Title: Comparative performance of the EQ-5D-5L, EQ-HWB, and PROMIS-10 in screening for anxiety and depression in the general adult population in 15 countries

Authors: Hilary Short, MSc, University of Alberta; Fatima Al Sayah, PhD, University of Alberta; Mathieu F. Janssen PhD, EuroQol Research Foundation; Erica Lubetkin, MD, MPH, CUNY School of Medicine; Rosalie Viney, PhD, University of Technology Sydney; Jeffrey A. Johnson, PhD, University of Alberta

ABSTRACT

Background: To examine the usefulness of generic health status measures in screening for anxiety and depression symptoms in the general adult population in Argentina, Australia, Brazil, Canada, Chile, China, France, Germany, Japan, Mexico, Netherlands, New Zealand, Spain, United Kingdom (UK), United States (US).

Methods: Cross-sectional data from "EuroQol Data for Assessment of Population Health Needs and Instrument Evaluation" project was used. The performance of specific items and the summary scores of the EQ-5D-5L, EQ-Health and Wellbeing (EQ-HWB), and Patient-Reported Outcomes Measurement Information System 10-item short form (PROMIS-10) were compared to the Generalized Anxiety Disorder 2-item questionnaire (GAD-2) and the Patient Health Questionnaire 2-item version (PHQ-2). GAD-2 and PHQ-2 are validated screening measures for anxiety and depression, respectively, with a positive screen defined as a score of ≥3. Performance of EQ-5D-5L, EQ-HWB, and PROMIS-10 in screening for anxiety and depression symptoms was evaluated using area under receiver operating curve (AUROC) analysis.

Results: We achieved a targeted sample size of 4500 per country. Sample distributions for age, sex, income, and urban/rural area were based on census or national data in each country. Brazil had the highest rates of positive screens for depression (30.1%), anxiety (30.6%) and the combined symptoms (20.4%), while China had the lowest rates (8.8%, 9.9%, and 4.7% respectively). Across all countries, the EQ-HWB anxiety item performed best in screening for anxiety, with the highest accuracy in Australia (AUROC: 0.90) UK (0.90), and US (0.90), and the lowest in Chile (0.78). The EQ-HWB depression item performed best for screening depression, with the highest accuracy in New Zealand (0.88) US (0.88), and Japan (0.88), and the lowest in China (0.81), Mexico (0.81), and Argentina (0.81). The EQ-HWB anxiety and depression items showed the highest performance for screening the combination of anxiety and depression with AUROC values ranging from 0.79 to 0.90 depending on the country. The EQ-5D-5L anxiety/depression dimension (range: 0.87-0.71) and the total sum score quintiles (range: 0.71-0.83) also performed well across all countries. However, the EQ VAS, the four mental health items of PROMIS-10, and the PROMIS-10 global physical health and mental health T-scores had lower performance across all screenings in all countries (<0.37).

Conclusion: Generic health status measures, like the EQ-5D-5L and EQ-HWB, have potential as effective screening tools for anxiety and depression in the general adult population, as evidenced by their performance across multiple countries.

Note: Analysis and results presented here are preliminary; further analyses are underway.

INTRODUCTION

According to the World Health Organization, in 2019, 1 in every 8 people, or 970 million

people around the world were living with a mental disorder, anxiety and depressive

disorders being the most common.[1] During the COVID-19 pandemic, it is estimated that

anxiety and depression rose by 26% and 28% respectively.[1,2] The long-term effects of the

pandemic such as loss of livelihood, decreases in economic activity, widespread

economic inflation, and shifting political priorities all have the potential to substantially

affect the mental health of many populations around the world.[3,4] Rising mental health

disorders represent a significant public health burden, contributing to impaired quality of

life, reduced productivity, and increased healthcare utilization.[5] As a result, effective tools

to identify individuals at risk of anxiety and depression in the general population are

needed.

Several patient-reported outcome measures (PROMs) are widely used to assess physical,

mental, and overall health and wellbeing. Among these, the EQ-5D-5L, EQ-Health and

Wellbeing (EQ-HWB), and Patient-Reported Outcomes Measurement Information System

10-item short form (PROMIS-10) are prominent instruments. Each of these tools captures

different dimensions of health-related quality of life (HRQL), with distinct strengths and

features, making them potentially valuable for mental health screening. Some studies have

previously examined the performance of the EQ-5D (3L and 5L versions) in screening for

anxiety and depression in distinct populations[6-13] however, there is less evidence for the

EQ-HWB and PROMIS-10. While each of these instruments has demonstrated value in

clinical and research settings[14-19] their comparative effectiveness and cross-cultural applicability as screening tools for mental health disorders in the general population warrant further investigation.

This study seeks to evaluate the usefulness of specific items and summary scores of the EQ-5D-5L, EQ-HWB, and PROMIS-10 as measures for anxiety and depression symptoms across diverse populations in 15 countries. By examining their performance in a variety of countries around the world, the study aims to address whether these tools are suitable for global application and culturally diverse settings.

METHODS

Data Source

This study used data from the EuroQol Data for Assessment of Population Health Needs and Instrument Evaluation (EQ-DAPHNIE) project. Data was collected by online survey from the general adult population in 15 countries between February and December 2024. Countries included Argentina, Australia, Brazil, Canada, Chile, China, France, Germany, Japan, Mexico, Netherlands, New Zealand, Spain, United Kingdom (UK), United States (US). Study design and data collection methods are described in detail elsewhere.[20] Briefly, we aimed for a sample size of 4500 respondents per country, with quota sampling for age, sex, income, and area of residence (i.e., urban/rural). Quotas were determined for each country based on available census data for those characteristics.

Measures

The EQ-5D-5L is a generic preference-based measure of HRQL with five dimensions (mobility, self-care, usual activities, pain/discomfort, anxiety/depression), each with five levels of problems (1= none, 2=mild, 3=moderate, 4=severe, 5=extreme), corresponding to 3125 distinct health states.[21,22] The EQ-5D-5L also includes a visual analogue scale (VAS), which records the respondent's self-rated health 'today' on a vertical, visual analogue scale, ranging from 0 "worst imaginable health state" to 100 "best imaginable health state".[22] A total sum score (TSS), also known as the level sum score, ranging from 5 to 25, can also be calculated from the EQ-5D-5L data by summing the levels on the five dimensions, whereby 5 represents the best health state (i.e., no problems in all five dimensions, 11111) and 25 represents the worst health state (i.e., severe problems in all five dimensions, 55555).[23]

The EQ-HWB is a new EuroQol measure with experimental status, designed to assess health and wellbeing across a wide range of domains.[15] It builds upon the EQ-5D but expands its scope to include additional dimensions that capture broader aspects of wellbeing, such as mental health, social connections, and functioning. In this study, the anxiety and depression items were analyzed, which assesses the frequency (1= none of the time; 2= only occasionally; 3= sometimes; 4= often; 5= most or all of the time) of such symptoms "in the last 7 days". The EQ-HWB was not collected in Brazil, France, and the Netherlands as language versions of this measure were not available at the time of data collection.

PROMIS-10 is a 10-item generic health measure designed to assess overall physical, mental, and social health. The items in PROMIS-10 are scored on five-point Likert scale and produce two summary scores, the Global Physical Health T-score and the Global Mental Health T-score.[24,25] Higher T-scores correspond to better physical or mental health. There are 4 items in PROMIS-10 that make up the Global Mental Health T-score. Those items include assessments of "quality of life", "mental health, including mood and ability to think", "satisfaction with social activities and relationships", and "emotional problems such as feeling anxious, depressed, or irritable". The first three items have a recall period of "in general", rated from excellent (5) to poor (1); the last item is assessed by frequency of being bothered, with a recall period "in the last 7 days", rated from never (5) to always (1). PROMIS-10 was not available in Japanese language version.

The performance of the EQ-5D-5L, EQ-HWB, and PROMIS-10 in screening for anxiety and depressive symptoms was evaluated in comparison to two self-report screening instruments: the Generalized Anxiety Disorder 2-item (GAD-2) questionnaire and the Patient Health Questionnaire 2-items (PHQ-2). GAD-2 and PHQ-2 assess the presence and frequency of anxiety and depressive symptoms, respectively, "over the last 2 weeks".[26,27] Both measures include two items that are scored from 0 (not at all) to 3 (nearly every day), with higher scores indicating higher severity of anxiety or depressive symptoms. A total score was generated by summing the two items (range 0–6), and the presence of anxiety or depressive symptoms is indicated by a cut-off point of ≥ 3. A score of 3 points is the

preferred cut-off for identifying possible cases for which further assessment for anxiety or depression disorders is warranted.[28,29] The total scores were categorized as anxiety present (GAD-2 ≥ 3), depression present (PHQ-2 ≥ 3), vs. anxiety absent (GAD-2 < 3) and depression absent (PHQ-2 < 3).

Statistical Analysis

Descriptive statistics were computed for demographic variables. The EQ-5D-5L TSS, EQ VAS, PROMIS-10 global physical health and mental health T-scores were categorized into quintiles. The EQ-5D-5L anxiety/depression dimension and the EQ-HWB anxiety and depression items have 5 levels, with increasing problems with anxiety or depression on the 1-5 scale. PROMIS-10 items have 5 levels, with increasing better health on the 1-5 scale. A composite variable was created from the GAD-2 and PHQ-2 and was categorized as follows:

- Absent anxiety and depressive symptoms

- Present anxiety and absent depressive symptoms

- Absent anxiety and present depressive symptoms

- Present anxiety and depressive symptoms

Area under receiver operating curve (AUROC) analysis was used to examine the performance of the following components in screening for anxiety and depressive symptoms: EQ-5D-5L anxiety/depression dimension, EQ-VAS, EQ-5D-5L TSS, EQ-HWB anxiety item, EQ-HWB depression item, PROMIS-10 quality of life item (item 2), PROMIS-10 mental health item (item 4), PROMIS-10 social activities and relationships item (item 5),

PROMIS-10 emotional problems item (item 10r), PROMIS-10 global mental health T-score, and global physical health T-score. Sensitivity, specificity, positive (LR+) and negative (LR−) likelihood ratios for presence of anxiety symptoms, presence of depressive symptoms, and presence of the combination at each cut-point, as well as an overall AUROC with 95% confidence interval (CI) were calculated to identify the optimal threshold for each of the examined components. AUROC values were interpreted as follows: ≤ 0.5 non-informative, 0.5 < AUROC ≤ 0.7 less accurate, 0.7 < AUROC ≤ 0.9 moderately accurate, 0.9 < AUROC < 1.0 highly accurate, and AUROC = 1 perfect test.[30] All analyses were performed using Stata version 18.[31]

RESULTS

General Characteristics

Differences were observed in socio-demographics across countries (Table 1), driven in part by the local country census and quota sampling. The mean (SD) age varied from 51.7 (17.0) in Canada to 36.3 (12.6) in Chile. Germany had the lowest percentage of female respondents (45.9%) and New Zealand had the highest (62.9%). China had the most married participants (82.2%), and Chile had the most single participants (50.3%). China had the most participants with less than a high school education (14.1%), and Brazil had the most participants with a high school education (41.4%). Japan had the most unemployed participants (19.5%), and China had the least (1.8%). Canadian respondents reported the most difficulty on their present income (37.9%) while respondents in China reported the most comfort on their present income (45.8%). China had the most

respondents living in a rural community (33.5%) and Argentina had the most living in an urban or sub-urban area (94.5%). Respondents in Japan reported the most excellent or very good overall health (32.3%) and China reported the most fair or poor health (60.7%). Brazil had the most respondents that reported they had anxiety as a chronic condition (29.6%) and Japan had the least (3.7%). The US had the most respondents that reported they had depression as a chronic condition (26.7%) and China had the least (3.9%).

