



PROMIS Instrument-Level Statistics Including Gender, Educational Level, Age Bracket, Clinical, and Levels of Self-rated General Health Subgroups

This content was previously posted as part of the PROMIS User Manual.

Portions of this document are published elsewhere.

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I. Overview

This document contains information about the statistical properties of the version 1.0 PROMIS item banks (section III) as well as statistics by gender, educational level, age bracket, clinical subgroups, and levels of self-rated general health.

II. PROMIS Version 1.0 Instruments

The PROMIS version 1.0 instruments included within this document are:

- Item Banks
 - Emotional Distress – Anger
 - Emotional Distress – Anxiety
 - Emotional Distress – Depression
 - Fatigue
 - Pain Behavior
 - Pain Interference
 - Physical Function
 - Satisfaction with Participation in Discretionary Social Activities
 - Satisfaction with Participation in Social Roles
 - Sleep Disturbance
 - Sleep-related Impairment
- Calibrated Scales
 - Pain Intensity
 - Global Health



III. Instrument Statistics

Emotional Distress – Anger Item Bank v1.0

Calibration Sample	Promis Wave 1											Min	Max	
Sample Description	Promis Wave 1 Full-Bank	Scale Score	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	27.8	80.6	
		SE	2.50	1.20	.50	.20	.20	.20	.20	.20	.30			
		Reliability	.00	.00	.74	.94	.97	.97	.97	.97	.93			
Scaling Model Used For Calibration	Promis													
Total Number of Items	29													
		SE	Average CAT Length for Target SE (Type=CAT only)											
		0.00												
		0.00												
		NI	Average SE for Target CAT Length (Type=CAT only)											
		0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
		0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
Scale Score Definition														
Sample		N	Alpha Reliability											
PROMIS Wave 1 Full Bank		858	0.96											
Score Distributions														
	Mean	SD	P5	P10	P25	P50	P75	P90	P95					
Raw	49.36	16.55	29.00	32.00	36.86	46.00	59.00	71.00	81.15					
Scale	47.19	9.43	27.91	34.89	41.27	47.30	53.64	58.54	62.33					

Emotional Distress – Anxiety Item Bank v1.0

Calibration Sample	Promis Wave 1											Min	Max	
Sample Description	Promis Wave 1 Full-Bank	Scale Score	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	31.6	88.4	
		SE	4.80	2.10	.80	.30	.20	.10	.10	.20	.40			
		Reliability	.00	.00	.38	.93	.98	.98	.98	.98	.88			
Scaling Model Used For Calibration	Graded Response Model (GRM)													
Total Number of Items	29													
		SE	Average CAT Length for Target SE (Type=CAT only)											
		0.00												
		0.00												
		NI	Average SE for Target CAT Length (Type=CAT only)											
		0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
		0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
Scale Score Definition														
Sample		N	Alpha Reliability											
PROMIS Wave 1 Full Bank		788	0.97											
Score Distributions														
	Mean	SD	P5	P10	P25	P50	P75	P90	P95					
Raw	49.42	20.09	29.00	30.00	34.00	43.00	59.00	80.00	90.30					
Scale	48.47	9.82	31.64	35.19	41.75	48.21	54.64	61.56	65.49					



PROMIS Validity and Interpretation Tables

Pain – Behavior Item Bank v1.0

Calibration Sample	Promis Wave 1 ▾									Min	Max
Sample Description	Promis Wave 1 Full-Bank										
Scaling Model Used For Calibration	Promis										
Total Number of Items	39										

	Conditional Reliability										Min	Max
Scale Score	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	36.2	76.3	
SE	133.20	15.40	1.70	.20	.10	.10	.10	.50	5.30			
Reliability	.00	.00	.00	.97	.99	1.00	.99	.72	.00			

SE	Average CAT Length for Target SE (Type=CAT only)									
0.00										
0.00										

NI	Average SE for Target CAT Length (Type=CAT only)									
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Scale Score Definition

Sample	N	Alpha Reliability
Promis ▾	15834	0.98

Score Distributions									
	Mean	SD	P5	P10	P25	P50	P75	P90	P95
Raw	102.69	33.26	39.00	39.00	84.00	106.00	127.00	142.00	151.00
Scale	55.57	8.20	36.17	39.31	52.47	57.29	61.37	63.92	65.21

Pain – Interference Item Bank v1.0

Calibration Sample	Promis Wave 1 ▾									Min	Max
Sample Description	Promis Wave 1 Full-Bank										
Scaling Model Used For Calibration	Promis										
Total Number of Items	41										

	Conditional Reliability										Min	Max
Scale Score	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	40.0	84.2	
SE	51.60	12.60	2.80	.50	.10	.10	.10	.20	.70			
Reliability	.00	.00	.00	.71	.99	1.00	.99	.96	.48			

