ab. OR dimensionality.ti,ab. OR subscale*.ti,ab. OR "multitrait scaling analysis".ti,ab. OR "multitrait scaling analyses".ti,ab. OR "item discriminant".ti,ab. OR "interscale correlation".ti,ab. OR "interscale correlations".ti,ab. OR ((error.ti,ab. OR errors.ti,ab.) AND (measure*.ti,ab. OR correlat*.ti,ab. OR evaluat*.ti,ab. OR accuracy.ti,ab. OR accurate.ti,ab. OR precision.ti,ab. OR mean.ti,ab.)) OR "individual variability".ti,ab. OR "interval variability".ti,ab. OR "rate variability".ti,ab. OR "variability analysis".ti,ab. OR (uncertainty.ti,ab. AND (measurement.ti,ab. OR measuring.ti,ab.)) OR "standard error of measurement".ti,ab. OR sensitiv*.ti,ab. OR responsive*.ti,ab. OR (limit.ti,ab. AND detection.ti,ab.) OR

"minimal detectable concentration".ti,ab. OR interpretab\*.ti,ab. OR (small\*.ti,ab. AND (real.ti,ab. OR detectable.ti,ab.)) AND (change.ti,ab. OR difference.ti,ab.)) OR "meaningful change".ti,ab. OR "minimal important change".ti,ab. OR "minimal important difference".ti,ab. OR "minimally important change".ti,ab. OR "minimally important difference".ti,ab. OR "minimal detectable change".ti,ab. OR "minimal detectable difference".ti,ab. OR "minimally detectable change".ti,ab. OR "minimally detectable difference".ti,ab. OR "minimal real change".ti,ab. OR "minimal real difference".ti,ab. OR "minimally real change".ti,ab. OR "minimally real difference".ti,ab. OR "ceiling effect".ti,ab. OR "floor effect".ti,ab. OR "Item response model".ti,ab. OR IRT.ti,ab. OR Rasch.ti,ab. OR "Differential item functioning".ti,ab. OR DIF.ti,ab. OR "computer adaptive testing".ti,ab. OR "item bank".ti,ab. OR "cross-cultural equivalence".ti,ab.

4. "addresses".pt. OR "biography".pt. OR "case reports".pt. OR "comment".pt. OR "directory".pt. OR "editorial".pt. OR "festschrift".pt. OR "interview".pt. OR "lectures".pt. OR "legal cases".pt. OR "legislation".pt. OR "letter".pt. OR "news".pt. OR "newspaper article".pt. OR "patient education handout".pt. OR "popular works".pt. OR "congresses".pt. OR "consensus development conference".pt. OR "consensus development conference, nih".pt. OR "practice guideline".pt.

5. 1 and 2 and 3 not 4

#### EMBASE via OVID

1. "State Trait Anxiety Inventory" OR "STAI" OR "Depression, Anxiety, and Stress Scale" OR "DASS-21" OR "DASS-48" OR "Beck Anxiety Inventory" OR "BAI" OR "General Anxiety Disorder 7" OR "GAD-7" OR "Maslach Burnout Inventory" OR "MBI" OR "Oldenburg Burnout Inventory" OR "OLBI" OR "Symptom Checklist-90-Revised" OR "SCL-90-R" OR "General Health Questionnaire" OR "GHQ-12" OR "GHQ-28" OR "Brief Symptom Inventory" OR "BSI" OR "Subjective Wellbeing Scale" OR "Medical Student Well-Being Index" OR "MSWBI" OR "General Well-Being Schedule" OR "Five Facets of Mindfulness Questionnaire" OR "FFMQ" OR "Mindful Attention Awareness Scale" OR "MAAS" OR "Beck Depression Inventory" OR "BDI" OR "Positive and Negative Affect Schedule" OR "PANAS" OR "Center for Epidemiologic Studies Depression Scale" OR "CES-D" OR "Patient Health Questionnaire" OR "PHQ-9" OR "PHQ-2" OR "PRIME-MD" OR "Hospital Anxiety and Depression Scale" OR "HADS" OR "Professional Quality of Life Scale" OR "ProQOL" OR "WHOQOL-BREF" OR "Satisfaction with Life Scale" OR "SWLS" OR "Short Form Health Survey" OR "SF-8" OR "Ways of Coping Checklist" OR "WCCL" OR "Brief COPE" OR "Connor Davidson Resilience Scale" OR "CD-RISC" OR "Resilience Scale 25" OR "RS-25" OR "Rosenberg Self-Esteem Scale" OR "RSES" OR "General Self-Efficacy Scale" OR "GSES" OR "Pittsburgh Sleep Quality Index" OR "PSQI" OR "Epworth Sleep Scale" OR "ESS" OR "UCLA Loneliness Scale" OR "Multidimensional Scale of Perceived Social Support" OR "MSPSS" OR "Perceived Stress Scale" OR "PSS-4" OR "PSS-10" OR "PSS-14" OR "Perceived Medical School Stress" OR "PMSS" OR "Visual Analogue Scale" OR "VAS" OR "Medical Student Stress Questionnaire" OR "MSSQ" OR "Trier Inventory of Chronic Stress" OR "TICS" OR "Kessler Psychological Distress Scale" OR "K10" OR "Bandura-Rosenthal Metrics for Assessing Stress" OR "BAROMAS" OR "Michigan Alcohol Screening Test" OR "MAST" OR "Work-Related Behaviour and Experience Patterns" OR "AVEM" OR "Utrecht Work Engagement Scale" OR "UWES"

2. exp medical student/ or exp education, medical, undergraduate/ or "medical student\*" or "medical learner\*" or "clerkship student\*" or "preclerkship student\*" or "medical education"

3. instrumentation.sh. OR Validation Studies.pt. OR exp reproducibility/ OR reproducib\*.ti,ab. OR exp psychometry/ OR psychometr\*.ti,ab. OR clinimetr\*.ti,ab. OR clinometr\*.ti,ab. OR exp observer variation/ OR observer variation.ti,ab. OR exp discriminant analysis/ OR exp reliability/ OR reliab\*.ti,ab. OR exp validity/ OR valid\*.ti,ab. OR coefficient.ti,ab. OR "internal consistency".ti,ab. OR (cronbach\*.ti,ab. AND (alpha.ti,ab. OR alphas.ti,ab.)) OR "item correlation".ti,ab. OR "item correlations".ti,ab. OR "item selection".ti,ab. OR "item selections".ti,ab. OR "item reduction".ti,ab. OR "item reductions".ti,ab. OR agreement.tw. OR precision.tw. OR imprecision.tw. OR "precise values".tw. OR test-retest.ti,ab. OR (test.ti,ab. AND retest.ti,ab.) OR (reliab\*.ti,ab. AND (test.ti,ab. OR retest.ti,ab.)) OR stability.ti,ab. OR interrater.ti,ab. OR inter-rater.ti,ab. OR intrarater.ti,ab. OR intra-rater.ti,ab. OR intertester.ti,ab. OR inter-tester.ti,ab. OR intratester.ti,ab. OR intra-tester.ti,ab. OR interobserver.ti,ab. OR inter-observer.ti,ab. OR intraobserver.ti,ab. OR intra-observer.ti,ab. OR intertechnician.ti,ab. OR inter-technician.ti,ab. OR intratechnician.ti,ab. OR intra-technician.ti,ab. OR interexaminer.ti,ab. OR inter-examiner.ti,ab. OR intraexaminer.ti,ab. OR intra-examiner.ti,ab. OR interassay.ti,ab. OR inter-assay.ti,ab. OR intraassay.ti,ab.