Distribution of Anxiety and Depression Symptoms across Measures and Countries

Canada had the most respondents reporting problems (levels 2-5) on the EQ-5D-5L anxiety/depression dimension (55.1%), followed by Argentina (54.2%) and the US (53.8%), whereas Japan had the least (31.3%). Canada had the highest mean (SD) EQ-5D-5L TSS at 8.1 (3.2), and Japan and China had the lowest score at 6.4 (2.2, 2.0, respectively). Likewise, Canada had the lowest mean (SD) EQ-VAS at 68.5 (3.2) and China the highest at 80.2 (16.7).

Chile had the most respondents reporting some frequency of depression (levels 2-5) on the depression item of the EQ-HWB (71.2%) and Japan had the fewest (47.9%). Chile also had the most respondents reporting some frequency of anxiety (levels 2-5) on the anxiety item of the EQ-HWB (77.2%) and Japan had the fewest (49.1%).

Canada had the lowest mean (SD) PROMIS-10 Global Mental Health T-score at 49.5 (7.8), indicating worst overall mental health, and China had the highest at 53.0 (7.3), indicating best overall mental health.

Brazil had the most positive screens (PHQ-2 and GAD-2 total score ≥3, respectively) for depression (30.1%), anxiety (30.6%), and the combination (20.4%) and China had the least (8.8%, 9.9%, and 4.7% respectively) (Table 2).

Comparative Performance of the Measures in Screening for Anxiety

The EQ-5D-5L anxiety/depression dimension performed the best in screening for anxiety in the UK (AUROC 0.86, 95% CI: 0.84, 0.87), followed by the US (AUROC 0.84, 95% CI: 0.82, 0.85), Canada (AUROC 0.84, 95% CI: 0.83, 0.86), and New Zealand (AUROC 0.82, 95%CI 0.80, 0.83). The worst performance was in Chile (AUROC 0.72, 95% CI: 0.71, 0.74). EQ-VAS quintiles performed the best in Chile and Mexico (AUROC 0.35, 95% CI: 0.33, 0.37) and the worst in Japan (AUROC 0.23, 95% CI: 0.21, 0.25). EQ-5D-5L TSS quintiles performed the best in Japan (AUROC 0.81, 95% CI: 0.79, 0.83), followed by the UK (AUROC 0.80, 95% CI: 0.78, 0.81), and the worst in the Netherlands (AUROC 0.71, 95% CI: 0.69, 0.71).

The EQ-HWB depression item performed the best in screening for anxiety in Australia, Canada, the US (AUROC: 0.87, 95%CI: 0.86, 0.88), the UK (AUROC: 0.87, 95% CI: 0.86, 0.89), and Japan (AUROC: 0.87, 95% CI: 0.85, 0.88). The worst performance was in Chile (AUROC: 0.78, 95% CI: 0.77, 0.80). The EQ-HWB anxiety item performed the best in

screening for anxiety in Australia (AUROC: 0.90, 95% CI: 0.87, 0.91), the UK (AUROC: 0.90, 95% CI: 0.89, 0.91), the US (AUROC: 0.90, 95% CI: 0.88, 0.91). The worst performance was in China (AUROC: 0.80, 95% CI: 0.77, 0.82) and Mexico (AUROC: 0.80, 95% CI: 0.78, 0.81).

Of the four items that make up the PROMIS-10 global mental health T-score, the item assessing emotional problems performed the worst across all countries (AUROC range: 0.12-0.24). The item assessing overall quality of life performed the best across all countries (AUROC range: 0.25-0.35). There was no difference in the performance of the global mental health and global physical health T-score quintiles (AUROC range: 0.20-0.29) (Table 3).

Comparative Performance of the Measures in Screening for Depression

The EQ-5D-5L anxiety/depression dimension performed the best in screening for depression Japan (AUROC: 0.83, 95% CI: 0.81, 0.85), followed by the UK (AUROC 0.82, 95% CI: 0.81, 0.84), and the US (AUROC 0.81, 95% CI: 0.79, 0.83). The worst performance was in Brazil (AUROC 0.71, 95% CI: 0.69, 0.72). EQ-VAS quintiles did not perform well in screening for depression across all countries (AUROC range: 0.23-0.33). EQ-5D-5L TSS quintiles performed the best in Japan (AUROC 0.80, 95% CI: 0.79, 0.82), followed by the UK (AUROC 0.79, 95% CI: 0.77, 0.80), and the worst in the Netherlands (AUROC 0.70, 95% CI: 0.68, 0.72).

The EQ-HWB depression item performed the best in screening for depression in New Zealand (AUROC: 0.88, 95%CI: 0.87, 0.89), the US, and Japan (AUROC: 0.88, 95%CI: 0.86, 0.89). The worst performance was in China (AUROC: 0.81, 95% CI: 0.79, 0.83), Mexico (AUROC: 0.81, 95% CI: 0.80, 0.83), and Argentina (AUROC: 0.81, 95% CI: 0.79, 0.82). The EQ-HWB anxiety item performed the best in screening for depression in Japan (AUROC: 0.86, 95% CI: 0.84, 0.88), followed by the UK (AUROC: 0.85, 95% CI: 0.84, 0.86). The worst performance was in Argentina (AUROC: 0.75, 95% CI: 0.73, 0.77).

The PROMIS-10 item assessing emotional problems performed the worst in screening for depression across all countries (AUROC range: 0.14-0.27). The item assessing overall quality of life performed the best of the 4 items across all countries (AUROC range: 0.25-0.35). There was no difference in the performance of the global mental health and global physical health T-score quintiles (AUROC range: 0.21-0.31) (Table 3).

Comparative Performance of the Measures in Screening for Comorbid Anxiety and Depression

The EQ-5D-5L anxiety/depression dimension performed the best in screening for the combination of anxiety and depression in the UK (AUROC: 0.87, 95% CI: 0.85, 0.88), followed by Japan (AUROC 0.86, 95% CI: 0.84, 0.88), and Canada (AUROC 0.85, 95% CI: 0.83, 0.86). The worst performance was in Brazil (AUROC 0.75, 95% CI: 0.73, 0.76). EQ-VAS quintiles did not perform well in screening for depression across all countries (AUROC range: 0.24-0.32). EQ-5D-5L TSS quintiles performed the best in Japan (AUROC 0.83, 95%

CI: 0.81, 0.85), followed by the UK (AUROC 0.81, 95% CI: 0.80, 0.83), and the worst in Australia (AUROC 0.71, 95% CI: 0.69, 0.73).

The EQ-HWB depression item performed the best in screening for comorbid anxiety and depression in Canada, the UK, the US (AUROC: 0.90, 95%CI: 0.88, 0.81) and Japan (AUROC: 0.90, 95% CI: 0.87, 0.92). The worst performance was in China (AUROC: 0.83, 95% CI: 0.80, 0.86). The EQ-HWB anxiety item performed the best in screening for comorbid anxiety and depression in Japan (AUROC: 0.90, 95% CI: 0.88, 0.92) and the UK (AUROC: 0.90, 95% CI: 0.89, 0.91). The worst performance was in China (AUROC: 0.79, 95% CI: 0.76, 0.83).

The PROMIS-10 item assessing emotional problems performed the worst in screening for comorbid anxiety and depression across all countries (AUROC range: 0.11-0.23). The item assessing overall quality of life performed the best of the 4 items across all countries, except in the Netherlands (AUROC range: 0.22-0.34). The social activities and relationships item was the best performing item in the Netherlands (AUROC: 0.33, 95% CI: 0.30, 0.35). There was no difference in the performance of the global mental health and global physical health T-score quintiles (AUROC range: 0.21-0.28) (Table 3).

Sensitivity, specificity, positive and negative likelihood ratios for presence of anxiety symptoms, presence of depressive symptoms, and presence of the combination at each cut-point are presented in a supplemental file. The optimal cut-point of the EQ-5D-5L

anxiety/depression dimension, TSS quintiles, and EQ-HWB anxiety and depression items were at ≥ 3 for all screenings.

DISCUSSION

The goal of this study was to compare the performance of commonly used generic health measures in screening for anxiety and depression in the general adult population across 15 countries. Across all countries, our findings indicate that specific items and summary scores of the EQ-5D-5L and EQ-HWB outperformed those of PROMIS-10 in identifying anxiety and depression symptoms, demonstrating superior psychometric properties and greater sensitivity and specificity. The superior performance of the EQ-5D-5L and EQ-HWB may be attributed to their design and focus. The EQ-5D-5L includes a specific dimension dedicated to anxiety and depression, which directly captures the presence and severity of these mental health symptoms. Its concise format and targeted approach likely contribute to its effectiveness in screening for psychological distress. Similarly, the EQ-HWB, designed to encompass a broader range of health and wellbeing dimensions, including distinct dimensions for anxiety and depression, may capture anxiety and depressive symptoms more accurately. In contrast, PROMIS-10 showed limited utility as a screening tool for anxiety and depression in this study. While it includes questions related to overall quality of life, mental health, social activities and relationships, and emotional problems, its broader focus may dilute its sensitivity to the specific symptoms of anxiety and depression.

Overall, the prevalence of anxiety and depression symptoms across countries did not affect the performance of the three measures. While the findings across countries were generally similar, the EQ-5D-5L and EQ-HWB performed the best in the predominately English-speaking countries (Australia, Canada, New Zealand, UK, US) and Japan and worst in the Spanish-speaking countries (Argentina, Chile, Mexico, Spain) and Brazil. This may demonstrate that the language and/or cultural suitability of these measures is better in certain countries.

Other studies have supported the use of the EQ-5D-5L as a screening tool for anxiety and depression.[6,9-12] Together with our study, these studies show that the EQ-5D-5L anxiety/depression dimension is equally sensitive in picking up problems with anxiety or depression, as well as the combination of both anxiety and depression symptoms, exhibiting high convergent validity. The EQ-HWB is a new instrument so there is limited evidence on its psychometric properties overall. However, McDool et al[32] found convergence in anxiety and depression items with the anxiety/depression dimension of the EQ-5D-5L.