SE	Average CAT Length for Target SE (Type=CAT only)									
0.00										
0.00										

NI	Average SE for Target CAT Length (Type=CAT only)									
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Scale Score Definition

Sample	N	Alpha Reliability
Promis ▾	15903	0.99

Score Distributions									
	Mean	SD	P5	P10	P25	P50	P75	P90	P95
Raw	87.14	51.51	33.00	36.00	42.00	66.00	131.00	170.00	183.00
Scale	55.92	10.82	39.98	39.98	47.48	55.22	65.34	70.30	72.84



PROMIS Validity and Interpretation Tables

Physical Function Item Bank v1.0

Calibration Sample	Promis Wave 1											Min	Max
Sample Description	Promis Wave 1 Full-Bank												
Scaling Model Used For Calibration	Graded Response Model (GRM)												
Total Number of Items	125												
Scale Score	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	10.0	90.0		
SE	.10	.10	.10	.10	.10	.20	.40	.90	2.40				
Reliability	.98	.99	.99	.99	.99	.95	.80	.13	.00				
SE	Average CAT Length for Target SE (Type=CAT only)												
0.00													
0.00													
NI	Average SE for Target CAT Length (Type=CAT only)												
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Scale Score Definition													
Sample	N	Alpha Reliability											
PROMIS Wave 1 Full Bank	1700	0.99											
<input type="button" value="Update"/>													
Score Distributions													
	Mean	SD	P5	P10	P25	P50	P75	P90	P95				
Raw	559.50	73.94	392.85	463.27	540.17	584.82	610.82	620.53	624.29				
Scale	50.00	9.99	27.46	36.98	47.38	53.42	56.94	58.25	58.76				

Satisfaction with Participation in Discretionary Social Activities Item Bank v1.0

Calibration Sample	Promis Wave 1											Min	Max
Sample Description	Promis Wave 1 Full-Bank												
Scaling Model Used For Calibration	Graded Response Model (GRM)												
Total Number of Items	12												
Scale Score	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	10.0	90.0		
SE	6.90	1.50	.30	.10	.20	.20	.70	3.90	20.10				
Reliability	.00	.00	.90	.98	.98	.97	.50	.00	.00				
SE	Average CAT Length for Target SE (Type=CAT only)												
0.00													
0.00													
NI	Average SE for Target CAT Length (Type=CAT only)												
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
Scale Score Definition													
Sample	N	Alpha Reliability											
PROMIS Wave 1 Full Bank	712	0.97											
<input type="button" value="Update"/>													
Score Distributions													
	Mean	SD	P5	P10	P25	P50	P75	P90	P95				
Raw	41.08	13.13	17.00	23.00	32.00	42.00	51.00	60.00	60.00				
Scale	49.31	10.73	32.13	36.57	41.96	48.50	55.05	68.86	68.85				



PROMIS Validity and Interpretation Tables

Sleep-related Impairment Item Bank v1.0

Calibration Sample	PROMIS Sleep Wave 1											Min	Max
Sample Description	Sleep calibration sample												
Scaling Model Used For Calibration	Graded Response Model												
Total Number of Items	16												

Scale Score	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	10.0	90.0
SE	2.20	.90	.40	.30	.20	.20	.20	.30	.80		
Reliability	.00	.13	.80	.90	.97	.97	.97	.91	.35		

SE	Average CAT Length for Target SE (Type=CAT only)									
0.00										
0.00										

NI	Average SE for Target CAT Length (Type=CAT only)									
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
0	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Scale Score Definition

Sample	N	Alpha Reliability									
Sleep Calibration	2252	0.95									

Score Distributions										
	Mean	SD	P5	P10	P25	P50	P75	P90	P95	
Raw	34.84	13.23	18.45	20.00	24.00	32.00	44.00	54.00	61.00	
Scale	50.00	9.81	34.59	37.41	43.03	49.52	56.89	63.18	66.73	

IV. Validity and Interpretation Tables

Initial evidence in support of the validity of PROMIS item banks and scales is provided in the tables below. The overall organization of the tables is according to PROMIS domain. Within each domain, the first table (Table xx-1) provides descriptive statistics on the sample that provided data in the PROMIS Wave 1 data collection described above. These initial tables provide sample size, average T-score and T-score standard deviation for each bank or scale, on the total sample as well as subsamples according to gender, educational level and age bracket. The second table, or set of tables, (Tables xx-2) provide T-score percentiles by total sample and demographic subgroup (gender, education and age). The third table (Tables xx-3) provides T-score means and standard deviations for clinical subgroups and levels of self-rated general health.