OR intra-assay.ti,ab. OR interindividual.ti,ab. OR inter-individual.ti,ab. OR intraindividual.ti,ab. OR intra-individual.ti,ab. OR interparticipant.ti,ab. OR inter-participant.ti,ab. OR intraparticipant.ti,ab. OR intra-participant.ti,ab. OR kappa.ti,ab. OR kappa's.ti,ab. OR kappas.ti,ab. OR "coefficient of variation".ti,ab. OR repeatab\*.tw. OR ((replicab\*.tw. OR repeated.tw.) AND (measure.tw. OR measures.tw. OR findings.tw. OR result.tw. OR results.tw. OR test.tw. OR tests.tw.)) OR generaliza\*.ti,ab. OR generalisa\*.ti,ab. OR concordance.ti,ab. OR (intraclass.ti,ab. AND correlation\*.ti,ab.) OR discriminative.ti,ab. OR "known group".ti,ab. OR exp factor analysis/ OR "factor analysis".ti,ab. OR "factor analyses".ti,ab. OR "factor structure".ti,ab. OR "factor structures".ti,ab. OR dimensionality.ti,ab. OR subscale\*.ti,ab. OR "multitrait scaling analysis".ti,ab. OR "multitrait scaling analyses".ti,ab. OR "item discriminant".ti,ab. OR "interscale correlation".ti,ab. OR "interscale correlations".ti,ab. OR ((error.ti,ab. OR errors.ti,ab.) AND (measure\*.ti,ab. OR correlat\*.ti,ab. OR evaluat\*.ti,ab. OR accuracy.ti,ab. OR accurate.ti,ab. OR precision.ti,ab. OR mean.ti,ab.)) OR "individual variability".ti,ab. OR "interval variability".ti,ab. OR "rate variability".ti,ab. OR "variability analysis".ti,ab. OR (uncertainty.ti,ab. AND (measurement.ti,ab. OR measuring.ti,ab.)) OR "standard error of measurement".ti,ab. OR sensitiv\*.ti,ab. OR responsive\*.ti,ab. OR (limit.ti,ab. AND detection.ti,ab.) OR "minimal detectable concentration".ti,ab. OR interpretab\*.ti,ab. OR (small\*.ti,ab. AND (real.ti,ab. OR detectable.ti,ab.)) AND (change.ti,ab. OR difference.ti,ab.)) OR "meaningful change".ti,ab. OR "minimal important change".ti,ab. OR "minimal important difference".ti,ab. OR "minimally important change".ti,ab. OR "minimally important difference".ti,ab. OR "minimal detectable change".ti,ab. OR "minimal detectable difference".ti,ab. OR "minimally detectable change".ti,ab. OR "minimally detectable difference".ti,ab. OR "minimal real change".ti,ab. OR "minimal real difference".ti,ab. OR "minimally real change".ti,ab. OR "minimally real difference".ti,ab. OR "ceiling effect".ti,ab. OR "floor effect".ti,ab. OR "Item response model".ti,ab. OR IRT.ti,ab. OR Rasch.ti,ab. OR "Differential item functioning".ti,ab. OR DIF.ti,ab. OR "computer adaptive testing".ti,ab. OR "item bank".ti,ab. OR "cross-cultural equivalence".ti,ab.

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5. 1 and 2 and 3 not 4

#### PsycINFO via OVID

1. "State Trait Anxiety Inventory" OR "STAI" OR "Depression, Anxiety, and Stress Scale" OR "DASS-21" OR "DASS-48" OR "Beck Anxiety Inventory" OR "BAI" OR "General Anxiety Disorder 7" OR "GAD-7" OR "Maslach Burnout Inventory" OR "MBI" OR "Oldenburg Burnout Inventory" OR "OLBI" OR "Symptom Checklist-90-Revised" OR "SCL-90-R" OR "General Health Questionnaire" OR "GHQ-12" OR "GHQ-28" OR "Brief Symptom Inventory" OR "BSI" OR "Subjective Wellbeing Scale" OR "Medical Student Well-Being Index" OR "MSWBI" OR "General Well-Being Schedule" OR "Five Facets of Mindfulness Questionnaire" OR "FFMQ" OR "Mindful Attention Awareness Scale" OR "MAAS" OR "Beck Depression Inventory" OR "BDI" OR "Positive and Negative Affect Schedule" OR "PANAS" OR "Center for Epidemiologic Studies Depression Scale" OR "CES-D" OR "Patient Health Questionnaire" OR "PHQ-9" OR "PHQ-2" OR "PRIME-MD" OR "Hospital Anxiety and Depression Scale" OR "HADS" OR "Professional Quality of Life Scale" OR "ProQOL" OR "WHOQOL-BREF" OR "Satisfaction with Life Scale" OR "SWLS" OR "Short Form Health Survey" OR "SF-8" OR "Ways of Coping Checklist" OR "WCCL" OR "Brief COPE" OR "Connor Davidson Resilience Scale" OR "CD-RISC" OR "Resilience Scale 25" OR "RS-25" OR "Rosenberg Self-Esteem Scale" OR "RSES" OR "General Self-Efficacy Scale" OR "GSES" OR "Pittsburgh Sleep Quality Index" OR "PSQI" OR "Epworth Sleep Scale" OR "ESS" OR "UCLA Loneliness Scale" OR "Multidimensional Scale of Perceived Social Support" OR "MSPSS" OR "Perceived Stress Scale" OR "PSS-4" OR "PSS-10" OR "PSS-14" OR "Perceived Medical School Stress" OR "PMSS" OR "Visual Analogue Scale" OR "VAS" OR "Medical Student Stress Questionnaire" OR "MSSQ" OR "Trier Inventory of Chronic Stress" OR "TICS" OR "Kessler Psychological Distress Scale" OR "K10" OR "Bandura-Rosenthal Metrics for Assessing Stress" OR "BAROMAS" OR "Michigan Alcohol Screening Test" OR "MAST" OR "Work-Related Behaviour and Experience Patterns" OR "AVEM" OR "Utrecht Work Engagement Scale" OR "UWES"

2. exp medical students/ or exp medical education/ or "medical student\*" or "medical learner\*" or "clerkship student\*" or "preclerkship student\*" or "medical education"
  3. instrumentation.sh. OR Validation Studies.pt. OR reproducib\*.ti,ab. OR exp psychometrics/ OR psychometr\*.ti,ab. OR clinimetr\*.ti,ab. OR clinometr\*.ti,ab. OR observer variation.ti,ab. OR reliab\*.ti,ab. OR valid\*.ti,ab. OR coefficient.ti,ab. OR "internal consistency".ti,ab. OR (cronbach\*.ti,ab. AND (alpha.ti,ab. OR alphas.ti,ab.)) OR "item correlation".ti,ab. OR "item correlations".ti,ab. OR "item selection".ti,ab. OR "item selections".ti,ab. OR "item reduction".ti,ab. OR "item reductions".ti,ab. OR agreement.tw. OR precision.tw. OR imprecision.tw. OR "precise values".tw. OR exp repeated measures/ OR test-retest.ti,ab. OR (test.ti,ab. AND retest.ti,ab.) OR (reliab\*.ti,ab. AND (test.ti,ab. OR retest.ti,ab.)) OR stability.ti,ab. OR interrater.ti,ab. OR inter-rater.ti,ab. OR intrarater.ti,ab. OR intra-rater.ti,ab. OR intertester.ti,ab. OR inter-tester.ti,ab. OR intratester.ti,ab. OR intra-tester.ti,ab. OR interobserver.ti,ab. OR inter-observer.ti,ab. OR intraobserver.ti,ab. OR intra-observer.ti,ab. OR intertechnician.ti,ab. OR inter-technician.ti,ab. OR intratechnician.ti,ab. OR intra-technician.ti,ab. OR interexaminer.ti,ab. OR inter-examiner.ti,ab. OR intraexaminer.ti,ab. OR intra-examiner.ti,ab. OR interassay.ti,ab. OR inter-assay.ti,ab. OR intraassay.ti,ab. OR intra-assay.ti,ab. OR interindividual.ti,ab. OR inter-individual.ti,ab. OR intraindividual.ti,ab. OR intra-individual.ti,ab. OR interparticipant.ti,ab. OR inter-participant.ti,ab. OR intraparticipant.ti,ab. OR intra-participant.ti,ab. OR kappa.ti,ab. OR kappa's.ti,ab. OR kappas.ti,ab. OR "coefficient of variation".ti,ab. OR repeatab\*.tw. OR ((replicab\*.tw. OR repeated.tw.) AND (measure.tw. OR measures.tw. OR findings.tw. OR result.tw. OR results.tw. OR test.tw. OR tests.tw.)) OR generaliza\*.ti,ab. OR generalisa\*.ti,ab. OR concordance.ti,ab. OR (intraclass.ti,ab. AND correlation\*.ti,ab.) OR discriminative.ti,ab. OR "known group".ti,ab. OR "factor analysis".ti,ab. OR "factor analyses".ti,ab. OR "factor structure".ti,ab. OR "factor structures".ti,ab. OR dimensionality.ti,ab. OR subscale\*.ti,ab. OR "multitrait scaling analysis".ti,ab. OR "multitrait scaling analyses".ti,ab. OR "item discriminant".ti,ab. OR "interscale correlation".ti,ab. OR "interscale correlations".ti,ab. OR ((error.ti,ab. OR errors.ti,ab.) AND (measure\*.ti,ab. OR correlat\*.ti,ab. OR evaluat\*.ti,ab. OR accuracy.ti,ab. OR accurate.ti,ab. OR precision.ti,ab. OR mean.ti,ab.)) OR "individual variability".ti,ab. OR "interval variability".ti,ab. OR "rate variability".ti,ab. OR "variability analysis".ti,ab. OR (uncertainty.ti,ab. AND (measurement.ti,ab. OR measuring.ti,ab.)) OR "standard error of measurement".ti,ab. OR sensitiv\*.ti,ab. OR responsive\*.ti,ab. OR (limit.ti,ab. AND detection.ti,ab.) OR "minimal detectable concentration".ti,ab. OR interpretab\*.ti,ab. OR (small\*.ti,ab. AND (real.ti,ab. OR detectable.ti,ab.)) AND (change.ti,ab. OR difference.ti,ab.)) OR "meaningful change".ti,ab. OR "minimal important change".ti,ab. OR "minimal important difference".ti,ab. OR "minimally important change".ti,ab. OR "minimally important difference".ti,ab. OR "minimal detectable change".ti,ab. OR "minimal detectable difference".ti,ab. OR "minimally detectable change".ti,ab. OR "minimally detectable difference".ti,ab. OR "minimal real change".ti,ab. OR "minimal real difference".ti,ab. OR "minimally real change".ti,ab. OR "minimally real difference".ti,ab. OR "ceiling effect".ti,ab. OR "floor effect".ti,ab. OR "Item response model".ti,ab. OR IRT.ti,ab. OR Rasch.ti,ab. OR "Differential item functioning".ti,ab. OR DIF.ti,ab. OR "computer adaptive testing".ti,ab. OR "item bank".ti,ab. OR exp cross cultural validity/ OR "cross-cultural equivalence".ti,ab.
  4. "addresses".pt. OR "biography".pt. OR "case reports".pt. OR "comment".pt. OR "directory".pt. OR "editorial".pt. OR "festschrift".pt. OR "interview".pt. OR "lectures".pt. OR "legal cases".pt. OR "legislation".pt. OR "letter".pt. OR "news".pt. OR "newspaper article".pt. OR "patient education handout".pt. OR "popular works".pt. OR "congresses".pt. OR "consensus development conference".pt. OR "consensus development conference, nih".pt. OR "practice guideline".pt.
  5. 1 and 2 and 3 not 4
- Web of Science Core Collection**
1. TS= ("State Trait Anxiety Inventory" OR "STAI" OR "Depression, Anxiety, and Stress Scale" OR "DASS-21" OR "DASS-48" OR "Beck Anxiety Inventory" OR "BAI" OR "General Anxiety Disorder 7" OR "GAD-7" OR "Maslach Burnout Inventory" OR "MBI" OR "Oldenburg Burnout Inventory" OR "OLBI" OR "Symptom Checklist-90-Revised" OR "SCL-90-R" OR "General Health Questionnaire" OR "GHQ-12" OR "GHQ-28" OR "Brief Symptom Inventory" OR "BSI" OR "Subjective Wellbeing Scale" OR "Medical Student Well-Being Index" OR "MSWBI" OR "General Well-Being Schedule" OR "Five Facets of Mindfulness Questionnaire" OR "FFMQ" OR "Mindful Attention Awareness Scale" OR "MAAS" OR "Beck Depression Inventory" OR "BDI" OR "Positive and