The results of this study have important implications for the use of PROMs in screening for anxiety and depression. The EQ-5D-5L and EQ-HWB demonstrated strong potential as practical and effective tools for identifying individuals at risk of these conditions. Given their ease of use and adaptability across diverse cultural contexts, these measures could be integrated into routine health assessments in primary care, public health surveys, and

population-level mental health initiatives. However, further research is needed to explore their long-term utility in clinical and non-clinical settings, as well as their responsiveness to changes in mental health status over time. By contrast, the findings suggest that the PROMIS-10 may be less suitable for this purpose, particularly in settings where accurate mental health screening is critical. However, its broader focus may still make it valuable in assessing overall health outcomes or as part of a more comprehensive assessment framework. The performance of PROMIS-10 may also vary depending on the specific population or healthcare context, warranting further investigation.

Limitations

We recognize this study has limitations. First, the reliance on any self-reported data may introduce response bias. However, all measures used were self-reported, including the reference measures. The use of the PHQ-2 and GAD-2 limited our ability to analyze different levels of anxiety and depression symptoms (e.g., mild, moderate-severe). Second, each measure used in this study had different recall periods of assessment. The PHQ-2 and GAD-2 asks respondents to recall the frequency of symptoms "over the last 2 weeks"; the EQ-5D-5L asks respondents to report the severity of their problems "today"; the EQ-HWB asks respondents to recall the frequency of the symptom "in the last 7 days"; PROMIS-10 has two recall periods, depending on the question; either "in general" or "in the past 7 days". These differences in recall periods may reduce the correlation between measures. Third, data used was cross-sectional so responsiveness of the measures could

not be assessed. The methodological limitations of data collection are described elsewhere.[20]

CONCLUSION

This study highlights the strengths of specific items and summary scores of the EQ-5D-5L and EQ-HWB as effective screening tools for anxiety and depression in the general adult population, outperforming the PROMIS-10 in this capacity. These findings underscore the importance of selecting measures that align with the targeted mental health outcomes and the contexts in which they will be applied. Future research should continue to explore the cross-cultural applicability and implementation of these tools to ensure their widespread utility in addressing the global burden of mental health disorders.

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Table 1. General characteristics by country