A. Emotional Distress: Anger, Anxiety and Depression

Table ED-1: Descriptive Statistics for Emotional Distress

Variable	Level	N ¹			Mean			SD ²		
		Anger	Anxiety	Depression	Anger	Anxiety	Depression	Anger	Anxiety	Depression
Population	Overall	14,901	14,836	14,839	50.2	50.4	50.5	8.7	9.0	9.1
Gender	Female	7,558	7,537	7,541	50.7	51.5	51.4	8.8	9.1	9.2
	Male	6,956	6,911	6,910	49.8	49.3	49.6	8.6	8.7	8.9
Education ³	Some HS or less	384	384	386	53.3	54.0	53.7	10.6	10.7	11.0
	HS graduate/GED	2,175	2,197	2,197	51.2	51.7	51.6	9.2	9.6	9.6
	>HS	11,949	11,863	11,864	50.0	50.1	50.2	8.5	8.8	8.9
Age	<35	2,233	2,245	2,244	52.8	52.9	52.9	9.4	9.5	9.7
	35-44	2,069	2,037	2,038	52.3	52.1	52.1	9.2	9.7	9.8
	45-54	2,638	2,599	2,602	51.3	52.0	52.3	8.9	9.4	9.6
	55-64	3,407	3,402	3,406	49.9	50.2	50.5	8.3	8.6	8.8
	65-74	2,395	2,381	2,381	48.0	47.7	47.8	7.7	7.6	7.6
	75+	1,773	1,786	1,782	47.1	47.4	47.2	7.3	7.2	7.1

¹ N=Sample size

² SD= Standard deviation

³ HS=High school; GED=Equivalent to a high school degree

Table ED-2 Anger: Anger T-score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	42.2	42.4	42.2	42.4	42.4	42.2	43.1	42.4	42.4	42.2	40.5	40.5
25	42.4	42.7	42.4	44.9	43.5	42.4	45.8	45.3	44.3	42.4	42.2	42.1
30	44.7	45.3	44.6	47.1	45.5	44.6	47.5	47.1	45.9	44.9	42.4	42.4
35	46.4	47.1	45.9	49.9	47.5	46.3	48.9	48.6	47.6	46.4	44.4	42.5
40	47.7	48.5	47.5	50.6	49.1	47.5	50.0	49.9	49.3	47.7	45.8	44.6
45	49.2	49.8	48.6	52.3	49.9	48.9	51.1	50.6	50.1	49.0	47.3	45.8
50	50.0	50.6	49.9	53.9	50.6	49.9	52.6	52.1	50.6	49.9	48.5	47.1
55	50.6	51.3	50.6	54.5	52.6	50.6	54.0	53.3	52.1	50.6	49.7	48.0
60	52.1	52.8	51.7	55.9	53.9	51.7	55.4	54.4	53.5	51.7	50.1	49.3
65	53.7	54.0	53.1	57.3	54.9	53.2	56.7	55.9	54.6	53.4	50.6	50.1
70	54.7	55.2	54.4	58.5	56.1	54.4	58.2	57.2	55.9	54.4	51.8	50.8
75	56.1	56.4	55.6	60.5	57.6	55.9	59.4	58.7	57.3	55.9	53.4	52.1
80	57.7	58.2	57.0	62.4	58.9	57.3	61.1	60.4	58.8	56.9	54.4	53.9

¹ HS=High school

² GED=Equivalent to a high school degree



PROMIS Validity and Interpretation Tables

Table ED-2 Anxiety: Anxiety T-score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	41.1	42.3	40.8	43.5	41.6	41.1	43.5	42.4	42.5	41.1	40.4	40.4
25	42.5	43.5	41.6	46.2	43.5	42.5	45.5	43.5	43.5	42.5	40.8	40.8
30	43.8	46.1	42.5	47.7	45.4	43.5	47.2	46.2	46.3	43.6	41.6	41.6
35	46.2	47.4	44.1	49.3	47.3	46.1	48.8	47.5	47.8	46.3	43.5	43.1
40	47.6	48.8	46.3	50.7	48.8	47.2	50.2	48.8	48.8	47.6	44.4	44.4
45	48.8	49.7	47.7	52.5	50.7	48.7	51.4	50.7	50.5	48.8	46.2	46.2
50	49.9	51.2	48.8	54.1	51.7	49.4	52.8	51.9	51.7	49.9	47.5	47.3
55	51.2	52.5	49.9	55.1	53.1	50.8	54.1	53.6	53.1	51.1	48.7	48.7
60	52.5	54.0	51.2	56.1	54.2	51.9	55.1	54.4	54.2	52.3	49.3	49.2
65	54.0	54.6	52.5	57.5	55.3	53.6	56.4	56.2	55.1	53.9	50.7	50.2
70	54.8	56.2	54.0	59.8	56.7	54.4	57.9	57.7	56.7	54.6	51.8	51.5
75	56.4	57.8	55.1	61.5	58.3	56.0	59.5	59.3	58.4	56.3	53.4	52.7
80	58.2	59.4	56.7	63.7	60.0	57.8	61.4	60.8	60.3	57.9	54.4	54.1