Negative Affect Schedule" OR "PANAS" OR "Center for Epidemiologic Studies Depression Scale" OR "CES-D" OR "Patient Health Questionnaire" OR "PHQ-9" OR "PHQ-2" OR "PRIME-MD" OR "Hospital Anxiety and Depression Scale" OR "HADS" OR "Professional Quality of Life Scale" OR "ProQOL" OR "WHOQOL-BREF" OR "Satisfaction with Life Scale" OR "SWLS" OR "Short Form Health Survey" OR "SF-8" OR "Ways of Coping Checklist" OR "WCCL" OR "Brief COPE" OR "Connor Davidson Resilience Scale" OR "CD-RISC" OR "Resilience Scale 25" OR "RS-25" OR "Rosenberg Self-Esteem Scale" OR "RSES" OR "General Self-Efficacy Scale" OR "GSES" OR "Pittsburgh Sleep Quality Index" OR "PSQI" OR "Epworth Sleep Scale" OR "ESS" OR "UCLA Loneliness Scale" OR "Multidimensional Scale of Perceived Social Support" OR "MSPSS" OR "Perceived Stress Scale" OR "PSS-4" OR "PSS-10" OR "PSS-14" OR "Perceived Medical School Stress" OR "PMSS" OR "Visual Analogue Scale" OR "VAS" OR "Medical Student Stress Questionnaire" OR "MSSQ" OR "Trier Inventory of Chronic Stress" OR "TICS" OR "Kessler Psychological Distress Scale" OR "K10" OR "Bandura-Rosenthal Metrics for Assessing Stress" OR "BAROMAS" OR "Michigan Alcohol Screening Test" OR "MAST" OR "Work-Related Behaviour and Experience Patterns" OR "AVEM" OR "Utrecht Work Engagement Scale" OR "UWES")

2. **AND** TS= ("medical student\*" OR "medical learner\*" OR "clerkship student\*" OR "preclerkship student\*" OR "medical education")

3. **AND** TS= (instrumentation OR Validation Studies OR reproducib\* OR psychometr\* OR clinimetr\* OR clinometr\* OR observer variation OR reliab\* OR valid\* OR coefficient OR "internal consistency" OR (cronbach\* AND (alpha OR alphas)) OR "item correlation" OR "item correlations" OR "item selection" OR "item selections" OR "item reduction" OR "item reductions" OR agreement OR precision OR imprecision OR "precise values" OR test-retest OR (test AND retest) OR (reliab\* AND (test OR retest)) OR stability OR interrater OR inter-rater OR intrarater OR intra-rater OR intertester OR inter-tester OR intratester OR intratester OR interobserver OR inter-observer OR intraobserver OR intra-observer OR intertechnician OR inter-technician OR intratechnician OR intra-technician OR interexaminer OR inter-examiner OR intraexaminer OR intra-examiner OR interassay OR inter-assay OR intraassay OR intra-assay OR interindividual OR inter-individual OR intraindividual OR intra-individual OR interparticipant OR inter-participant OR intraparticipant OR intra-participant OR kappa OR kappa's OR kappas OR "coefficient of variation" OR repeatab\* OR ((replicab\* OR repeated) AND (measure OR measures OR findings OR result OR results OR test OR tests)) OR generaliza\* OR generalisa\* OR concordance OR (intraclass AND correlation\*) OR discriminative OR "known group" OR "factor analysis" OR "factor analyses" OR "factor structure" OR "factor structures" OR dimensionality OR subscale\* OR "multitrait scaling analysis" OR "multitrait scaling analyses" OR "item discriminant" OR "interscale correlation" OR "interscale correlations" OR ((error OR errors ) AND (measure\* OR correlat\* OR evaluat\* OR accuracy OR accurate OR precision OR mean)) OR "individual variability" OR "interval variability" OR "rate variability" OR "variability analysis" OR (uncertainty AND (measurement OR measuring)) OR "standard error of measurement" OR sensitiv\* OR responsive\* OR (limit AND detection) OR "minimal detectable concentration" OR interpretab\* OR (small\* AND (real OR detectable) AND (change OR difference)) OR "meaningful change" OR "minimal important change" OR "minimal important difference" OR "minimally important change" OR "minimally important difference" OR "minimal detectable change" OR "minimal detectable difference" OR "minimally detectable change" OR "minimally detectable difference" OR "minimal real change" OR "minimal real difference" OR "minimally real change" OR "minimally real difference" OR "ceiling effect" OR "floor effect" OR "Item response model" OR IRT OR Rasch OR "Differential item functioning" OR DIF OR "computer adaptive testing" OR "item bank" OR "cross-cultural equivalence")

#### Google Scholar (first 200 studies)

1. "State Trait Anxiety Inventory" OR "STAI" OR "Depression, Anxiety, and Stress Scale" OR "DASS-21" OR "DASS-48" OR "Beck Anxiety Inventory" OR "BAI" OR "General Anxiety Disorder 7" OR "GAD-7" OR "Maslach Burnout Inventory" OR "MBI" OR "Oldenburg Burnout Inventory" OR "OLBI" OR "Symptom Checklist-90-Revised" OR "SCL-90-R" OR "General Health Questionnaire" OR "GHQ-12" OR "GHQ-28" OR "Brief Symptom Inventory" OR "BSI" OR "Subjective Wellbeing Scale" OR "Medical Student Well-Being Index" OR "MSWBI" OR "General Well-Being Schedule" OR "Five Facets of Mindfulness Questionnaire" OR "FFMQ" OR "Mindful Attention Awareness Scale" OR "MAAS" OR "Beck Depression Inventory" OR "BDI" OR "Positive and Negative Affect Schedule" OR "PANAS" OR "Center for Epidemiologic Studies Depression Scale" OR "CES-D"