Mean ± SD or N (%)		Australia (n=5040)	Canada (n=4668)	New Zealand (n=4515)	United Kingdom (n=4505)	United States (n=4525)	France (n=4502)	Brazil (n=4513)	Japan (n=4502)	Netherlands (n=4506)	China (n=4519)	Spain (n=4526)	Mexico (n=4508)	Chile (n=4503)	Argentina (n=4506)	Germany (n=4537)
Age	Mean (SD)	49.8 ± 16.9	51.7 ± 17.0	46.0 ± 16.8	48.7 ± 16.8	49.5 ± 17.3	48.6 ± 16.2	37.7 ± 14.0	55.2 ± 14.4	49.1 ± 17.5	46.8 ± 15.1	47.1 ± 16.2	36.6 ± 14.6	36.3 ± 12.6	37.1 ± 13.9	48.3 ± 16.7
	18-24	198 (3.9%)	284 (6.1%)	295 (6.5%)	340 (7.6%)	344 (7.6%)	391 (8.7%)	920 (20.4%)	113 (2.5%)	388 (8.6%)	350 (7.8%)	624 (13.8%)	1170 (26.0%)	1019 (22.6%)	1110 (24.6%)	456 (10.1%)
	25-34	944 (18.7%)	669 (14.3%)	1054 (23.3%)	783 (17.4%)	800 (17.7%)	717 (15.9%)	1252 (27.7%)	319 (7.1%)	749 (16.6%)	763 (16.9%)	507 (11.2%)	1336 (29.6%)	1190 (26.4%)	1140 (25.3%)	672 (14.8%)
	45-44	1054 (20.9%)	776 (16.6%)	1140 (25.3%)	842 (18.7%)	773 (17.1%)	781 (17.4%)	1050 (23.3%)	622 (13.8%)	806 (17.9%)	1060 (23.5%)	828 (18.3%)	783 (17.4%)	1175 (26.1%)	948 (21.0%)	890 (19.6%)
	45-64	1608 (31.9%)	1621 (34.7%)	1143 (25.3%)	1529 (33.9%)	1513 (33.4%)	1660 (36.9%)	1089 (24.1%)	1974 (43.9%)	1377 (30.6%)	1446 (32.0%)	1734 (38.3%)	1021 (22.7%)	1050 (23.3%)	1144 (25.4%)	1561 (34.4%)
	65+	1224 (24.3%)	1294 (27.7%)	828 (18.3%)	970 (21.5%)	1069 (23.6%)	938 (20.8%)	183 (4.1%)	1455 (32.3%)	1143 (25.4%)	900 (19.9%)	833 (18.4%)	197 (4.4%)	69 (1.5%)	164 (3.6%)	958 (21.1%)
	Missing	12 (0.2%)	24 (0.5%)	55 (1.2%)	41 (0.9%)	26 (0.6%)	15 (0.3%)	19 (0.4%)	19 (0.4%)	43 (1.0%)	0 (0.0%)	0 (0.0%)	1 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
Sex	Female	2650 (52.6%)	2666 (57.1%)	2838 (62.9%)	2371 (52.6%)	2225 (49.2%)	2556 (56.8%)	2304 (51.1%)	2258 (50.2%)	2487 (55.2%)	2142 (47.4%)	2206 (48.7%)	2485 (55.1%)	2287 (50.8%)	2259 (50.1%)	2082 (45.9%)
	Missing	61 (1.2%)	63 (1.4%)	42 (0.9%)	37 (0.8%)	52 (1.2%)	71 (1.6%)	56 (1.2%)	46 (1.0%)	42 (0.9%)	31 (0.7%)	46 (1.0%)	15 (0.3%)	19 (0.4%)	19 (0.4%)	52 (1.2%)
Marital status	Single	1218 (24.2%)	1593 (34.1%)	1096 (24.3%)	1612 (35.8%)	1456 (32.2%)	1483 (32.9%)	1896 (42.0%)	1524 (33.9%)	1322 (29.3%)	557 (12.3%)	1423 (31.4%)	1780 (39.5%)	2266 (50.3%)	2209 (49.0%)	1081 (23.8%)
	Married	2533 (50.3%)	1790 (38.4%)	2309 (51.1%)	1742 (38.7%)	1900 (42.0%)	1627 (36.1%)	1721 (38.1%)	2379 (52.8%)	1799 (39.9%)	3714 (82.2%)	2183 (48.2%)	1801 (40.0%)	1150 (25.5%)	1151 (25.5%)	2280 (50.3%)
	Domestic partnership	586 (11.6%)	413 (8.9%)	622 (13.8%)	541 (12.0%)	336 (7.4%)	588 (13.1%)	500 (11.1%)	47 (1.0%)	677 (15.0%)	72 (1.6%)	387 (8.6%)	526 (11.7%)	713 (15.8%)	743 (16.5%)	550 (12.1%)
	Divorced	355 (7.0%)	402 (8.6%)	188 (4.2%)	337 (7.5%)	486 (10.7%)	469 (10.4%)	208 (4.6%)	371 (8.2%)	377 (8.4%)	46 (1.0%)	300 (6.6%)	171 (3.8%)	202 (4.5%)	185 (4.1%)	330 (7.3%)
	Separated	127 (2.5%)	164 (3.5%)	92 (2.0%)	64 (1.4%)	75 (1.7%)	115 (2.6%)	67 (1.5%)	34 (0.8%)	21 (0.5%)	10 (0.2%)	69 (1.5%)	121 (2.7%)	102 (2.3%)	104 (2.3%)	78 (1.7%)
	Widowed	176 (3.5%)	251 (5.4%)	143 (3.2%)	165 (3.7%)	223 (4.9%)	121 (2.7%)	52 (1.2%)	97 (2.2%)	184 (4.1%)	92 (2.0%)	99 (2.2%)	73 (1.6%)	39 (0.9%)	61 (1.4%)	147 (3.2%)
	Other	28 (0.6%)	32 (0.7%)	40 (0.9%)	30 (0.7%)	32 (0.7%)	70 (1.6%)	56 (1.2%)	26 (0.6%)	116 (2.6%)	11 (0.2%)	56 (1.2%)	25 (0.6%)	23 (0.5%)	43 (1.0%)	44 (1.0%)
	Missing	17 (0.3%)	23 (0.5%)	25 (0.6%)	14 (0.3%)	17 (0.4%)	29 (0.6%)	13 (0.3%)	24 (0.5%)	10 (0.2%)	17 (0.4%)	9 (2.2%)	11 (0.2%)	8 (0.2%)	10 (0.2%)	27 (0.6%)
Education level	<High School	93 (1.9%)	154 (3.3%)	207 (4.6%)	90 (2.0%)	54 (1.2%)	377 (8.4%)	356 (7.9%)	165 (3.7%)	306 (6.8%)	639 (14.1%)	161 (3.6%)	82 (1.8%)	128 (2.8%)	347 (7.7%)	282 (6.2%)
	High School	1666 (33.1%)	1393 (29.8%)	963 (21.3%)	1796 (39.9%)	1521 (33.6%)	833 (18.5%)	1863 (41.3%)	1408 (31.3%)	952 (21.1%)	934 (20.7%)	584 (12.9%)	513 (11.4%)	1174 (26.1%)	1516 (33.6%)	1858 (41.0%)
	Polytechnic or Bachelors	2595 (51.5%)	2629 (56.3%)	2807 (62.2%)	2004 (44.5%)	2172 (48.0%)	1451 (32.2%) (BAC)	1861 (41.2%)	2554 (56.7%)	2244 (49.8%)	2625 (58.1%)	2496 (55.1%)	3587 (79.6%)	2785 (61.8%)	2304 (51.1%)	1425 (31.4%)
	Masters/PhD	650 (12.9%)	472 (10.1%)	514 (11.4%)	588 (13.1%)	757 (16.7%)	1824 (40.5%) (BAC 3 or higher)	410 (9.1%)	316 (7.0%)	329 (7.3%)	301 (6.7%)	1271 (28.1%)	309 (6.9%)	406 (9.0%)	124 (2.8%)	946 (20.9%)
	Missing	36 (0.7%)	20 (0.4%)	24 (0.5%)	27 (0.6%)	21 (0.5%)	17 (0.4%)	23 (0.5%)	29 (0.6%)	675 (15.0%)	20 (0.4%)	14 (0.3%)	17 (0.4%)	10 (0.2%)	20 (0.4%)	26 (0.6%)
Employment status	Stay at home parent	222 (4.4%)	131 (2.8%)	395 (8.8%)	170 (3.8%)	152 (3.8%)	79 (1.8%)	253 (5.6)	103 (2.3%)	147 (3.3%)	146 (3.2%)	119 (2.6%)	296 (6.6%)	189 (4.2%)	159 (3.5%)	73 (1.6%)
	Self employed	265 (5.3%)	318 (6.8%)	257 (5.7%)	298 (6.6%)	353 (7.8%)	244 (5.4%)	1131 (25.1%)	377 (8.4%)	280 (6.2%)	389 (8.6%)	282 (6.2%)	931 (20.7%)	739 (16.4%)	1052 (23.4%)	286 (6.3%)
	Employed full-time	2029 (40.3%)	1344 (28.8%)	1982 (43.9%)	1365 (30.3%)	1721 (38.0%)	2007 (44.6%)	1658 (36.7%)	1653 (36.7%)	1425 (31.6%)	2532 (56.0%)	2168 (47.9%)	1788 (39.7%)	2032 (45.1%)	1556 (34.5%)	2186 (48.2%)
	Employed part-time	747 (14.8%)	501 (10.7%)	549 (12.2%)	740 (16.4%)	433 (9.6%)	376 (8.4%)	382 (8.5%)	640 (14.2%)	805 (17.9%)	141 (3.1%)	383 (8.5%)	522 (11.6%)	420 (9.3%)	603 (13.4%)	531 (11.7%)
	Unemployed	292 (5.8%)	390 (8.4%)	229 (5.1%)	334 (7.4%)	354 (7.8%)	333 (7.4%)	472 (10.5%)	879 (19.5%)	217 (4.8%)	82 (1.8%)	408 (9.0%)	267 (5.9%)	458 (10.2%)	382 (8.5%)	162 (3.6%)
	Retired	1099 (21.8%)	1370 (29.4%)	673 (14.9%)	954 (21.2%)	1036 (22.9%)	1077 (23.9%)	238 (5.3%)	512 (11.4%)	979 (21.7%)	1007 (22.3%)	712 (15.7%)	185 (4.1%)	94 (2.1%)	163 (3.6%)	943 (20.8%)
	Student	96 (1.9%)	224 (4.8%)	136 (3.0%)	246 (5.5%)	170 (3.8%)	157 (3.5%)	265 (5.9%)	60 (1.3%)	187 (4.2%)	144 (3.2%)	296 (6.5%)	378 (8.4%)	454 (10.1%)	487 (10.8%)	127 (2.8%)
	Unable to work due to disability/illness	189 (3.8%)	311 (6.7%)	184 (4.1%)	300 (6.7%)	256 (5.7%)	129 (2.9%)	33 (0.7%)	84 (1.9%)	372 (8.3%)	20 (0.4%)	89 (2.0%)	36 (0.8%)	22 (0.5%)	28 (0.6%)	99 (2.2%)
	Maternity or Paternity Leave	23 (0.5%)	15 (6.7%)	51 (1.1%)	19 (0.4%)	5 (0.1%)	11 (0.2%)	19 (0.4)	7 (1.9%)	8 (0.2%)	2 (0.0%)	8 (0.2%)	19 (0.4%)	25 (0.6%)	5 (0.1%)	37 (0.8%)
	Other	66 (1.35)	44 (0.9%)	38 (0.8%)	66 (6.7%)	37 (0.8%)	68 (1.5%)	51 (1.1%)	152 (3.4%)	72 (1.6%)	24 (0.5%)	44 (1.0%)	66 (1.5%)	51 (1.1%)	50 (1.1%)	66 (1.5%)
	Missing	12 (0.2%)	20 (0.4%)	21 (0.5%)	13 (0.3%)	14 (0.3%)	21 (0.5%)	11 (0.2%)	35 (0.8%)	32 (0.7%)	32 (0.7%)	17 (0.4%)	20 (0.4%)	19 (0.4%)	21 (0.5%)	27 (0.6%)
Income	Living comfortably on present income	1554 (30.8%)	1225 (26.2%)	1280 (28.4%)	1064 (23.6%)	1646 (36.4%)	1232 (27.4%)	977 (21.7%)	1122 (24.9%)	1291 (28.7%)	2070 (45.8%)	1099 (24.3%)	1509 (33.5%)	1044 (23.2%)	892 (19.8%)	1771 (39.0%)
	Coping on present income	1849 (36.7%)	1655 (35.5%)	1802 (39.9%)	1870 (41.5%)	1549 (34.2%)	2016 (44.8%)	1852 (41.0%)	2375 (52.8%)	2302 (51.1%)	2121 (46.9%)	2284 (50.5%)	2125 (47.1%)	2133 (47.4%)	2125 (47.2%)	1806 (39.8%)
	Finding it difficult on present income	1139 (22.6%)	1156 (24.8%)	1080 (23.9%)	1098 (24.4%)	891 (19.7%)	833 (18.5%)	1366 (30.3%)	655 (14.6%)	719 (16.0%)	265 (5.9%)	903 (20.0%)	696 (15.4%)	1026 (22.8%)	1126 (25.0%)	710 (15.7%)
	Finding it very difficult on present income	481 (9.5%)	613 (13.1%)	338 (7.5%)	450 (10.0%)	428 (9.5%)	383 (8.5%)	296 (6.6%)	335 (7.4%)	171 (3.8%)	32 (0.7%)	228 (5.0%)	161 (3.6%)	284 (6.3%)	352 (7.8%)	225 (5.0%)
	Missing	17 (0.3%)	19 (0.4%)	15 (0.3%)	23 (0.5%)	11 (0.2%)	38 (0.8%)	22 (0.5%)	15 (0.3%)	23 (0.5%)	31 (0.7%)	12 (0.3%)	17 (0.4%)	16 (0.4%)	11 (0.2%)	25 (0.6%)
Ethnicity	White	3467 (68.8%)	3277 (70.2%)	3253 (72.1%)	3582 (79.5%)	3396 (75.1%)		2410 (53.4%)	69 (1.5%)	4425 (98.2%)		3946 (87.2%)	709 (15.7%)	1892 (42.0%)	2998 (66.5%)	4113 (90.7%)
	Black	67 (1.3%)	287 (6.2%)	0 (0.0%)	375 (8.3%)	618 (13.7%)		914 (20.3%)	6 (0.1%)	126 (2.8%) (Surinamese or Antillean)		69 (1.5%)	149 (3.3%)	129 (2.9%)	104 (2.3%)	104 (2.3%)
	East Asian	174 (3.5%)	293 (6.3%)	150 (3.3%)	63 (1.4%)	155 (3.4%)		80 (1.8%)	4236 (94.1%)	70 (1.6%) (Asian)	4239 (93.8%) (Han)	76 (1.7%)	61 (1.4%)			120 (2.6%)
	Latin American	49 (1.0%)	98 (2.1%)	0 (0.0%)	16 (0.4%)	303 (6.7%)		643 (14.3%)	2 (0.0%)			249 (5.5%)	3035 (67.3%)	1930 (42.9%)	1176 (26.1%)	103 (2.3%)
	Middle Eastern	92 (1.8%)	104 (2.2%)	0 (0.0%)	43 (1.0%)	29 (0.6%)		61 (1.4%)	5 (0.1%)	116 (2.6%)		45 (1.0%)	0 (0.0%)	62 (1.4%)	86 (1.9%)	184 (4.1%)
	South Asian	217 (4.3%)	337 (7.2%)	160 (3.5%)	322 (7.2%)	76 (1.7%)		43 (1.0%)	11 (0.2%)			19 (0.4%)	0 (0.0%)	39 (0.9%)	23 (0.5%)	63 (1.4%)
	South East Asian	193 (3.8%)	152 (3.3%)	0 (0.0%)	41 (0.9%)	56 (1.2%)		47 (1.0%)	42 (0.9%)	55 (1.2%) (Indonesian)		13 (0.3%)	0 (0.0%)	29 (0.6%)	21 (0.5%)	71 (1.6%)
	Indigenous	467 (9.3%)	174 (3.7%)	804 (17.8%)	0 (0%)	109 (2.4%)		249 (5.5%)	3 (0.1%)			21 (0.5%)	541 (12.0%)	533 (11.8%)	159 (3.5%)	70 (1.5%)
	Other	412 (8.2%)	100 (2.1%)	597 (13.2%)	82 (1.8%)	45 (1.0%)		346 (7.7%)	60 (1.3%)	67 (1.5%)		38 (8.4%)	257 (5.7%)	208 (4.6%)	131 (2.9%)	16 (0.4%)
Area	Urban	1463 (29.0%)	2494 (53.4%)	1839 (40.7%)	1613 (35.8%)	1545 (34.1%)	2791 (62.0%)	3660 (81.1%)	2202 (48.9%)	2544 (56.5%)	2247 (49.7%)	3161 (69.9%)	3273 (72.6%)	3294 (73.2%)	3412 (75.7%)	2384 (52.6%)
	Suburban	2742 (54.4%)	1338 (28.7%)	1905 (42.2%)	1836 (40.8%)	2108 (46.6%)	762 (16.9%)	423 (9.4%)	1937 (43.0%)	1464 (32.5%)	736 (16.3%)	650 (14.4%)	807 (17.9%)	534 (11.9%)	848 (18.8%)	1043 (23.0%)
	Rural	800 (15.9%)	796 (17.1%)	759 (16.8%)	1017 (22.6%)	852 (18.8%)	859 (19.1%)	253 (5.6%)	339 (7.5%)	438 (9.7%)	1513 (33.5%)	677 (15.0%)	352 (7.8%)	616 (13.7%)	196 (4.4%)	1078 (23.8%)
	Missing	35 (0.6%)	40 (0.9%)	12 (0.3%)	39 (0.9%)	20 (0.4%)	90 (2.0%)	177 (3.9%)	24 (0.5%)	60 (1.3%)	23 (0.5%)	38 (0.8%)	76 (1.7%)	59 (1.3%)	50 (1.1%)	32 (0.7%)
Comorbidities	Anxiety	1196 (23.7%)	1130 (24.2%)	957 (21.2%)	1080 (24.0%)	1275 (28.2%)	706 (15.7%)	1334 (29.6%)	166 (3.7%)	435 (9.7%)	391 (8.7%)	801 (17.7%)	784 (17.4%)	857 (19.0%)	746 (16.6%)	422 (9.3%)
	Depression	1146 (22.7%)	1079 (23.1%)	941 (20.8%)	1065 (23.6%)	1209 (26.7%)	568 (12.6%)	699 (15.5%)	367 (8.2%)	674 (15.0%)	177 (3.9%)	539 (11.9%)	567 (12.6%)	734 (16.3%)	469 (10.4%)	736 (16.2%)