¹ HS=High school

² GED=Equivalent to a high school degree

Table ED-2 Depression: Depression T-score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	40.9	41.4	40.7	41.9	40.9	40.9	41.9	41.4	41.4	40.9	40.1	40.1
25	41.9	42.5	41.4	42.5	41.9	41.9	45.5	42.5	44.0	41.9	40.9	40.9
30	42.5	46.1	42.4	46.9	44.9	42.5	47.0	45.5	46.9	44.0	41.4	41.4
35	46.4	47.0	44.0	48.4	46.9	46.4	48.4	47.0	47.8	46.7	42.5	42.5
40	47.0	48.4	46.7	50.4	48.7	47.0	50.3	48.6	49.7	47.4	43.2	43.9
45	48.7	50.3	47.4	51.2	50.4	48.3	51.3	50.5	50.8	49.0	46.4	45.8
50	50.4	51.0	49.0	53.1	51.6	50.0	52.7	51.6	51.9	50.4	47.0	46.9
55	51.2	52.2	50.4	54.7	52.9	50.9	54.1	53.2	53.2	51.4	48.0	47.8
60	52.5	53.5	51.6	56.0	54.4	51.9	55.6	55.2	55.3	52.5	49.7	49.1
65	53.9	55.3	52.6	58.6	55.9	53.4	56.6	56.0	56.0	54.0	50.7	50.4
70	55.4	56.0	54.3	60.3	56.6	55.3	58.6	57.6	57.3	55.3	51.8	51.2
75	56.4	57.9	55.7	61.9	58.5	56.0	60.1	59.0	58.6	56.3	53.1	52.2
80	58.6	59.4	57.2	63.3	60.3	58.2	61.8	61.1	60.9	58.4	55.2	53.2

¹ HS=High school

² GED=Equivalent to a high school degree

Table ED-3: Emotional Distress T-Scores for Clinical Subgroups and Levels of Self-rated General Health

Variable	Category	N ¹			Mean			SD ²		
		Anger	Anxiety	Depression	Anger	Anxiety	Depression	Anger	Anxiety	Depression
Condition ⁵	Hypertension	6,221	6,208	6,212	50.1	50.3	50.4	8.6	8.9	9.0
	Angina	1,676	1,678	1,676	52.1	52.6	52.6	9.0	9.5	9.5
	Coronary Artery	1,031	1,032	1,030	50.8	50.6	50.8	8.6	8.9	8.8
	Heart Failure	762	756	756	51.1	51.7	52.2	8.4	9.0	9.0
	Heart Attack	1,081	1,078	1,075	50.4	50.8	50.9	8.6	8.9	9.0
	Stroke	658	648	647	50.4	51.4	52.1	8.8	9.2	9.1
	Liver Disease	644	651	651	52.1	52.4	52.9	9.1	9.5	9.1
	Kidney Disease	461	463	462	51.6	51.5	51.6	8.9	9.3	9.3
	Arthritis	4,046	4,048	4,049	50.8	51.7	51.7	8.7	9.0	9.1
	Osteoarthritis	2,310	2,302	2,304	50.7	51.2	51.7	8.5	8.9	9.1
	Migraines	2,662	2,678	2,685	52.9	54.0	54.3	9.3	9.5	9.6
	Asthma	2,475	2,465	2,466	52.1	52.8	52.9	9.1	9.6	9.5
	COPD	1,858	1,865	1,862	52.2	52.7	52.7	8.7	9.5	8.8
	Diabetes	2,114	2,099	2,100	51.1	51.2	51.7	8.9	9.1	9.2
	Cancer	2,667	2,679	2,677	48.6	48.6	48.5	8.1	8.1	8.4
	Depression	4,125	4,127	4,133	54.3	56.2	56.8	9.1	9.1	9.2
	Anxiety	2,869	2,858	2,866	54.8	57.6	56.9	9.1	9.2	9.4
	Alcohol/Drug	625	626	626	54.3	55.0	54.9	8.8	9.6	9.6
	Sleep Disorder	2,225	2,208	2,211	53.7	55.4	55.5	9.2	9.6	9.6
	HIV ³	112	113	113	53.7	54.3	54.4	10.6	9.8	10.4
	Spinal Cord Injury	728	729	730	52.0	53.3	53.7	8.7	9.4	9.0
Multiple Sclerosis	156	153	153	52.2	55.1	55.6	9.3	8.9	9.4	
Parkinson's Disease	35	33	33	54.8	57.1	57.0	10.1	11.1	10.6	
Epilepsy	184	182	181	53.0	53.8	54.0	9.6	9.5	9.2	
ALS ⁴	9	9	9	60.9	57.7	57.9	8.7	12.4	10.2	
Number of Chronic Conditions	None	2,065	2,025	2,021	48.4	47.3	47.4	8.3	7.8	7.8
	One	2,565	2,541	2,543	48.7	48.1	48.0	8.1	7.9	8.1
	Two or more	9,885	9,884	9,889	51.1	51.7	51.8	8.8	9.2	9.3
Number of Disabling Conditions	None	8,063	8,025	8,016	48.6	47.8	47.8	8.1	7.8	7.8
	One	3,015	3,003	3,006	50.1	50.7	50.9	8.3	8.2	8.5
	Two or more	3,437	3,422	3,431	54.4	56.4	56.7	9.2	9.4	9.4
General Health	Poor	742	738	739	55.6	58.2	59.3	9.8	9.8	9.7
	Fair	2,670	2,650	2,655	53.2	54.8	55.0	9.0	9.1	9.0
	Good	4,855	4,836	4,835	50.8	50.9	51.0	8.4	8.6	8.6
	Very Good	4,611	4,601	4,598	48.5	47.9	47.9	8.1	7.8	7.9
	Excellent	1,633	1,624	1,624	46.8	45.7	45.4	7.6	7.0	7.0