OR "Patient Health Questionnaire" OR "PHQ-9" OR "PHQ-2" OR "PRIME-MD" OR "Hospital Anxiety and Depression Scale" OR "HADS" OR "Professional Quality of Life Scale" OR "ProQOL" OR "WHOQOL-BREF" OR "Satisfaction with Life Scale" OR "SWLS" OR "Short Form Health Survey" OR "SF-8" OR "Ways of Coping Checklist" OR "WCCL" OR "Brief COPE" OR "Connor Davidson Resilience Scale" OR "CD-RISC" OR "Resilience Scale 25" OR "RS-25" OR "Rosenberg Self-Esteem Scale" OR "RSES" OR "General Self-Efficacy Scale" OR "GSES" OR "Pittsburgh Sleep Quality Index" OR "PSQI" OR "Epworth Sleep Scale" OR "ESS" OR "UCLA Loneliness Scale" OR "Multidimensional Scale of Perceived Social Support" OR "MSPSS" OR "Perceived Stress Scale" OR "PSS-4" OR "PSS-10" OR "PSS-14" OR "Perceived Medical School Stress" OR "PMSS" OR "Visual Analogue Scale" OR "VAS" OR "Medical Student Stress Questionnaire" OR "MSSQ" OR "Trier Inventory of Chronic Stress" OR "TICS" OR "Kessler Psychological Distress Scale" OR "K10" OR "Bandura-Rosenthal Metrics for Assessing Stress" OR "BAROMAS" OR "Michigan Alcohol Screening Test" OR "MAST" OR "Work-Related Behaviour and Experience Patterns" OR "AVEM" OR "Utrecht Work Engagement Scale" OR "UWES"

2. **AND** "medical student\*" or "medical learner\*" or "clerkship student\*" or "preclerkship student\*" or "medical education"

3. **AND** instrumentation OR Validation Studies OR reproducib\* OR psychometr\* OR clinimetr\* OR clinometr\* OR observer variation OR reliab\* OR valid\* OR coefficient OR "internal consistency" OR (cronbach\* AND (alpha OR alphas)) OR "item correlation" OR "item correlations" OR "item selection" OR "item selections" OR "item reduction" OR "item reductions" OR agreement OR precision OR imprecision OR "precise values" OR test-retest OR (test AND retest) OR (reliab\* AND (test OR retest)) OR stability OR interrater OR inter-rater OR intrarater OR intra-rater OR intertester OR inter-tester OR intratester OR intra-tester OR interobserver OR inter-observer OR intraobserver OR intra-observer OR intertechnician OR inter-technician OR intratechnician OR intra-technician OR interexaminer OR inter-examiner OR intraexaminer OR intra-examiner OR interassay OR inter-assay OR intraassay OR intra-assay OR interindividual OR inter-individual OR intraindividual OR intra-individual OR interparticipant OR inter-participant OR intraparticipant OR intra-participant OR kappa OR kappa's OR kappas OR "coefficient of variation" OR repeatab\* OR ((replicab\* OR repeated) AND (measure OR measures OR findings OR result OR results OR test OR tests)) OR generaliza\* OR generalisa\* OR concordance OR (intraclass AND correlation\*) OR discriminative OR "known group" OR "factor analysis" OR "factor analyses" OR "factor structure" OR "factor structures" OR dimensionality OR subscale\* OR "multitrait scaling analysis" OR "multitrait scaling analyses" OR "item discriminant" OR "interscale correlation" OR "interscale correlations" OR ((error OR errors ) AND (measure\* OR correlat\* OR evaluat\* OR accuracy OR accurate OR precision OR mean)) OR "individual variability" OR "interval variability" OR "rate variability" OR "variability analysis" OR (uncertainty AND (measurement OR measuring)) OR "standard error of measurement" OR sensitiv\* OR responsive\* OR (limit AND detection) OR "minimal detectable concentration" OR interpretab\* OR (small\* AND (real OR detectable) AND (change OR difference)) OR "meaningful change" OR "minimal important change" OR "minimal important difference" OR "minimally important change" OR "minimally important difference" OR "minimal detectable change" OR "minimal detectable difference" OR "minimally detectable change" OR "minimally detectable difference" OR "minimal real change" OR "minimal real difference" OR "minimally real change" OR "minimally real difference" OR "ceiling effect" OR "floor effect" OR "Item response model" OR IRT OR Rasch OR "Differential item functioning" OR DIF OR "computer adaptive testing" OR "item bank" OR "cross-cultural equivalence"

ERIC via EBSCOhost

1. "State Trait Anxiety Inventory" OR "STAI" OR "Depression, Anxiety, and Stress Scale" OR "DASS-21" OR "DASS-48" OR "Beck Anxiety Inventory" OR "BAI" OR "General Anxiety Disorder 7" OR "GAD-7" OR "Maslach Burnout Inventory" OR "MBI" OR "Oldenburg Burnout Inventory" OR "OLBI" OR "Symptom Checklist-90-Revised" OR "SCL-90-R" OR "General Health Questionnaire" OR "GHQ-12" OR "GHQ-28" OR "Brief Symptom Inventory" OR "BSI" OR "Subjective Wellbeing Scale" OR "Medical Student Well-Being Index" OR "MSWBI" OR "General Well-Being Schedule" OR "Five Facets of Mindfulness Questionnaire" OR "FFMQ" OR "Mindful Attention Awareness Scale" OR "MAAS" OR "Beck Depression Inventory" OR "BDI" OR "Positive and Negative Affect Schedule" OR "PANAS" OR "Center for Epidemiologic Studies Depression Scale" OR "CES-D" OR "Patient Health Questionnaire" OR "PHQ-9" OR "PHQ-2" OR "PRIME-MD" OR "Hospital Anxiety and

Depression Scale" OR "HADS" OR "Professional Quality of Life Scale" OR "ProQOL" OR "WHOQOL-BREF" OR "Satisfaction with Life Scale" OR "SWLS" OR "Short Form Health Survey" OR "SF-8" OR "Ways of Coping Checklist" OR "WCCL" OR "Brief COPE" OR "Connor Davidson Resilience Scale" OR "CD-RISC" OR "Resilience Scale 25" OR "RS-25" OR "Rosenberg Self-Esteem Scale" OR "RSES" OR "General Self-Efficacy Scale" OR "GSES" OR "Pittsburgh Sleep Quality Index" OR "PSQI" OR "Epworth Sleep Scale" OR "ESS" OR "UCLA Loneliness Scale" OR "Multidimensional Scale of Perceived Social Support" OR "MSPSS" OR "Perceived Stress Scale" OR "PSS-4" OR "PSS-10" OR "PSS-14" OR "Perceived Medical School Stress" OR "PMSS" OR "Visual Analogue Scale" OR "VAS" OR "Medical Student Stress Questionnaire" OR "MSSQ" OR "Trier Inventory of Chronic Stress" OR "TICS" OR "Kessler Psychological Distress Scale" OR "K10" OR "Bandura-Rosenthal Metrics for Assessing Stress" OR "BAROMAS" OR "Michigan Alcohol Screening Test" OR "MAST" OR "Work-Related Behaviour and Experience Patterns" OR "AVEM" OR "Utrecht Work Engagement Scale" OR "UWES"

2. **AND** DE=medical students OR "medical student\*" OR "medical learner\*" OR "clerkship student\*" OR "preclerkship student\*" OR "medical education"