Table 2. Anxiety, depression, and health status by country

Mean ± SD or n (%)	Australia (n=5040)	Canada (n=4668)	New Zealand (n=4515)	United Kingdom (n=4505)	United States (n=4525)	France (n=4502)	Brazil (n=4513)	Japan (n=4502)	Netherlands (n=4506)	China (n=4519)	Spain (n=4526)	Mexico (n=4508)	Chile (n=4503)	Argentina (n=4506)	Germany (n=4537)
EQ-5D-5L — Anxiety/depression															
1	2441 (48.4%)	2073 (44.4%)	2307 (51.1%)	2203 (48.9%)	2066 (45.7%)	2298 (51.0%)	2094 (46.4%)	3074 (68.3%)	2831 (62.8%)	2755 (61.0%)	2580 (57.0%)	2334 (51.8%)	2186 (48.6%)	2039 (45.3%)	2654 (58.5%)
2	1444 (28.7%)	1357 (29.1%)	1346 (29.8%)	1141 (25.3%)	1176 (26.0%)	1194 (26.5%)	1393 (30.9%)	976 (21.7%)	991 (22.0%)	1423 (31.5%)	1189 (26.3%)	1364 (30.3%)	1395 (31.0%)	1487 (33.0%)	1045 (23.0%)
3	750 (14.9%)	772 (16.5%)	584 (12.9%)	661 (14.7%)	788 (17.4%)	643 (14.3%)	603 (13.4%)	239 (5.3%)	403 (8.9%)	237 (5.2%)	480 (10.6%)	551 (12.2%)	565 (12.6%)	626 (13.9%)	483 (10.7%)
4	247 (4.9%)	288 (6.2%)	183 (4.1%)	296 (6.6%)	301 (6.7%)	247 (5.5%)	275 (6.1%)	133 (3.0%)	192 (4.3%)	47 (1.0%)	202 (4.5%)	181 (4.0%)	244 (5.4%)	256 (5.7%)	225 (5.0%)
5	145 (2.9%)	155 (3.3%)	76 (1.7%)	191 (4.2%)	171 (3.8%)	101 (2.2%)	122 (2.7%)	62 (1.4%)	79 (1.8%)	14 (0.3%)	63 (1.4%)	50 (1.1%)	84 (1.9%)	73 (1.6%)	116 (2.6%)
levels 2-5	2586 (51.3%)	2572 (55.1%)	2189 (48.5%)	2289 (50.8%)	2436 (53.8%)	2185 (48.5%)	2393 (53.0%)	1410 (31.3%)	1665 (37.0%)	1721 (38.1%)	1934 (42.7%)	2146 (47.6%)	2288 (50.8%)	2442 (54.2%)	1869 (41.2%)
Missing	13 (0.3%)	23 (0.5%)	19 (0.4%)	13 (0.3%)	23 (0.5%)	19 (0.4%)	26 (0.6%)	18 (0.4%)	10 (0.2%)	43 (1.0%)	12 (0.3%)	28 (0.6%)	29 (0.6%)	25 (0.6%)	14 (0.3%)
Total Level Score (5-25)	7.6 ± 2.9	8.1 ± 3.2	7.4 ± 2.8	7.8 ± 3.4	7.9 ± 3.1	7.5 ± 2.9	7.1 ± 2.5	6.4 ± 2.2	7.5 ± 2.9	6.4 ± 2.0	6.9 ± 2.5	6.9 ± 2.4	6.9 ± 2.2	6.8 ± 2.1	7.8 ± 3.3
EQ VAS	72.4 ± 19.8	68.5 ± 23.5	75.0 ± 19.0	70.0 ± 21.7	73.3 ± 19.6	71.1 ± 21.1	74.9 ± 21.2	73.9 ± 19.2	73.6 ± 19.4	80.2 ± 16.7	73.5 ± 20.0	79.0 ± 20.0	75.1 ± 21.4	76.8 ± 19.0	72.5 ± 21.0
EQ-HWB — Depression															
1 (none of the time)	2095 (41.6%)	1748 (37.5%)	1893 (41.9%)	1771 (39.3%)	1933 (42.7%)			2340 (52.0%)		1840 (40.7%)	1763 (39.0%)	1491 (33.1%)	1276 (28.3%)	1299 (28.8%)	1855 (40.9%)
2 (only occassionally)	1303 (25.9%)	1223 (26.2%)	1455 (32.2%)	1237 (27.5%)	1080 (23.9%)			1312 (29.1%)		1771 (39.2%)	1296 (28.6%)	1352 (30.0%)	1319 (29.3%)	1369 (30.4%)	1212 (26.7%)
3 (sometimes)	886 (17.6%)	909 (19.5%)	690 (15.3%)	799 (17.7%)	796 (17.6%)			496 (11.0%)		663 (14.7%)	810 (17.9%)	883 (19.6%)	984 (21.9%)	983 (21.8%)	770 (17.0%)
4 (often)	524 (10.4%)	432 (9.3%)	321 (7.1%)	414 (9.2%)	431 (9.5%)			218 (4.8%)		148 (3.3%)	448 (9.9%)	489 (10.9%)	560 (12.4%)	540 (12.0%)	481 (10.6%)
5 (most or all of the time)	217 (4.3%)	278 (6.0%)	136 (3.0%)	273 (6.1%)	269 (5.9%)			128 (2.8%)		23 (0.5%)	193 (4.3%)	275 (6.1%)	345 (7.7%)	298 (6.6%)	198 (4.4%)
levels 2-5	2930 (58.1%)	2842 (60.9%)	2602 (57.6%)	2723 (60.4%)	2576 (56.9%)			2154 (47.9%)		2605 (57.7%)	2747 (60.9%)	2999 (66.5%)	3208 (71.2%)	3190 (70.8%)	2661 (58.7%)
Missing	15 (0.3%)	78 (1.7%)	20 (0.4%)	11 (0.2%)	16 (0.4%)			8 (0.2%)		74 (1.6%)	16 (0.4%)	18 (0.4%)	19 (0.4%)	17 (0.4%)	21 (0.5%)
EQ-HWB — Anxiety															
1 (none of the time)	1967 (39.0%)	1624 (34.8%)	1731 (38.3%)	1701 (37.8%)	1694 (37.4%)			2283 (50.7%)		1675 (37.1%)	1742 (38.5%)	1486 (33.0%)	1012 (22.5%)	1031 (22.9%)	1802 (39.7%)
2 (only occassionally)	1309 (26.0%)	1288 (27.6%)	1358 (30.1%)	1154 (25.6%)	1182 (26.1%)			1270 (28.2%)		1784 (39.5%)	1260 (27.8%)	1360 (30.2%)	1373 (30.5%)	1428 (31.7%)	1370 (30.2%)
3 (sometimes)	928 (18.4%)	871 (18.7%)	838 (18.6%)	835 (18.5%)	836 (18.5%)			516 (11.5%)		738 (16.3%)	876 (19.4%)	911 (20.2%)	1091 (24.2%)	1051 (23.3%)	814 (17.9%)
4 (often)	578 (11.5%)	515 (11.0%)	404 (9.0%)	484 (10.7%)	520 (11.5%)			268 (6.0%)		216 (4.8%)	469 (10.4%)	517 (11.5%)	642 (14.3%)	650 (14.4%)	392 (8.6%)
5 (most or all of the time)	232 (4.6%)	289 (6.2%)	157 (3.5%)	315 (7.0%)	274 (6.1%)			157 (3.5%)		28 (0.6%)	171 (3.8%)	219 (4.9%)	371 (8.2%)	332 (7.4%)	138 (3.0%)
levels 2-5	3047 (60.5%)	2963 (63.5%)	2757 (61.1%)	2788 (61.9%)	2812 (62.1%)			2211 (49.1%)		2766 (61.2%)	2776 (61.3%)	3007 (66.7%)	3477 (77.2%)	3461 (76.8%)	2714 (59.8%)
Missing	26 (0.5%)	81 (1.7%)	27 (0.6%)	16 (0.4%)	19 (0.4%)			8 (0.2%)		78 (1.7%)	8 (0.2%)	15 (0.3%)	14 (0.3%)	14 (0.3%)	21 (0.5%)
PROMIS-10 — Quality of Life (item 2)															
1 (Poor)	201 (4.0%)	271 (5.8%)	147 (3.3%)	265 (5.9%)	152 (3.4%)	86 (1.9%)	310 (6.9%)		170 (3.8%)	79 (1.8%)	114 (2.5%)	60 (1.3%)	84 (1.9%)	118 (2.6%)	163 (3.6%)
2 (Fair)	695 (13.8%)	818 (17.5%)	619 (13.7%)	835 (18.5%)	691 (15.3%)	560 (12.4%)	723 (16.0%)		803 (17.8%)	734 (16.2%)	674 (14.9%)	588 (13.0%)	769 (17.1%)	783 (17.4%)	704 (15.5%)
3 (Good)	1623 (32.2%)	1691 (36.2%)	1346 (29.8%)	1481 (32.9%)	1449 (32.0%)	2360 (52.4%)	1716 (38.0%)		1642 (36.4%)	1166 (25.8%)	1823 (40.3%)	1886 (41.8%)	1840 (40.9%)	1802 (40.0%)	1576 (34.7%)
4 (Very good)	1815 (36.0%)	1403 (30.1%)	1656 (36.7%)	1394 (30.9%)	1560 (34.5%)	1159 (25.7%)	1259 (27.9%)		1367 (30.3%)	1535 (34.0%)	1482 (32.7%)	1415 (31.4%)	1315 (29.2%)	1402 (31.1%)	1539 (33.9%)
5 (Excellent)	699 (13.9%)	473 (10.1%)	732 (16.2%)	516 (11.5%)	662 (14.6%)	323 (7.2%)	481 (10.7%)		514 (11.4%)	918 (20.3%)	423 (9.4%)	550 (12.2%)	483 (10.7%)	382 (8.5%)	543 (12.0%)
Missing	7 (0.1%)	12 (0.3%)	15 (0.3%)	14 (0.3%)	11 (0.2%)	14 (0.3%)	24 (0.5%)		10 (0.2%)	87 (1.9%)	10 (0.2%)	9 (0.2%)	12 (0.3%)	19 (0.4%)	12 (0.3%)
Mental Health (item 4)															
1 (Poor)	350 (6.9%)	362 (7.8%)	308 (6.8%)	483 (10.7%)	287 (6.3%)	146 (3.2%)	464 (10.3%)		221 (4.9%)	87 (1.9%)	233 (5.2%)	202 (4.5%)	353 (7.8%)	281 (6.2%)	234 (5.2%)