¹ N=Sample size

² SD= Standard deviation

³ HIV=Human immunodeficiency virus

⁴ ALS=Amyotrophic lateral sclerosis

⁵ Condition=self-reported medical condition

B. Fatigue

Table F-1: Descriptive Statistics for Fatigue

Variable	Level	N ¹	Mean	SD ²
Population	Overall	14,931	50.0	10.0
Gender	Female	7,797	51.5	10.1
	Male	7,129	48.4	9.7
Education ³	Some HS or less	409	53.1	11.1
	HS graduate/GED	2,257	51.3	10.2
	>HS	12,247	49.7	9.9
Age	<35	2,220	50.7	9.7
	35-44	2,100	51.5	10.4
	45-54	2,732	52.3	10.5
	55-64	3,577	50.2	10.3
	65-74	2,475	47.4	9.2
	75+	1,823	47.0	8.1

¹ N=Sample size

² SD= Standard deviation

³ HS=High school; GED=Equivalent to a high school degree

Table F-2: Fatigue T-score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	41.2	42.6	39.9	43.4	41.8	41.0	41.9	42.0	42.7	40.9	39.3	40.4
25	42.7	44.3	41.3	44.5	43.4	42.5	43.5	43.8	44.4	42.6	40.8	41.7
30	44.2	45.8	42.6	46.7	45.2	43.9	45.1	45.5	46.1	44.2	41.9	42.7
35	45.6	47.3	43.9	48.4	46.9	45.4	46.4	47.0	47.8	45.8	43.3	44.0
40	46.9	48.6	45.3	49.6	48.4	46.6	47.7	48.5	49.2	47.3	44.7	45.1
45	48.3	49.9	46.5	51.2	49.8	47.9	49.2	50.1	50.4	48.6	45.8	46.1
50	49.6	51.2	47.8	52.5	50.8	49.2	50.3	51.6	52.0	50.0	46.9	47.0
55	50.8	52.7	49.1	54.3	52.3	50.4	51.6	53.1	53.9	51.2	48.3	47.9
60	52.2	54.2	50.3	56.4	53.8	51.8	53.2	54.5	55.4	52.8	49.5	48.9
65	53.8	55.6	51.6	57.7	55.5	53.3	54.6	55.8	56.9	54.3	50.5	50.0
70	55.3	57.1	53.2	59.5	56.9	54.9	56.0	57.4	58.3	56.2	51.8	51.1
75	57.0	58.6	54.8	61.4	58.5	56.6	57.5	58.9	60.0	57.9	53.4	52.3
80	58.8	60.5	56.7	63.3	60.4	58.3	59.3	60.9	61.6	59.6	55.0	53.5
85	61.0	62.4	58.9	65.6	62.4	60.5	61.1	62.7	63.8	61.6	57.1	55.0
90	63.5	64.8	61.6	67.4	65.2	63.1	63.6	65.3	66.3	64.1	59.5	57.2

¹ HS=High school

² GED=Equivalent to a high school degree

Table F-3: Fatigue T-Scores for Clinical Subgroups and Levels of Self-rated General Health