3. **AND** instrumentation OR Validation Studies OR reproducib\* OR DE=psychometrics OR psychometr\* OR clinimetr\* OR clinometr\* OR observer variation OR DE=evaluation criteria OR reliab\* OR valid\* OR coefficient OR "internal consistency" OR (cronbach\* AND (alpha OR alphas)) OR "item correlation" OR "item correlations" OR "item selection" OR "item selections" OR "item reduction" OR "item reductions" OR agreement OR precision OR imprecision OR "precise values" OR test-retest OR (test AND retest) OR (reliab\* AND (test OR retest)) OR stability OR interrater OR inter-rater OR intrarater OR intra-rater OR intertester OR inter-tester OR intratester OR intra-tester OR interobserver OR inter-observer OR intraobserver OR intra-observer OR intertechnician OR inter-technician OR intratechnician OR intra-technician OR interexaminer OR inter-examiner OR intraexaminer OR intra-examiner OR interassay OR inter-assay OR intraassay OR intra-assay OR interindividual OR inter-individual OR intraindividual OR intra-individual OR interparticipant OR inter-participant OR intraparticipant OR intra-participant OR kappa OR kappa's OR kappas OR "coefficient of variation" OR repeatab\* OR ((replicab\* OR repeated) AND (measure OR measures OR findings OR result OR results OR test OR tests)) OR generaliza\* OR generalisa\* OR concordance OR (intraclass AND correlation\*) OR discriminative OR "known group" OR "factor analysis" OR "factor analyses" OR "factor structure" OR "factor structures" OR dimensionality OR subscale\* OR "multitrait scaling analysis" OR "multitrait scaling analyses" OR "item discriminant" OR "interscale correlation" OR "interscale correlations" OR ((error OR errors ) AND (measure\* OR correlat\* OR evaluat\* OR accuracy OR accurate OR precision OR mean)) OR "individual variability" OR "interval variability" OR "rate variability" OR "variability analysis" OR (uncertainty AND (measurement OR measuring)) OR "standard error of measurement" OR sensitiv\* OR responsive\* OR (limit AND detection) OR "minimal detectable concentration" OR interpretab\* OR (small\* AND (real OR detectable) AND (change OR difference)) OR "meaningful change" OR "minimal important change" OR "minimal important difference" OR "minimally important change" OR "minimally important difference" OR "minimal detectable change" OR "minimal detectable difference" OR "minimally detectable change" OR "minimally detectable difference" OR "minimal real change" OR "minimal real difference" OR "minimally real change" OR "minimally real difference" OR "ceiling effect" OR "floor effect" OR "Item response model" OR IRT OR Rasch OR "Differential item functioning" OR DIF OR "computer adaptive testing" OR "item bank" OR "cross-cultural equivalence"

CINAHL via EBSCOhost

1. "State Trait Anxiety Inventory" OR "STAI" OR "Depression, Anxiety, and Stress Scale" OR "DASS-21" OR "DASS-48" OR "Beck Anxiety Inventory" OR "BAI" OR "General Anxiety Disorder 7" OR "GAD-7" OR "Maslach Burnout Inventory" OR "MBI" OR "Oldenburg Burnout Inventory" OR "OLBI" OR "Symptom Checklist-90-Revised" OR "SCL-90-R" OR "General Health Questionnaire" OR "GHQ-12" OR "GHQ-28" OR "Brief Symptom Inventory" OR "BSI" OR "Subjective Wellbeing Scale" OR "Medical Student Well-Being Index" OR "MSWBI" OR "General Well-Being Schedule" OR "Five Facets of Mindfulness Questionnaire" OR "FFMQ" OR "Mindful Attention Awareness Scale" OR "MAAS" OR "Beck Depression Inventory" OR "BDI" OR "Positive and Negative Affect Schedule" OR "PANAS" OR "Center for Epidemiologic Studies Depression Scale" OR "CES-D" OR "Patient Health Questionnaire" OR "PHQ-9" OR "PHQ-2" OR "PRIME-MD" OR "Hospital Anxiety and Depression Scale" OR "HADS" OR "Professional Quality of Life Scale" OR "ProQOL" OR "WHOQOL-BREF" OR



"Satisfaction with Life Scale" OR "SWLS" OR "Short Form Health Survey" OR "SF-8" OR "Ways of Coping Checklist" OR "WCCL" OR "Brief COPE" OR "Connor Davidson Resilience Scale" OR "CD-RISC" OR "Resilience Scale 25" OR "RS-25" OR "Rosenberg Self-Esteem Scale" OR "RSES" OR "General Self-Efficacy Scale" OR "GSES" OR "Pittsburgh Sleep Quality Index" OR "PSQI" OR "Epworth Sleep Scale" OR "ESS" OR "UCLA Loneliness Scale" OR "Multidimensional Scale of Perceived Social Support" OR "MSPSS" OR "Perceived Stress Scale" OR "PSS-4" OR "PSS-10" OR "PSS-14" OR "Perceived Medical School Stress" OR "PMSS" OR "Visual Analogue Scale" OR "VAS" OR "Medical Student Stress Questionnaire" OR "MSSQ" OR "Trier Inventory of Chronic Stress" OR "TICS" OR "Kessler Psychological Distress Scale" OR "K10" OR "Bandura-Rosenthal Metrics for Assessing Stress" OR "BAROMAS" OR "Michigan Alcohol Screening Test" OR "MAST" OR "Work-Related Behaviour and Experience Patterns" OR "AVEM" OR "Utrecht Work Engagement Scale" OR "UWES"

2. **AND** (MH "Students, Medical") OR "medical student\*" OR "medical learner\*" OR "clerkship student\*" OR "preclerkship student\*" OR "medical education"
3. **AND** instrumentation OR Validation Studies OR reproducib\* OR (MH "Psychometrics") OR (MH "Reliability and Validity+") OR (MH "Respondent Validation") OR psychometr\* OR clinimetr\* OR clinometr\* OR observer variation OR reliab\* OR valid\* OR coefficient OR "internal consistency" OR (cronbach\* AND (alpha OR alphas)) OR "item correlation" OR "item correlations" OR "item selection" OR "item selections" OR "item reduction" OR "item reductions" OR agreement OR precision OR imprecision OR "precise values" OR test-retest OR (test AND retest) OR (reliab\* AND (test OR retest)) OR stability OR interrater OR inter-rater OR intrarater OR intra-rater OR intertester OR inter-tester OR intratester OR intra-tester OR interobserver OR inter-observer OR intraobserver OR intra-observer OR intertechnician OR inter-technician OR intratechnician OR intra-technician OR interexaminer OR inter-examiner OR intraexaminer OR intra-examiner OR interassay OR inter-assay OR intraassay OR intra-assay OR interindividual OR inter-individual OR intraindividual OR intra-individual OR interparticipant OR inter-participant OR intraparticipant OR intra-participant OR kappa OR kappa's OR kappas OR "coefficient of variation" OR repeatab\* OR ((replicab\* OR repeated) AND (measure OR measures OR findings OR result OR results OR test OR tests)) OR generaliza\* OR generalisa\* OR concordance OR (intraclass AND correlation\*) OR discriminative OR "known group" OR "factor analysis" OR "factor analyses" OR "factor structure" OR "factor structures" OR dimensionality OR subscale\* OR "multitrait scaling analysis" OR "multitrait scaling analyses" OR "item discriminant" OR "interscale correlation" OR "interscale correlations" OR ((error OR errors ) AND (measure\* OR correlat\* OR evaluat\* OR accuracy OR accurate OR precision OR mean)) OR "individual variability" OR "interval variability" OR "rate variability" OR "variability analysis" OR (uncertainty AND (measurement OR measuring)) OR "standard error of measurement" OR sensitiv\* OR responsive\* OR (limit AND detection) OR "minimal detectable concentration" OR interpretab\* OR (small\* AND (real OR detectable) AND (change OR difference)) OR "meaningful change" OR "minimal important change" OR "minimal important difference" OR "minimally important change" OR "minimally important difference" OR "minimal detectable change" OR "minimal detectable difference" OR "minimally detectable change" OR "minimally detectable difference" OR "minimal real change" OR "minimal real difference" OR "minimally real change" OR "minimally real difference" OR "ceiling effect" OR "floor effect" OR "Item response model" OR IRT OR Rasch OR "Differential item functioning" OR DIF OR "computer adaptive testing" OR "item bank" OR "cross-cultural equivalence"

#### ClinicalTrials.gov

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3. "Medical Student Well-Being Index" OR "MSWBI" OR "General Well-Being Schedule" OR "Five Facets of Mindfulness Questionnaire" OR "FFMQ" OR "Mindful Attention Awareness Scale" OR "MAAS" OR "Beck Depression Inventory" OR "BDI"