2 (Fair)	917 (18.2%)	879 (18.8%)	757 (16.8%)	900 (20.0%)	774 (17.1%)	600 (13.3%)	733 (16.2%)		771 (17.1%)	650 (14.4%)	792 (17.5%)	825 (18.3%)	969 (21.5%)	885 (19.6%)	735 (16.2%)
3 (Good)	1392 (27.6%)	1388 (29.7%)	1275 (28.2%)	1123 (24.9%)	1210 (26.7%)	1875 (41.7%)	1353 (30.0%)		1512 (33.6%)	1112 (24.6%)	1397 (30.9%)	1409 (31.3%)	1409 (31.3%)	1346 (29.9%)	1308 (28.8%)
4 (Very good)	1516 (30.1%)	1316 (28.2%)	1368 (30.3%)	1224 (27.2%)	1360 (30.1%)	1327 (29.5%)	1210 (26.8%)		1308 (29.0%)	1558 (34.5%)	1386 (30.6%)	1285 (28.5%)	1130 (25.1%)	1316 (29.2%)	1399 (30.8%)
5 (Excellent)	861 (17.1%)	712 (15.3%)	788 (17.5%)	758 (16.8%)	887 (19.6%)	550 (12.2%)	727 (16.1%)		686 (15.2%)	1034 (22.9%)	707 (15.6%)	781 (17.3%)	631 (14.0%)	652 (14.5%)	854 (18.8%)
Missing	4 (0.1%)	11 (0.2%)	19 (0.4%)	17 (0.4%)	7 (0.2%)	4 (0.1%)	26 (0.6%)		8 (0.2%)	78 (1.7%)	11 (0.2%)	6 (0.1%)	11 (0.2%)	26 (0.6%)	7 (0.2%)
Social Activities & Relationships (item 5)															
1 (Poor)	409 (8.1%)	494 (10.6%)	336 (7.4%)	541 (12.0%)	396 (8.8%)	113 (2.5%)	388 (8.6%)		261 (5.8%)	130 (2.9%)	220 (4.9%)	214 (4.8%)	291 (6.5%)	322 (7.2%)	215 (4.7%)
2 (Fair)	838 (16.6%)	915 (19.6%)	748 (16.6%)	896 (19.9%)	831 (18.4%)	564 (12.5%)	704 (15.6%)		809 (18.0%)	707 (15.7%)	733 (16.2%)	771 (17.1%)	857 (19.0%)	890 (19.8%)	748 (16.5%)
3 (Good)	1527 (30.3%)	1437 (30.8%)	1296 (28.7%)	1253 (27.8%)	1228 (27.1%)	1949 (43.3%)	1506 (33.4%)		1560 (34.6%)	1116 (24.7%)	1578 (34.9%)	1526 (33.9%)	1478 (32.8%)	1376 (30.5%)	1425 (31.4%)
4 (Very good)	1463 (29.0%)	1267 (27.1%)	1403 (31.1%)	1189 (26.4%)	1313 (29.0%)	1389 (30.9%)	1235 (27.4%)		1258 (27.9%)	1527 (33.8%)	1402 (31.0%)	1256 (27.9%)	1216 (27.0%)	1297 (28.8%)	1424 (31.4%)
5 (Excellent)	796 (15.8%)	543 (11.6%)	710 (15.7%)	616 (13.7%)	745 (16.5%)	483 (10.7%)	664 (14.7%)		608 (13.5%)	962 (21.3%)	586 (13.0%)	735 (16.3%)	645 (14.3%)	606 (13.5%)	719 (15.9%)
Missing	7 (0.1%)	12 (0.3%)	22 (0.5%)	10 (0.2%)	12 (0.3%)	4 (0.1%)	16 (0.4%)		10 (0.2%)	77 (1.7%)	7 (0.2%)	6 (0.1%)	16 (0.4%)	15 (0.3%)	6 (0.1%)
Emotional Problems (item 10r)															
1 (Always)	262 (5.2%)	269 (5.8%)	209 (4.6%)	328 (7.3%)	282 (6.2%)	172 (3.8%)	313 (6.9%)		186 (4.1%)	30 (0.7%)	154 (3.4%)	155 (3.4%)	227 (5.0%)	213 (4.7%)	142 (3.1%)
2 (Often)	770 (15.3%)	736 (15.8%)	654 (14.5%)	665 (14.8%)	744 (16.4%)	649 (14.4%)	850 (18.8%)		611 (13.6%)	202 (4.5%)	556 (12.3%)	595 (13.2%)	775 (17.2%)	746 (16.6%)	572 (12.6%)
3 (Sometimes)	1522 (30.2%)	1468 (31.5%)	1326 (29.4%)	1393 (30.9%)	1242 (27.5%)	1381 (30.7%)	1633 (36.2%)		1296 (28.8%)	1118 (24.7%)	1326 (29.3%)	1337 (29.7%)	1466 (32.6%)	1479 (32.8%)	1098 (24.2%)
4 (Rarely)	1395 (27.7%)	1370 (29.4%)	1429 (31.7%)	1200 (26.6%)	1251 (27.7%)	1365 (30.3%)	1203 (26.7%)		1423 (31.6%)	1980 (43.8%)	1459 (32.2%)	1580 (35.1%)	1355 (30.1%)	1403 (31.1%)	1396 (30.8%)
5 (Never)	1074 (21.3%)	802 (17.2%)	877 (19.4%)	904 (20.1%)	991 (21.9%)	925 (20.6%)	484 (10.7%)		974 (21.6%)	1110 (24.6%)	1016 (22.5%)	827 (18.4%)	663 (14.7%)	644 (14.3%)	1306 (28.8%)
Missing	17 (0.3%)	23 (0.5%)	20 (0.4%)	15 (0.3%)	15 (0.3%)	10 (0.2%)	30 (0.7%)		16 (0.4%)	79 (1.8%)	15 (0.3%)	14 (0.3%)	17 (0.4%)	21 (0.5%)	23 (0.5%)
Global Mental Health T Score (21.2 - 67.6)	50.3 ± 7.8	49.5 ± 7.8	50.5 ± 7.7	50.3 ± 8.4	50.7 ± 7.9	49.8 ± 7.1	49.7 ± 7.5		50.0 ± 8.2	53.0 ± 7.3	50.7 ± 7.5	50.9 ± 7.3	50.2 ± 7.3	50.3 ± 7.1	50.2 ± 7.6
Global Physical Health T Score (16.2 - 67.7)	47.6 ± 8.9	46.7 ± 8.8	47.8 ± 8.7	47.6 ± 9.6	48.0 ± 8.9	47.0 ± 8.1	46.9 ± 8.5		47.2 ± 9.3	50.6 ± 8.4	48.0 ± 8.5	48.2 ± 8.3	47.4 ± 8.3	47.6 ± 8.1	47.5 ± 8.6
PHQ-2 — Total Score (0-6)	1.4 ± 1.6	1.5 ± 1.6	1.3 ± 1.6	1.6 ± 1.7	1.4 ± 1.7	1.4 ± 1.5	2.0 ± 1.6	1.1 ± 1.5	1.4 ± 1.6	1.1 ± 1.1	1.4 ± 1.5	1.5 ± 1.5	1.7 ± 1.6	1.6 ± 1.5	1.6 ± 1.6
≥3	1104 (21.9%)	1048 (22.5%)	849 (18.8%)	1094 (24.3%)	980 (21.7%)	762 (16.9%)	1359 (30.1%)	592 (13.2%)	868 (19.3%)	397 (8.8%)	841 (18.6%)	881 (19.5%)	1052 (23.4%)	967 (21.5%)	1017 (22.4%)
Missing	7 (0.1%)	23 (0.5%)	18 (0.4%)	12 (0.3%)	12 (0.3%)	13 (0.3%)	31 (0.7%)	10 (0.2%)	15 (0.3%)	97 (2.2%)	13 (0.3%)	22 (0.5%)	18 (0.4%)	21 (0.5%)	20 (0.4%)
GAD-2 — Total Score (0-6)	1.5 ± 1.7	1.6 ± 1.7	1.5 ± 1.6	1.6 ± 1.8	1.6 ± 1.7	1.5 ± 1.6	2.1 ± 1.7	1.2 ± 1.5	1.4 ± 1.7	1.1 ± 1.1	1.4 ± 1.5	1.5 ± 1.5	1.7 ± 1.6	1.7 ± 1.5	1.5 ± 1.6
≥3	1138 (22.6%)	1085 (23.2%)	894 (19.8%)	1108 (24.6%)	1064 (23.5%)	881 (19.6%)	1383 (30.6%)	695 (15.4%)	856 (19.0%)	448 (9.9%)	855 (18.9%)	928 (20.6%)	1114 (24.7%)	1049 (23.3%)	979 (21.6%)
Missing	8 (0.2%)	20 (0.4%)	35 (0.8%)	18 (0.4%)	18 (0.4%)	15 (0.3%)	28 (0.36%)	14 (0.3%)	16 (0.4%)	100 (2.2%)	24 (0.5%)	32 (0.7%)	30 (0.7%)	20 (0.4%)	24 (0.5%)
Composite variable (PHQ and GAD)															
[1] - anxiety - depression	3601 (71.5%)	3263 (69.9%)	3359 (74.4%)	3101 (68.8%)	3195 (70.6%)	3372 (74.9%)	2659 (58.9%)	3657 (81.2%)	3375 (74.9%)	3782 (83.7%)	3355 (74.1%)	3204 (71.1%)	3015 (67.0%)	3082 (68.4%)	3205 (70.6%)
[2] + anxiety - depression	327 (6.5%)	328 (7.0%)	272 (6.0%)	291 (6.5%)	333 (7.4%)	342 (7.6%)	457 (10.1%)	237 (5.3%)	241 (5.4%)	232 (5.1%)	300 (6.6%)	387 (8.6%)	405 (9.0%)	429 (9.5%)	288 (6.4%)
[3] - anxiety + depression	292 (5.8%)	291 (6.2%)	225 (5.0%)	276 (6.1%)	246 (5.4%)	221 (4.9%)	435 (9.6%)	130 (2.9%)	255 (5.7%)	176 (3.9%)	286 (6.3%)	337 (7.5%)	341 (7.6%)	352 (7.8%)	324 (7.1%)
[4] + anxiety + depression	809 (16.1%)	756 (16.2%)	622 (13.8%)	814 (18.1%)	730 (16.1%)	539 (12.0%)	921 (20.4%)	458 (10.2%)	611 (13.6%)	213 (4.7%)	552 (12.2%)	539 (12.0%)	708 (15.7%)	615 (13.7%)	687 (15.1%)
Missing	11 (0.2%)	30 (0.6%)	37 (0.8%)	23 (0.5%)	21 (0.5%)	28 (0.6%)	41 (0.9%)	20 (0.4%)	24 (0.5%)	116 (2.6%)	33 (0.7%)	41 (0.9%)	34 (0.8%)	28 (0.6%)	33 (0.7%)