Variable	Category	N ¹	Mean	SD ²
Condition ⁵	Hypertension	6,402	50.7	10.0
	Angina	1,723	53.4	10.4
	Coronary Artery	1,069	51.4	10.2
	Heart Failure	783	54.4	9.8
	Heart Attack	1,110	51.8	10.3
	Stroke	2,323	53.5	9.8
	Liver Disease	692	53.4	10.6
	Kidney Disease	495	52.8	9.9
	Arthritis	4,213	53.0	9.9
	Osteoarthritis	2,323	53.5	9.8
	Migraines	2,728	55.0	9.9
	Asthma	2,544	53.5	10.2
	COPD	1,878	53.9	10.2
	Diabetes	2,179	52.7	9.9
	Cancer	3,032	48.2	9.7
	Depression	4,205	56.7	9.1
	Anxiety	2,943	56.9	9.3
	Alcohol/Drug	634	53.8	10.1
	Sleep Disorder	2,258	57.1	9.5
	HIV ³	118	55.0	10.7
	Spinal Cord Injury	754	54.1	10.1
	Multiple Sclerosis	157	58.8	9.1
Parkinson's Disease	37	56.7	11.9	
Epilepsy	186	53.9	10.8	
ALS ⁴	13	55.2	14.5	
Number of Chronic Conditions	None	1,998	44.3	8.3
	One	2,631	46.2	8.5
	Two or more	10,233	52.1	9.9
Number of Disabling Conditions	None	6,237	46.0	8.3
	One	3,157	51.6	8.6
	Two or more	3,539	58.6	8.7
General Health	Poor	752	63.6	8.0
	Fair	2,738	57.0	8.4
	Good	4,992	50.8	8.5
	Very Good	4,755	45.9	8.1
	Excellent	1,675	41.7	7.8

¹ N=Sample size

² SD= Standard deviation

³ HIV=Human immunodeficiency virus

⁴ ALS=Amyotrophic lateral sclerosis

⁵ Condition=self-reported medical condition

C. Pain: Behavior, Interference and Intensity

Table P-1: Descriptive Statistics for Pain Item Banks (Behavior and Interference)

Variable	Level	N ¹		Mean		SD ²	
		Behavior ⁴	Interference	Behavior ⁴	Interference	Behavior ⁴	Interference
Population	Overall	14,825	14,848	51.5	52.8	9.5	8.1
Gender	Female	7,720	7,744	52.3	53.6	9.6	8.3
	Male	7,104	7,103	50.7	51.9	9.3	7.8
Education ³	Some HS or less	398	399	54.7	56.6	9.8	9.4
	HS graduate/GED	2,210	2,219	52.4	53.9	9.8	8.5
	>HS	12,206	12,220	51.2	52.5	9.4	7.9
Age	<35	2,205	2,257	49.1	50.7	10.1	7.5
	35-44	2,087	2,091	51.5	52.7	10.1	8.3
	45-54	2,723	2,695	53.6	55.0	9.6	8.9
	55-64	3,552	3,508	52.5	54.0	9.2	8.3
	65-74	2,481	2,504	50.8	51.7	8.8	7.1
	75+	1,777	1,793	50.2	51.5	8.6	6.7

¹ N=Sample size

² SD= Standard deviation

³ HS=High school; GED=Equivalent to a high school degree

⁴ Based on Version 1.1 calibrations

Table P-2 PB: Pain Behavior T-score Percentile (Total and by Demographic Subgroup)³

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	37.9	38.1	37.9	45.8	38.1	37.9	37.0	37.9	42.6	39.5	38.1	37.9
25	41.0	44.4	39.5	50.9	43.8	39.9	37.2	39.4	49.5	48.3	42.1	41.1
30	48.6	49.6	47.2	52.2	49.1	48.4	38.1	46.9	51.1	50.1	48.6	48.3
35	50.3	51.2	49.5	53.8	51.1	49.8	39.5	49.6	53.0	51.6	49.6	49.6
40	51.8	52.8	50.9	55.1	52.4	51.4	47.2	51.8	53.9	53.0	51.0	50.9
45	53.0	53.9	51.8	56.0	53.8	52.7	49.6	53.0	54.9	53.9	51.8	51.8
50	54.0	54.8	53.1	57.0	54.8	53.8	51.4	54.2	55.9	54.9	53.2	52.7
55	54.9	55.9	54.0	57.8	55.9	54.7	53.1	55.1	56.8	55.9	54.1	53.6
60	55.9	56.7	54.9	58.4	56.9	55.6	54.3	56.4	57.7	56.8	54.9	54.3
65	56.8	57.6	55.9	59.5	57.9	56.5	55.2	57.3	58.5	57.7	55.8	54.9
70	57.7	58.4	56.8	60.4	58.9	57.3	56.5	58.2	59.5	58.3	56.5	55.9
75	58.6	59.3	57.7	61.3	59.6	58.3	57.6	59.2	60.2	59.2	57.3	56.6
80	59.6	60.0	58.8	62.2	60.6	59.3	58.6	60.2	61.4	60.0	58.4	57.4
85	60.6	61.3	59.9	63.9	61.9	60.2	59.6	61.6	62.5	61.1	59.4	58.5
90	62.1	62.7	61.4	65.5	63.2	61.9	61.3	62.9	64.1	62.5	60.1	59.6
95	64.2	64.9	63.4	67.7	65.1	63.9	63.5	65.1	66.1	64.2	62.2	61.2
100	78.7	78.7	75.0	76.7	75.0	78.7	78.7	75.6	78.0	75.0	71.8	70.7