4.	"Positive and Negative Affect Schedule" OR "PANAS" OR "Center for Epidemiologic Studies Depression Scale" OR "CES-D" OR "Patient Health Questionnaire" OR "PHQ-9" OR "PHQ-2" OR "PRIME-MD" OR "Hospital Anxiety and Depression Scale" OR "HADS"
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6.	"Connor Davidson Resilience Scale" OR "CD-RISC" OR "Resilience Scale 25" or "RS-25" OR "Rosenberg Self-Esteem Scale" OR "RSES" OR "General Self-Efficacy Scale" OR "GSES" OR "Pittsburgh Sleep Quality Index" OR "PSQI"
7.	"Epworth Sleep Scale" OR "ESS" OR "UCLA Loneliness Scale" OR "Multidimensional Scale of Perceived Social Support" OR "MSPSS" OR "Perceived Stress Scale" OR "PSS-4" OR "PSS-10" OR "PSS-14" OR "Perceived Medical School Stress" OR "PMSS"
8.	"Visual Analogue Scale" OR "VAS" OR "Medical Student Stress Questionnaire" OR "MSSQ" OR "Trier Inventory of Chronic Stress" OR "TICS" OR "Kessler Psychological Distress Scale" OR "K10" OR "Bandura-Rosenthal Metrics for Assessing Stress"
9.	"BAROMAS" OR "Michigan Alcohol Screening Test" OR "MAST" OR "Work-Related Behaviour and Experience Patterns" OR "AVEM" OR "Utrecht Work Engagement Scale" OR "UWES"
10.	<b>AND</b> medical student OR medical learner OR clerkship student OR preclerkship student OR "medical education" OR "education, medical"
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1.	"State Trait Anxiety Inventory" OR "STAI" OR "Depression, Anxiety, and Stress Scale" OR "DASS-21" OR "DASS-48" OR "Beck Anxiety Inventory" OR "BAI" OR "General Anxiety Disorder 7" OR "GAD-7" OR "Maslach Burnout Inventory" OR "MBI" OR "Oldenburg Burnout Inventory" OR "OLBI" OR "Symptom Checklist-90-Revised" OR "SCL-90-R" OR "General Health Questionnaire" OR "GHQ-12" OR "GHQ-28" OR "Brief Symptom Inventory" OR "BSI" OR "Subjective Wellbeing Scale" OR "Medical Student Well-Being Index" OR "MSWBI" OR "General Well-Being Schedule" OR "Five Facets of Mindfulness Questionnaire" OR "FFMQ" OR "Mindful Attention Awareness Scale" OR "MAAS" OR "Beck Depression Inventory" OR "BDI" OR "Positive and Negative Affect Schedule" OR "PANAS" OR "Center for Epidemiologic Studies Depression Scale" OR "CES-D" OR "Patient Health Questionnaire" OR "PHQ-9" OR "PHQ-2" OR "PRIME-MD" OR "Hospital Anxiety and Depression Scale" OR "HADS" OR "Professional Quality of Life Scale" OR "ProQOL" OR "WHOQOL-BREF" OR "Satisfaction with Life Scale" OR "SWLS" OR "Short Form Health Survey" OR "SF-8" OR "Ways of Coping Checklist" OR "WCCL" OR "Brief COPE" OR "Connor Davidson Resilience Scale" OR "CD-RISC" OR "Resilience Scale 25" or "RS-25" OR "Rosenberg Self-Esteem Scale" OR "RSES" OR "General Self-Efficacy Scale" OR "GSES" OR "Pittsburgh Sleep Quality Index" OR "PSQI" OR "Epworth Sleep Scale" OR "ESS" OR "UCLA Loneliness Scale" OR "Multidimensional Scale of Perceived Social Support" OR "MSPSS" OR "Perceived Stress Scale" OR "PSS-4" OR "PSS-10" OR "PSS-14" OR "Perceived Medical School Stress" OR "PMSS" OR "Visual Analogue Scale" OR "VAS" OR "Medical Student Stress Questionnaire" OR "MSSQ" OR "Trier Inventory of Chronic Stress" OR "TICS" OR "Kessler Psychological Distress Scale" OR "K10" OR "Bandura-Rosenthal Metrics for Assessing Stress" OR "BAROMAS" OR "Michigan Alcohol Screening Test" OR "MAST" OR "Work-Related Behaviour and Experience Patterns" OR "AVEM" OR "Utrecht Work Engagement Scale" OR "UWES"
2.	<b>AND</b> "medical student*" or "medical learner*" or "clerkship student*" or "preclerkship student*" or "medical education"
3.	<b>AND</b> instrumentation OR Validation Studies OR reproducib* OR psychometr* OR clinimetr* OR clinometr* OR observer variation OR reliab* OR valid* OR coefficient OR "internal consistency" OR (cronbach* AND (alpha OR alphas)) OR "item correlation" OR "item correlations" OR "item selection" OR "item selections" OR "item reduction" OR "item reductions" OR agreement OR precision OR imprecision OR "precise values" OR test-retest OR (test AND retest) OR (reliab* AND (test OR retest)) OR stability OR interrater OR inter-rater OR intrarater OR intra-rater OR intertester OR inter-tester OR intratester OR intra-tester OR interobserver OR inter-observer OR intraobserver OR intra-observer OR intertechnician OR inter-technician OR intratechnician OR intra-technician OR interexaminer OR inter-examiner OR intraexaminer OR intra-examiner OR interassay OR inter-assay OR intraassay OR intra-assay OR interindividual OR inter-individual

OR intraindividual OR intra-individual OR interparticipant OR inter-participant OR intraparticipant OR intra-participant OR kappa OR kappa's OR kappas OR "coefficient of variation" OR repeatab\* OR ((repeatab\* OR repeated) AND (measure OR measures OR findings OR result OR results OR test OR tests)) OR generaliza\* OR generalisa\* OR concordance OR (intraclass AND correlation\*) OR discriminative OR "known group" OR "factor analysis" OR "factor analyses" OR "factor structure" OR "factor structures" OR dimensionality OR subscale\* OR "multitrait scaling analysis" OR "multitrait scaling analyses" OR "item discriminant" OR "interscale correlation" OR "interscale correlations" OR ((error OR errors ) AND (measure\* OR correlat\* OR evaluat\* OR accuracy OR accurate OR precision OR mean)) OR "individual variability" OR "interval variability" OR "rate variability" OR "variability analysis" OR (uncertainty AND (measurement OR measuring)) OR "standard error of measurement" OR sensitiv\* OR responsive\* OR (limit AND detection) OR "minimal detectable concentration" OR interpretab\* OR (small\* AND (real OR detectable) AND (change OR difference)) OR "meaningful change" OR "minimal important change" OR "minimal important difference" OR "minimally important change" OR "minimally important difference" OR "minimal detectable change" OR "minimal detectable difference" OR "minimally detectable change" OR "minimally detectable difference" OR "minimal real change" OR "minimal real difference" OR "minimally real change" OR "minimally real difference" OR "ceiling effect" OR "floor effect" OR "Item response model" OR IRT OR Rasch OR "Differential item functioning" OR DIF OR "computer adaptive testing" OR "item bank" OR "cross-cultural equivalence"



**Table S4. Data Charting Form**

<b>Study Characteristics</b>	
Study ID	
Title	
Country	
Continent	
Year	
Decade	
Sample size	
Medical school year	
Student stage	
No. of institutions	
Diversity (gender, ethnicity)	
Metric	
Language/Cultural Version	
<b>Scale characteristics</b>	
Original Citation	
Purpose	
Year Created	
Original Language	
No. items and Subdomains	
Completion Time	
Response Options	
Recall Period	
Cost	
Administration	
Do you need training to administer it?	
<b>PROM development</b>	
Construct described	
Origin of construct (theory, framework, disease model)	
Target population described	
Developed in representative sample?	
Item identification?	
Number of subjects (Quantitative)	
Moderators/Interviewers	
Topic/Interview Guide described?	
Meetings/Interviews recorded and transcribed verbatim?	
Analytic method	
Number of researchers analyzing	
Saturation reached?	