Table 3. Performance of the EQ-5D-5L, EQ-HWB, and PROMIS-10 in screening for anxiety (GAD-2 ≥ 3), depression (PHQ-2 ≥ 3), and the combination of symptoms (GAD-2 & PHQ-2 ≥ 3)

Country	Measure	Component	Anxiety (GAD-2 ≥ 3)	Depression (PHQ-2 ≥ 3)	Comorbid Anxiety and Depression (GAD-2 & PHQ-2 ≥ 3)
			AUROC (95% CI)		
Australia	EQ-5D-5L	Anxiety/Depression Dimension	0.78 (0.76, 0.79)	0.75 (0.73, 0.77)	0.76 (0.74, 0.78)
		EQ-VAS	0.32 (0.30, 0.33)	0.30 (0.28, 0.32)	0.31 (0.29, 0.33)
		TSS	0.72 (0.70, 0.74)	0.71 (0.69, 0.73)	0.71 (0.69, 0.73)
	EQ-HWB	Depression item	0.87 (0.86, 0.88)	0.87 (0.86, 0.88)	0.89 (0.88, 0.90)
		Anxiety item	0.90 (0.87, 0.91)	0.83 (0.82, 0.85)	0.88 (0.87, 0.89)
	PROMIS-10	Quality of Life item	0.33 (0.31, 0.35)	0.30 (0.28, 0.32)	0.32 (0.30, 0.34)
		Mental Health item	0.23 (0.22, 0.25)	0.26 (0.24, 0.28)	0.25 (0.23, 0.27)
		Social Activities & Relationships item	0.31 (0.29, 0.33)	0.29 (0.27, 0.31)	0.31 (0.29, 0.33)
		Emotional Problems item	0.14 (0.13, 0.16)	0.18 (0.16, 0.19)	0.15 (0.13, 0.16)
		Mental Health T Score Quintiles	0.26 (0.24, 0.27)	0.23 (0.22, 0.25)	0.24 (0.22, 0.25)
		Physical Health T Score Quintiles	0.26 (0.24, 0.27)	0.23 (0.22, 0.25)	0.24 (0.22, 0.25)
Canada	EQ-5D-5L	Anxiety/Depression Dimension	0.84 (0.83, 0.86)	0.80 (0.79, 0.82)	0.85 (0.83, 0.86)
		EQ-VAS	0.29 (0.28, 0.31)	0.29 (0.27, 0.31)	0.27 (0.25, 0.29)
		TSS	0.76 (0.74, 0.77)	0.74 (0.72, 0.76)	0.76 (0.75, 0.78)
	EQ-HWB	Depression item	0.87 (0.86, 0.88)	0.86 (0.85, 0.87)	0.90 (0.88, 0.91)
		Anxiety item	0.89 (0.88, 0.90)	0.82 (0.81, 0.84)	0.88 (0.87, 0.89)
	PROMIS-10	Quality of Life item	0.26 (0.24, 0.28)	0.26 (0.25, 0.28)	0.24 (0.22, 0.26)
		Mental Health item	0.17 (0.16, 0.19)	0.19 (0.18, 0.21)	0.16 (0.15, 0.18)
		Social Activities & Relationships item	0.24 (0.22, 0.25)	0.25 (0.23, 0.27)	0.22 (0.21, 0.24)
		Emotional Problems item	0.13 (0.12, 0.14)	0.17 (0.16, 0.19)	0.13 (0.11, 0.14)
		Mental Health T Score Quintiles	0.26 (0.24, 0.27)	0.25 (0.24, 0.27)	0.25 (0.23, 0.27)
		Physical Health T Score Quintiles	0.26 (0.24, 0.27)	0.25 (0.24, 0.27)	0.25 (0.23, 0.27)
New Zealand	EQ-5D-5L	Anxiety/Depression Dimension	0.82 (0.80, 0.83)	0.79 (0.77, 0.81)	0.81 (0.79, 0.83)
		EQ-VAS	0.30 (0.28, 0.32)	0.28 (0.26, 0.30)	0.29 (0.27, 0.32)
		TSS	0.76 (0.74, 0.78)	0.76 (0.74, 0.78)	0.77 (0.75, 0.79)
	EQ-HWB	Depression item	0.86 (0.84, 0.87)	0.88 (0.87, 0.89)	0.89 (0.88, 0.91)
		Anxiety item	0.89 (0.88, 0.90)	0.84 (0.83, 0.86)	0.88 (0.87, 0.90)
	PROMIS-10	Quality of Life item	0.28 (0.26, 0.29)	0.25 (0.23, 0.27)	0.25 (0.23, 0.28)
		Mental Health item	0.20 (0.19, 0.22)	0.21 (0.20, 0.23)	0.21 (0.19, 0.23)
		Social Activities & Relationships item	0.27 (0.25, 0.29)	0.25 (0.23, 0.27)	0.26 (0.24, 0.28)
		Emotional Problems item	0.14 (0.13, 0.15)	0.16 (0.15, 0.17)	0.14 (0.12, 0.15)
		Mental Health T Score Quintiles	0.23 (0.22, 0.25)	0.21 (0.20, 0.23)	0.21 (0.19, 0.22)
		Physical Health T Score Quintiles	0.23 (0.22, 0.25)	0.21 (0.20, 0.23)	0.21 (0.19, 0.22)
United Kingdom	EQ-5D-5L	Anxiety/Depression Dimension	0.86 (0.84, 0.87)	0.82 (0.81, 0.84)	0.87 (0.85, 0.88)
		EQ-VAS	0.25 (0.24, 0.27)	0.26 (0.24, 0.28)	0.24 (0.22, 0.26)
		TSS	0.80 (0.78, 0.81)	0.79 (0.77, 0.80)	0.81 (0.80, 0.83)
	EQ-HWB	Depression item	0.87 (0.86, 0.89)	0.87 (0.86, 0.89)	0.90 (0.89, 0.91)
		Anxiety item	0.90 (0.89, 0.91)	0.85 (0.84, 0.86)	0.90 (0.89, 0.91)
	PROMIS-10	Quality of Life item	0.25 (0.23, 0.27)	0.25 (0.23, 0.27)	0.22 (0.20, 0.24)
		Mental Health item	0.17 (0.15, 0.18)	0.19 (0.18, 0.21)	0.16 (0.14, 0.17)
		Social Activities & Relationships item	0.23 (0.22, 0.25)	0.24 (0.22, 0.26)	0.22 (0.20, 0.23)
		Emotional Problems item	0.14 (0.13, 0.15)	0.17 (0.15, 0.18)	0.13 (0.12, 0.14)
		Mental Health T Score Quintiles	0.24 (0.23, 0.26)	0.23 (0.22, 0.25)	0.23 (0.21, 0.24)
		Physical Health T Score Quintiles	0.24 (0.23, 0.26)	0.23 (0.22, 0.25)	0.23 (0.21, 0.24)
United States	EQ-5D-5L	Anxiety/Depression Dimension	0.84 (0.82, 0.85)	0.81 (0.79, 0.83)	0.84 (0.83, 0.86)
		EQ-VAS	0.31 (0.29, 0.33)	0.32 (0.30, 0.34)	0.30 (0.28, 0.32)
		TSS	0.76 (0.75, 0.78)	0.75 (0.74, 0.77)	0.78 (0.76, 0.79)
	EQ-HWB	Depression item	0.87 (0.86, 0.88)	0.88 (0.86, 0.89)	0.90 (0.89, 0.91)
		Anxiety item	0.90 (0.88, 0.91)	0.84 (0.82, 0.85)	0.89 (0.88, 0.90)
	PROMIS-10	Quality of Life item	0.29 (0.27, 0.31)	0.30 (0.28, 0.32)	0.27 (0.25, 0.29)
		Mental Health item	0.21 (0.19, 0.23)	0.23 (0.22, 0.25)	0.20 (0.18, 0.22)
		Social Activities & Relationships item	0.27 (0.25, 0.29)	0.28 (0.26, 0.29)	0.25 (0.23, 0.27)
		Emotional Problems item	0.12 (0.11, 0.13)	0.14 (0.13, 0.15)	0.11 (0.10, 0.12)
		Mental Health T Score Quintiles	0.27 (0.25, 0.28)	0.26 (0.24, 0.27)	0.25 (0.23, 0.27)
		Physical Health T Score Quintiles	0.27 (0.25, 0.28)	0.26 (0.24, 0.27)	0.25 (0.23, 0.27)
France	EQ-5D-5L	Anxiety/Depression Dimension	0.79 (0.77, 0.80)	0.75 (0.73, 0.77)	0.81 (0.79, 0.83)
		EQ-VAS	0.30 (0.28, 0.32)	0.31 (0.29, 0.33)	0.29 (0.26, 0.31)
		TSS	0.75 (0.74, 0.77)	0.72 (0.70, 0.74)	0.77 (0.75, 0.79)
	EQ-HWB	Depression item			
		Anxiety item			
	PROMIS-10	Quality of Life item	0.35 (0.33, 0.37)	0.35 (0.33, 0.38)	0.32 (0.30, 0.35)
		Mental Health item	0.25 (0.24, 0.27)	0.29 (0.27, 0.31)	0.24 (0.22, 0.27)
		Social Activities & Relationships item	0.31 (0.29, 0.33)	0.32 (0.31, 0.35)	0.29 (0.27, 0.32)
		Emotional Problems item	0.17 (0.16, 0.18)	0.19 (0.18, 0.21)	0.15 (0.13, 0.16)
		Mental Health T Score Quintiles	0.26 (0.24, 0.27)	0.27 (0.26, 0.29)	0.25 (0.23, 0.27)
		Physical Health T Score Quintiles	0.26 (0.24, 0.27)	0.27 (0.26, 0.29)	0.25 (0.23, 0.27)
Brazil	EQ-5D-5L	Anxiety/Depression Dimension	0.74 (0.72, 0.75)	0.71 (0.69, 0.72)	0.75 (0.73, 0.76)
		EQ-VAS	0.32 (0.30, 0.34)	0.33 (0.31, 0.35)	0.31 (0.29, 0.33)