¹ HS=High school

² GED=Equivalent to a high school degree

³ Based on Version 1.1 calibrations



PROMIS Validity and Interpretation Tables

Table P-2 PI: Pain Interference T-score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	44.5	44.7	44.5	45.0	44.7	44.5	44.3	44.3	44.8	44.8	44.5	44.7
25	44.8	44.8	44.7	48.4	45.0	44.8	44.4	44.7	45.3	45.0	44.8	44.8
30	45.3	47.2	44.8	51.0	47.2	45.0	44.7	44.8	48.8	47.2	45.0	45.3
35	47.2	49.1	45.3	52.1	49.4	47.2	44.8	46.2	50.5	49.7	47.2	47.2
40	49.6	50.6	47.2	53.1	50.7	49.1	45.0	48.9	51.9	51.0	48.4	48.8
45	50.9	51.8	49.8	55.1	52.2	50.5	47.2	50.6	53.4	52.3	49.9	49.9
50	52.1	53.2	51.0	56.3	53.3	51.6	49.1	51.9	54.7	53.6	51.1	51.1
55	53.3	54.4	52.2	57.5	54.7	53.1	50.2	53.3	55.8	54.8	52.3	52.1
60	54.5	55.6	53.4	59.1	55.9	54.1	51.6	54.6	57.1	55.9	53.5	53.1
65	55.7	56.9	54.5	60.7	57.1	55.3	53.1	55.9	58.6	57.1	54.4	54.1
70	56.9	58.1	55.7	62.5	58.7	56.5	54.1	57.1	60.1	58.4	55.5	54.9
75	58.3	59.5	57.0	63.7	60.0	57.8	55.7	58.5	61.6	60.1	56.6	56.2
80	60.1	61.1	58.7	66.1	61.8	59.5	57.3	60.2	63.3	61.8	58.0	57.3

¹ HS=High school

² GED=Equivalent to a high school degree



PROMIS Validity and Interpretation Tables

Table P-3: Pain T-Scores for Clinical Subgroups and Levels of Self-rated General Health

Variable	Category	N ¹		Mean		SD ²	
		Behavior	Interference	Behavior	Interference	Behavior	Interference
Condition ⁵	Hypertension	6,369	6,369	53.0	54.1	9.0	8.2
	Angina	1,685	1,689	55.1	56.4	8.5	8.3
	Coronary Artery	1,049	1,043	53.9	55.0	8.4	8.1
	Heart Failure	774	765	55.0	56.6	8.5	8.5
	Heart Attack	1,080	1,081	53.5	54.	8.9	8.5
	Stroke	652	657	55.0	56.4	8.8	8.8
	Liver Disease	685	682	54.3	55.8	9.3	8.7
	Kidney Disease	483	481	54.6	55.8	8.7	8.0
	Arthritis	4,180	4,181	55.9	56.7	7.6	8.0
	Osteoarthritis	2,295	2,280	56.4	57.8	7.3	8.1
	Migraines	2,713	2,724	55.7	56.9	8.7	8.4
	Asthma	2,713	2,724	55.7	56.9	8.7	8.4
	COPD	1,849	1,851	54.9	56.1	9.1	8.7
	Diabetes	2,152	2,147	54.2	55.5	8.8	8.5
	Cancer	3,019	3,031	50.5	52.0	9.2	7.4
	Depression	4,183	4,197	55.5	56.8	8.9	8.6
	Anxiety	2,893	2,915	55.5	56.9	9.2	8.8
	Alcohol/Drug	629	629	54.3	55.1	9.3	8.5
	Sleep Disorder	2,243	2,237	56.5	58.1	8.5	8.5
	HIV ³	111	117	53.4	55.9	9.9	8.6
	Spinal Cord Injury	744	749	58.2	59.2	7.5	8.3
Multiple Sclerosis	151	152	57.0	59.4	8.5	8.2	
Parkinson's Disease	35	35	55.6	59.2	9.5	9.1	
Epilepsy	181	180	54.2	55.8	9.9	8.9	
ALS ⁴	9	9	56.9	59.5	9.9	10.2	
Number of Chronic Conditions	None	2,009	2,023	45.3	47.6	8.9	5.3
	One	2,630	2,626	47.9	49.5	9.2	6.4
	Two or more	10,141	10,152	53.6	54.7	8.9	8.2
Number of Disabling Conditions	None	8,170	8,189	47.8	49.1	9.0	5.9
	One	3,135	3,121	53.8	54.6	8.1	7.1
	Two or more	3,475	3,491	58.0	59.9	7.6	7.8
General Health	Poor	743	742	60.3	63.9	7.4	8.0
	Fair	2,692	2,708	57.2	58.7	7.5	7.7
	Good	4,969	4,975	52.8	53.3	8.5	7.1
	Very Good	4,734	4,734	48.2	49.4	9.0	6.0
	Excellent	1,685	1,686	43.8	46.6	8.1	4.4