Cognitive interview/pilot test conducted?	
Conducted in representative sample?	
Content Validity	
Sample (Students/Professionals)	
Relevance/Comprehensiveness/Comprehensibility	
Method	
Each item rated individually?	
Number of subjects	
Moderators/Interviewers	
Topic/Interview Guide described?	
Meetings/Interviews recorded and transcribed verbatim?	
Analytic method	
Number of researchers analyzing	
M	
Relevant?	
Comprehensive?	
Comprehensible?	
Overall rating	
Structural Validity	
Method (EFA/CFA/IRT/Rasch)	
IRT/Rasch model fit (yes, assumed, doubtful)	
# Factors in model	
Factor loadings & items	
Sample size adequate? (7x # of items and/or >200)	
Rotation method	
CFI/TLI/RMSEA/SRMR value	
M	
Q	
Internal Consistency	
ICC calculated for each subscale?	
Continuous: Cronbach alpha/omega value	
Dichotomous: Cronbach alpha/KR-20 value	
Item-total correlation values	
IRT-based: Standard error of theta/reliability coefficient of estimated latent trait value	
M	
Q	
Cross-cultural validity/Measurement invariance	
Similar samples compared?	
Analysis method (regression, CFA, IRT: DIF)	

Result	
Sample size adequate? (>200 and/or 7x # of items)	
M	
Q	
Reliability	
Type of reliability	
Subjects stable in the interim period?	
Time interval between measurements	
Test conditions (mode, setting, instructions) similar?	
Continuous: ICC value	
Nominal/Ordinal: Kappa/Weighted Kappa value	
Ordinal: Weighting scheme described?	
Administrations independent?	
M	
Q	
Measurement Error	
Subjects stable in the interim period?	
Time interval between measurements	
Test conditions (mode, setting, instructions) similar?	
Continuous: SEM/SDC/LoA value	
Nominal/Ordinal: percentage agreement value	
M	
Q	
Criterion Validity	
Comparator	
Metric cutoff	
Continuous: Correlation or AUROC value	
Dichotomous: Sensitivity/Specificity values	
Scores of short version based on responses obtained with the long version?	
M	
Q	
Hypothesis Testing via Convergent Validity	
Comparator Instrument	
Construct	
Valid/Reliable Comparator?	
Correlation coefficient	
M	
Q	
Hypothesis Testing via Known-Groups	

Group 1	
Group 2	
Statistical methods	
Result	
M	
Q	
Responsiveness via Criterion	
Comparator	
Metric cutoff	
Continuous: Correlation or AUROC value	
Dichotomous: Sensitivity/Specificity values	
Scores of short version based on responses obtained with the long version?	
M	
Q	
Responsiveness via Convergence	
Comparator Instrument	
Construct	
Valid/Reliable Comparator?	
Correlation coefficient	
M	
Q	
Responsiveness via Known Groups	
Group 1	
Group 2	
Statistical methods	
Result	
M	
Q	
Responsiveness via Intervention	
Intervention	
Statistical methods	
Result	
M	
Q	

Table S5

Other Construct	Metric Category														
	Anxiety	Burnout	well-being	s	t	QOL	Resilience	(problem/em	Esteem	Sleep	Support	Loneliness	Stress	use	related
Anxiety															
Burnout	+														
General well-being	-	-													
Mindfulness	-	-	+												
Mood/affect	-	-	+	+											
QOL	-	-	+	+	-										
Resilience	-	-	+	+		+									
(problem/emotion/avoidance)	-/0/+*	-/0/+	+/0/-	+/0/-	-/0/+	+/0/-	+/0/-								
Self-Esteem	-	-	+	+	-	+	+	+/0/-							
Sleep	-	-	+	+	-	+	+	+/0/-	+						
Social Support	-	-	+	+	-	+	+	+/0/-	+	+					
Loneliness	+	+	-	-	+	-	-	-/0/+	-	-	-				
Stress	+	+	-	-	+	-	-	-/0/+	-	-	-	+			
Substance use	+	+	-	-	+	-	-	-/0/+	-	-	-	+	+		
Work-related wellbeing	-	-	+	+	-	+	+	+/0/-	+	+	+	-	-	-	
Empathy	-	-	+	+	-	+	+	+/0/-	+	+	+	-	-	-	+
Emotional intelligence	-	-	+	+	-	+	+	+/0/-	+	+	+	-	-	-	+
Fatigue	+	+	-	-	+	-	-	-/0/+	-	-	-	+	+	+	-
Suicidality	+	+	-	-	+	-	-	-/0/+	-	-	-	+	+	+	-
Mistreatment	+	+	-	-	+	-	-	-/0/+	-	-	-	+	+	+	-
Thoughts of dropping out	+	+	-	-	+	-	-	-/0/+	-	-	-	+	+	+	-
Eating disorders	+	+	-	-	+	-	-	-/0/+	-	-	-	+	+	+	-
Physical activity	-	-	+	+	-	+	+	+/0/-	+	+	+	-	-	-	+
Anhedonia	+	+	-	-	+	-	-	-/0/+	-	-	-	+	+	+	-
Hopelessness	+	+	-	-	+	-	-	-/0/+	-	-	-	+	+	+	-
Hope	-	-	+	+	-	+	+	+/0/-	+	+	+	-	-	-	+
Emotional regulation	-	-	+	+	-	+	+	+/0/-	+	+	+	-	-	-	+

Legend

"+" = positive association

"-" = negative association

"0" = no association

*\* -/0/+ refers to relationship of anxiety to coping with respect to problem-based coping, emotion-based coping, and for avoidant coping. Specifically the hypothesized relationships are as follows:*

Negative (-) relationship between anxiety and problem-based coping;

No relationship (0) between anxiety and emotion-based coping;

Positive relationship (+) between anxiety and avoidant coping.

Table S6 Full Psychometric Properties of Included Scales and Subscale Abbreviations

Construct	Metric	Content Validity		Structural Validity		Internal Consistency		Cross-cultural validity/Measurement invariance		Reliability		Criterion Validity		Construct Validity		Responsiveness	
		Q	QE	Q (# of factors)	QE	Q (cronbach alpha)	QE	Q	QE	Q (ICC)	QE	Q	QE	Q	QE	Q	QE
Burnout	Maslach Burnout Inventory - Human Services Survey (MBI-HSS)					+ (0.91 total, EE 0.87, DP 0.75, PA 0.83)	M							N: QOL, resilience, empathy	H	P: Depression, anxiety, stress N: General well-being, mindfulness, work engagement	H
	Maslach Burnout Inventory - Student Survey (MBI-SS)			I (3 factor)	M	+ (0.82 total, EX 0.86, CY 0.84, AE 0.80)	H	+ (Kappa 0.83)	H	- (EX 0.673, CY 0.714, AE 0.667)	M		P: Anxiety, stress, depression, insomnia N: Empathy, resilience (I for EX)	H			
	Oldenburg Burnout Inventory (OLBI)	? (P for Comprehensibility)	L	I (2 factor, 1 P 2 N)	L	+ (0.82 total, EE 0.89, DIS 0.81)	H						P: Poor general well-being, performance-based self-esteem	H			
Anxiety	Beck Anxiety Inventory (BAI)					+ (0.92)	H						P: Maladaptive coping, depression, anxiety, physical activity N: Adaptive coping	H			
	General Anxiety Disorder-7 (GAD-7)					+ (0.93)	H						P: Suicidal ideation, depression, burnout	H			
	State Trait Anxiety Inventory (STAI)					+ (S 0.92, T 0.91)	H			- (S: 0.201, T: 0.416)	VL		P: Psychological distress, fatigue, stress, poor sleep quality, burnout, insomnia, depression N: Social support, resilience, mindfulness	H			
Mood & Anxiety	Depression and Anxiety Stress Scales-21 (DASS-21)			- (3 factor)	L	+ (0.92 total, D 0.91, A 0.85, S 0.83))	H	- (DIF present x1)	H				P: Stress, daytime sleepiness, avoidant coping N: General well-being, mindfulness, resilience, problem-based coping, emotion-focused coping	H	P: Burnout N: Mindfulness, general well-being, work engagement	H	
	Depression and Anxiety Stress Scales-42 (DASS-42)					+ (D 0.93, A 0.87, S 0.91)	H						P: Depression, anxiety	H			
	Hospital Anxiety and Depression Scale (HADS)					+ (0.80 total, A 0.82, D 0.80)	H	+ (Concordance Anxiety: 82.4%-91.7% Depression: 87.0%-98.1%)	L				P: Negative coping N: Positive coping (I)	H			
Mood	Beck Depression Inventory (BDI)			?	L	+ (0.86)	H						P: Loneliness, physical activity, stress, psychological distress N: Life satisfaction, social support, general well-being	H			
	Beck Depression Inventory (BDI)-II			?	VL	+ (0.91)	H			+ (0.89)	L		P: Anxiety, psychological distress, stress, burnout, insomnia N: QOL	H			
	Center for Epidemiologic Studies Depression Scale (CES-D)			?	VL	+ (0.92)	H			- (0.59)	L	+ (Sn 0.82, Sp 0.83, AUROC 0.84)	M	N: Social support	H		