Country	Instrument	Item/Dimension			
		TSS	0.73 (0.71, 0.74)	0.71 (0.69, 0.73)	0.74 (0.72, 0.75)
	EQ-HWB	Depression item			
		Anxiety item			
	PROMIS-10	Quality of Life item	0.34 (0.32, 0.35)	0.35 (0.34, 0.37)	0.33 (0.31, 0.35)
		Mental Health item	0.27 (0.25, 0.28)	0.31 (0.30, 0.33)	0.26 (0.25, 0.28)
		Social Activities & Relationships item	0.34 (0.32, 0.35)	0.34 (0.33, 0.36)	0.32 (0.30, 0.34)
		Emotional Problems item	0.23 (0.22, 0.24)	0.27 (0.25, 0.28)	0.23 (0.21, 0.24)
		Mental Health T Score Quintiles	0.28 (0.27, 0.30)	0.31 (0.29, 0.33)	0.28 (0.26, 0.30)
		Physical Health T Score Quintiles	0.28 (0.27, 0.30)	0.31 (0.29, 0.33)	0.28 (0.26, 0.30)
Japan	EQ-5D-5L	Anxiety/Depression Dimension	0.83 (0.81, 0.85)	0.83 (0.81, 0.85)	0.86 (0.84, 0.88)
		EQ-VAS	0.23 (0.21, 0.25)	0.23 (0.21, 0.25)	0.21 (0.18, 0.23)
		TSS	0.81 (0.79, 0.83)	0.80 (0.79, 0.82)	0.83 (0.81, 0.85)
	EQ-HWB	Depression item	0.87 (0.85, 0.88)	0.88 (0.86, 0.89)	0.90 (0.87, 0.92)
		Anxiety item	0.88 (0.86, 0.89)	0.86 (0.84, 0.88)	0.90 (0.88, 0.92)
	PROMIS-10	Quality of Life item			
		Mental Health item			
		Social Activities & Relationships item			
		Emotional Problems item			
		Mental Health T Score Quintiles			
		Physical Health T Score Quintiles			
Netherlands	EQ-5D-5L	Anxiety/Depression Dimension	0.79 (0.77, 0.81)	0.77 (0.75, 0.79)	0.80 (0.78, 0.82)
		EQ-VAS	0.32 (0.30, 0.34)	0.33 (0.31, 0.35)	0.32 (0.30, 0.35)
		TSS	0.71 (0.69, 0.73)	0.70 (0.68, 0.72)	0.72 (0.70, 0.74)
	EQ-HWB	Depression item			
		Anxiety item			
	PROMIS-10	Quality of Life item	0.32 (0.30, 0.34)	0.31 (0.29, 0.33)	0.30 (0.28, 0.33)
		Mental Health item	0.28 (0.26, 0.30)	0.30 (0.28, 0.32)	0.28 (0.26, 0.31)
		Social Activities & Relationships item	0.32 (0.30, 0.34)	0.33 (0.31, 0.35)	0.33 (0.30, 0.35)
		Emotional Problems item	0.15 (0.14, 0.17)	0.17 (0.16, 0.19)	0.13 (0.11, 0.14)
		Mental Health T Score Quintiles	0.24 (0.23, 0.26)	0.26 (0.25, 0.28)	0.24 (0.22, 0.25)
		Physical Health T Score Quintiles	0.24 (0.23, 0.26)	0.26 (0.25, 0.28)	0.24 (0.22, 0.25)
China	EQ-5D-5L	Anxiety/Depression Dimension	0.77 (0.75, 0.79)	0.78 (0.76, 0.80)	0.80 (0.77, 0.83)
		EQ-VAS	0.26 (0.24, 0.29)	0.25 (0.23, 0.28)	0.24 (0.21, 0.27)
		TSS	0.78 (0.76, 0.80)	0.78 (0.75, 0.80)	0.80 (0.77, 0.83)
	EQ-HWB	Depression item	0.81 (0.79, 0.83)	0.81 (0.79, 0.83)	0.83 (0.80, 0.86)
		Anxiety item	0.80 (0.77, 0.82)	0.78 (0.76, 0.80)	0.79 (0.76, 0.83)
	PROMIS-10	Quality of Life item	0.31 (0.29, 0.34)	0.33 (0.30, 0.36)	0.32 (0.28, 0.35)
		Mental Health item	0.27 (0.24, 0.29)	0.30 (0.27, 0.32)	0.28 (0.24, 0.31)
		Social Activities & Relationships item	0.29 (0.27, 0.32)	0.32 (0.29, 0.34)	0.31 (0.27, 0.35)
		Emotional Problems item	0.22 (0.20, 0.24)	0.23 (0.20, 0.25)	0.22 (0.19, 0.25)
		Mental Health T Score Quintiles	0.20 (0.18, 0.21)	0.20 (0.18, 0.22)	0.19 (0.16, 0.21)
		Physical Health T Score Quintiles	0.20 (0.18, 0.21)	0.20 (0.18, 0.22)	0.19 (0.16, 0.21)
Spain	EQ-5D-5L	Anxiety/Depression Dimension	0.78 (0.76, 0.80)	0.77 (0.75, 0.79)	0.80 (0.78, 0.82)
		EQ-VAS	0.32 (0.30, 0.34)	0.30 (0.28, 0.32)	0.28 (0.26, 0.31)
		TSS	0.74 (0.72, 0.76)	0.74 (0.72, 0.76)	0.76 (0.74, 0.78)
	EQ-HWB	Depression item	0.83 (0.82, 0.85)	0.85 (0.83, 0.86)	0.87 (0.86, 0.89)
		Anxiety item	0.83 (0.81, 0.85)	0.81 (0.80, 0.83)	0.85 (0.83, 0.87)
	PROMIS-10	Quality of Life item	0.33 (0.31, 0.35)	0.31 (0.29, 0.33)	0.28 (0.26, 0.30)
		Mental Health item	0.25 (0.24, 0.27)	0.25 (0.23, 0.27)	0.23 (0.21, 0.26)
		Social Activities & Relationships item	0.30 (0.28, 0.32)	0.28 (0.26, 0.30)	0.26 (0.24, 0.28)
		Emotional Problems item	0.19 (0.18, 0.21)	0.20 (0.19, 0.22)	0.17 (0.15, 0.19)
		Mental Health T Score Quintiles	0.27 (0.25, 0.29)	0.24 (0.23, 0.26)	0.24 (0.22, 0.26)
		Physical Health T Score Quintiles	0.27 (0.25, 0.29)	0.24 (0.23, 0.26)	0.24 (0.22, 0.26)
Mexico	EQ-5D-5L	Anxiety/Depression Dimension	0.74 (0.72, 0.76)	0.76 (0.74, 0.78)	0.79 (0.76, 0.81)
		EQ-VAS	0.35 (0.33, 0.37)	0.32 (0.30, 0.34)	0.32 (0.29, 0.34)
		TSS	0.72 (0.70, 0.74)	0.74 (0.72, 0.76)	0.76 (0.74, 0.78)
	EQ-HWB	Depression item	0.79 (0.77, 0.81)	0.81 (0.80, 0.83)	0.84 (0.82, 0.86)
		Anxiety item	0.80 (0.78, 0.81)	0.79 (0.77, 0.81)	0.83 (0.81, 0.85)
	PROMIS-10	Quality of Life item	0.37 (0.35, 0.39)	0.34 (0.32, 0.36)	0.34 (0.31, 0.36)
		Mental Health item	0.29 (0.27, 0.31)	0.28 (0.26, 0.30)	0.27 (0.24, 0.29)
		Social Activities & Relationships item	0.34 (0.32, 0.36)	0.32 (0.30, 0.34)	0.32 (0.29, 0.34)
		Emotional Problems item	0.24 (0.23, 0.26)	0.24 (0.22, 0.25)	0.20 (0.18, 0.23)
		Mental Health T Score Quintiles	0.29 (0.27, 0.30)	0.27 (0.25, 0.28)	0.25 (0.23, 0.27)
		Physical Health T Score Quintiles	0.29 (0.27, 0.30)	0.27 (0.25, 0.28)	0.25 (0.23, 0.27)
Chile	EQ-5D-5L	Anxiety/Depression Dimension	0.72 (0.71, 0.74)	0.76 (0.75, 0.79)	0.77 (0.75, 0.79)
		EQ-VAS	0.35 (0.33, 0.37)	0.32 (0.30, 0.34)	0.32 (0.30, 0.35)
		TSS	0.73 (0.71, 0.74)	0.75 (0.74, 0.77)	0.75 (0.73, 0.77)
	EQ-HWB	Depression item	0.78 (0.77, 0.80)	0.83 (0.82, 0.84)	0.84 (0.83, 0.86)
		Anxiety item	0.78 (0.77, 0.80)	0.78 (0.77, 0.80)	0.81 (0.79, 0.83)
	PROMIS-10	Quality of Life item	0.35 (0.33, 0.36)	0.33 (0.31, 0.35)	0.33 (0.31, 0.35)
		Mental Health item	0.28 (0.26, 0.30)	0.25 (0.23, 0.27)	0.25 (0.23, 0.27)
		Social Activities & Relationships item	0.32 (0.31, 0.34)	0.30 (0.28, 0.32)	0.29 (0.27, 0.31)
		Emotional Problems item	0.23 (0.21, 0.24)	0.21 (0.20, 0.23)	0.20 (0.18, 0.21)
		Mental Health T Score Quintiles	0.28 (0.26, 0.29)	0.26 (0.25, 0.28)	0.26 (0.24, 0.28)
		Physical Health T Score Quintiles	0.28 (0.26, 0.29)	0.26 (0.25, 0.28)	0.26 (0.24, 0.28)
Argentina	EQ-5D-5L	Anxiety/Depression Dimension	0.76 (0.74, 0.77)	0.74 (0.72, 0.76)	0.79 (0.77, 0.81)

		EQ-VAS	0.33 (0.31, 0.35)	0.34 (0.32, 0.36)	0.31 (0.28, 0.33)
		TSS	0.74 (0.72, 0.75)	0.73 (0.71, 0.75)	0.76 (0.74, 0.78)
	EQ-HWB	Depression item	0.79 (0.78, 0.81)	0.81 (0.79, 0.82)	0.85 (0.83, 0.86)
		Anxiety item	0.79 (0.78, 0.81)	0.75 (0.73, 0.77)	0.82 (0.80, 0.84)
	PROMIS-10	Quality of Life item	0.35 (0.33, 0.37)	0.32 (0.31, 0.34)	0.32 (0.29, 0.34)
		Mental Health item	0.26 (0.24, 0.28)	0.24 (0.22, 0.26)	0.21 (0.19, 0.23)
		Social Activities & Relationships item	0.31 (0.29, 0.33)	0.28 (0.26, 0.30)	0.26 (0.24, 0.28)
		Emotional Problems item	0.22 (0.21, 0.24)	0.23 (0.22, 0.25)	0.19 (0.18, 0.21)
		Mental Health T Score Quintiles	0.28 (0.26, 0.29)	0.27 (0.26, 0.29)	0.25 (0.23, 0.26)
		Physical Health T Score Quintiles	0.28 (0.26, 0.29)	0.27 (0.26, 0.29)	0.25 (0.23, 0.26)
Germany	EQ-5D-5L	Anxiety/Depression Dimension	0.79 (0.78, 0.81)	0.77 (0.75, 0.78)	0.79 (0.77, 0.81)
		EQ-VAS	0.31 (0.29, 0.33)	0.31 (0.29, 0.33)	0.31 (0.29, 0.34)
		TSS	0.75 (0.73, 0.77)	0.73 (0.71, 0.75)	0.74 (0.72, 0.76)
	EQ-HWB	Depression item	0.84 (0.83, 0.86)	0.83 (0.82, 0.85)	0.85 (0.84, 0.87)
		Anxiety item	0.83 (0.81, 0.84)	0.77 (0.76, 0.79)	0.82 (0.80, 0.83)
	PROMIS-10	Quality of Life item	0.32 (0.30, 0.34)	0.32 (0.30, 0.34)	0.32 (0.30, 0.34)
		Mental Health item	0.25 (0.23, 0.27)	0.27 (0.25, 0.28)	0.26 (0.23, 0.28)
		Social Activities & Relationships item	0.31 (0.29, 0.33)	0.30 (0.29, 0.32)	0.31 (0.29, 0.34)
		Emotional Problems item	0.18 (0.16, 0.19)	0.20 (0.18, 0.21)	0.17 (0.15, 0.19)
		Mental Health T Score Quintiles	0.24 (0.22, 0.25)	0.24 (0.23, 0.26)	0.23 (0.21, 0.24)
		Physical Health T Score Quintiles	0.24 (0.22, 0.25)	0.24 (0.23, 0.26)	0.23 (0.21, 0.24)

*Green: High AUROC value (≥0.80); Yellow: Moderate AUROC value (0.70-0.79); Red: Low AUROC value (<0.70)