	Patient Health Questionnaire-9 (PHQ-9)					+ (0.88)	H			- (0.65)	M	+ (r 0.889, Sn 0.907, Sp 0.865, AUROC 0.92)	H	P: Stress, burnout, anxiety N: Perceived social support, mindfulness, resilience	H			
	Positive and Negative Affect Schedule (PANAS)	- (all 3)	VL	?	M	+ (P 0.80, N 0.82)	H			- (P 0.19, N -0.09)	M			Pos: Life satisfaction, general well-being, depression (I), emotional intelligence, anxiety (I) Neg: Depression, anxiety	H			
Stress	Bandura-Rosenthal Metrics for Assessing Stress (BAROMAS)									- (CR 0.02-0.66, NCDI - 0.04-0.68)	VL							
	Medical Student Stress Questionnaire-20 (MSSQ-20)					- (0.89 total, ARS 0.82, GARS 0.62, SRS 0.70, IRS 0.88, DRS 0.64, TLRs 0.76)	H											
	Medical Student Stress Questionnaire-40 (MSSQ-40)	?	L	- (6 factor)	H	- (0.95 total, ARS 0.92, IRS 0.91, TLRs 0.86, SRS 0.72, DRS 0.67, GARS 0.77)	L			- (ARS 0.62, IRS 0.47, TLRs 0.55, SRS 0.56, DRS 0.56, GARS 0.51)	VL			P: Poor sleep quality	H			
	Medical Student Stress Questionnaire-40-Revised (MSSQ-40-R)	? (P for Comprehensibility)	L	I (5 factor)	L	- (0.94 total, ARS 0.89, TLRs 0.86, SSRS 0.85, IERS 0.83, PRS 0.62)	H			+ (0.918 total, ARS 0.891, SSRS 0.908, IERS 0.865, TLRs 0.788, PRS 0.862)	M			P: Stress, psychological distress	H			
	Perceived Medical School Stress (PMSS)					+ (0.81)	H	+ (r 0.943)	M									
	Perceived Stress Scale-4 (PSS-4)														P: Burnout N: Work engagement	H		
	Perceived Stress Scale-10 (PSS-10)	?	M				+ (0.82 total, PH 0.78, LSE 0.73)	H	- (Kappa 0.267-0.699)	VL	+ (0.82)	M			P: Anxiety, depression, poor sleep quality, burnout, psychological distress, insomnia N: Life satisfaction, resilience, mindfulness	H	P: Poor sleep quality N: Physical activity	H
Quality of Life	Satisfaction with Life Scale (SWLS)					+ (0.90)	H							P: Self-esteem, resilience, positive affect, social support, mindfulness, general well-being, emotional intelligence N: Loneliness, stress, negative affect, burnout, academic burnout, depression	H			
	World Health Organization Quality of Life Brief Version - (WHOQOL-BREF)			+ (3P 1 N for 4 factors)	L	+ (0.87 total, Ph 0.77, Ps 0.78, SR 0.71, E 0.76)	M			- (Ph 0.665, Ps 0.724, SR 0.725, E 0.602)	M			P: Physical activity, empathy N: Burnout, depression	H			
General well-being	Medical Student Well-Being Index (MSWBI)	+ (all 3)	L	+ (1 factor)	L		H							P: Depression, anxiety, stress	H			
	General Health Questionnaire - 12 (GHQ-12)	? (P for Comprehensibility)	L			+ (0.81)	H							P: Poor sleep quality, burnout, stress, loneliness N: Life satisfaction, emotional intelligence, depression	H			
	General Health Questionnaire - 28 (GHQ-28)					- (0.86 total, SC 0.78, AI 0.83, SD 0.80, D 0.68)	M							P: Anxiety, eating disorders, anorexia nervosa N: Resilience, social support	H			
	Symptom Checklist-90-Revised (SCL-90-R)													N: Social support, resilience	H			

Mindfulness	Five Facets of Mindfulness Questionnaire (FFMQ)				+ (O 0.76, D 0.90, AA 0.88, NJ 0.89, NR 0.77)	H					P: Positive mental health N: Anxiety, stress, depression, poor sleep quality, psychological distress	H		
	Mindful Attention Awareness Scale (MAAS)			+ (1 factor) L	+ (0.90)	H			+ (0.75)	M	P: Life satisfaction, happiness N: Depression, anxiety, stress	H	P: General well-being, work engagement N: Depression, anxiety, stress, burnout	H
Coping & Resilience	Brief COPE										Avoidant: anxiety (I), depression, burnout Problem: -depression, -anxiety, -burnout Emotion: -depression, -anxiety, burnout	H		
	Connor-Davidson Resilience Scale (CD-RISC)			+ (? factor) L	+ (0.89)	H					P: Social support, emotional intelligence, self-esteem, empathy N: Anxiety, psychological distress, burnout, addiction potential, depression	H		
	Ways of Coping Checklist (WCCL)			?	M	- (0.82 total, PF 0.84, WT 0.81, SSS 0.77, BS 0.68, A 0.67)	M							
Self-Esteem	General Self-Efficacy Scale (GSES)				+ (0.92)	H								
	Rosenberg Self-Esteem Scale (RSES)				+ (0.87)	H					P: Life satisfaction, happiness, social support, empathy, resilience N: Burnout, academic burnout	H		
Sleep	Epworth Sleep Scale (ESS)			?	M	+ (0.75)	H			+ (0.822)	VL	P: Poor sleep quality, depression, anxiety, stress	H	
	Pittsburgh Sleep Quality Index (PSQI)					- (0.67)	M					P: Poor general well-being, burnout, academic burnout, stress, psychological distress, fatigue, daytime sleepiness, anxiety, physical activity N: Depression	H	P: Stress H
Social Support & Loneliness	Multidimensional Scale of Perceived Social Support (MSPSS)			+ (3 factor) H	+ (0.91 total, SO 0.90, FA 0.83, FR 0.90)	H	+ (r 0.94)	H		+ (0.81)	H	P: Life satisfaction, self-esteem, resilience N: Depression, anxiety, psychological distress	H	
	UCLA Loneliness Scale				+ (0.88)	H						P: Depression, psychological distress N: Life satisfaction, empathy	H	
Work	Utrecht Work Engagement Scale (UWES)				+ (0.94)	H						N: Stress, burnout	H	P: Mindfulness, general well-being N: Depression, anxiety, stress, burnout H

Quality of the property (Q) rated as sufficient (+), insufficient (-), inconsistent (I), or indeterminate (?). Quality of the evidence (QE) using GRADE rated as high (H), moderate (M), low (L), or very low (VL). Construct validity and responsiveness via convergence/divergence described positive associations (P) and negative associations (N) using pearson's r.

#### Subscale Abbreviations

Maslach Burnout Inventory - Human Services Survey (MBI-HSS): EE = emotional exhaustion, DP = depersonalization, PA = reduced personal achievement

Maslach Burnout Inventory - Student Survey (MBI-SS): EX = emotional exhaustion, CY = cynicism, AE = reduced academic efficacy

Oldenburg Burnout Inventory (OLBI): EE = emotional exhaustion, DIS = disengagement

State Trait Anxiety Inventory (STAI): S = state anxiety, T = trait anxiety



Depression and Anxiety Stress Scales-21 (DASS-21): D = depression, A = anxiety, S = stress

Depression and Anxiety Stress Scales-42 (DASS-42): D = depression, A = anxiety, S = stress

Hospital Anxiety and Depression Scale (HADS): A = anxiety, D = depression

Positive and Negative Affect Schedule (PANAS): P = positive affect, N = negative affect

Medical Student Stress Questionnaire-20 (MSSQ-20): ARS = academic related stressor, IRS = interpersonal and intrapersonal related stressor, TLRS = teaching and learning related stressor, SRS = social related stressor, DRS = drive and desire related stressor, GARS = group activities related stressor

Medical Student Stress Questionnaire-40 (MSSQ-40): ARS = academic related stressor, IRS = interpersonal and intrapersonal related stressor, TLRS = teaching and learning related stressor, SRS = social related stressor, DRS = drive and desire related stressor, GARS = group activities related stressor

Medical Student Stress Questionnaire-40-Revised (MSSQ-40-R): ARS = academic related stressor, TLRS = teaching and learning related stressor, SSRS = staff and students related stressors, IERS = interpersonal and expectations related stressors, PRS = patients related stressors

Perceived Stress Scale-10 (PSS-10): PH = perceived helplessness, LSE = lack of self-efficacy

World Health Organization Quality of Life Brief Version - (WHOQOL-BREF): PH = physical health, Ps = psychological health, SR = social relationships, E = environmental health

General Health Questionnaire - 28 (GHQ-28): SC = somatic symptoms, AI = anxiety and insomnia, SD = social dysfunction, D = depression

Five Facets of Mindfulness Questionnaire (FFMQ): O = observing, D = describing, AA = acting with awareness, NJ = non-judgement, NR = non-reactivity

Ways of Coping Checklist (WCCL): PF = problem-focused, WT = wishful thinking, SSS = seeks social support, BS = blamed self, A = avoidance

Multidimensional Scale of Perceived Social Support (MSPSS): SO = significant other, FA = family, FR = friends