¹ N=Sample size

² SD= Standard deviation

³ HIV=Human immunodeficiency virus

⁴ ALS=Amyotrophic lateral sclerosis

⁵ Condition=self-reported medical condition



1. Pain Intensity

Table P-1 PI: Descriptive Statistics for Pain Intensity (0-10 numeric rating scale)

Variable	Level	N ¹	Mean	SD ²
Population	Overall	21,100	2.6	2.5
Gender	Female	10,976	2.8	2.6
	Male	10,121	2.4	2.4
Education ³	Some HS or less	548	3.8	3.0
	HS graduate/GED	3,281	3.1	2.6
	>HS	17,249	2.5	2.4
Age	<35	3,683	2.0	2.2
	35-44	3,027	2.6	2.5
	45-54	3,849	3.2	2.7
	55-64	4,594	3.0	2.5
	65-74	3,226	2.4	2.3
	75+	2,721	2.3	2.1

¹ N=Sample size

² SD= Standard deviation

³ HS=High school; GED=Equivalent to a high school degree

Table P-2 PI: Pain Intensity Raw Score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age						
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+	
20	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	1.0	1.0	0.0	1.0	1.0	1.0	0.0	0.0	1.0	1.0	1.0	1.0	1.0
30	1.0	1.0	1.0	1.0	1.0	1.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0
35	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
40	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.0
45	2.0	2.0	1.0	3.0	2.0	2.0	1.0	2.0	2.0	2.0	2.0	2.0	2.0
50	2.0	2.0	2.0	3.0	3.0	2.0	1.0	2.0	3.0	3.0	2.0	2.0	2.0
55	2.0	3.0	2.0	4.0	3.0	2.0	2.0	2.0	3.0	3.0	2.0	2.0	2.0
60	3.0	3.0	2.0	5.0	3.0	3.0	2.0	3.0	4.0	3.0	3.0	3.0	2.0
65	3.0	3.0	3.0	5.0	4.0	3.0	2.0	3.0	4.0	4.0	3.0	3.0	3.0
70	4.0	4.0	3.0	6.0	5.0	3.0	3.0	4.0	5.0	4.0	3.0	3.0	3.0
75	4.0	5.0	4.0	6.0	5.0	4.0	3.0	4.0	5.0	5.0	4.0	3.0	3.0
80	5.0	5.0	4.0	7.0	6.0	5.0	4.0	5.0	6.0	6.0	4.0	4.0	4.0
85	6.0	6.0	5.0	8.0	6.0	6.0	4.0	6.0	7.0	6.0	5.0	5.0	5.0
90	7.0	7.0	6.0	8.0	7.0	6.0	5.0	7.0	7.0	7.0	6.0	6.0	6.0
95	7.0	8.0	7.0	9.0	8.0	7.0	7.0	7.0	8.0	8.0	7.0	7.0	7.0
100	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

¹ HS=High school

² GED=Equivalent to a high school degree



Table P-3 PI: Pain T-Scores for Clinical Subgroups and Levels of Self-rated General Health

Variable	Category	N ¹	Mean	SD ²
		Intensity	Intensity	Intensity
Condition ⁵	Hypertension	8,506	3.1	2.5
	Angina	2,046	3.7	2.7
	Coronary Artery	1,278	3.2	2.5
	Heart Failure	939	3.7	2.7
	Heart Attack	1,331	3.3	2.6
	Stroke	846	3.6	2.6
	Liver Disease	855	3.4	2.7
	Kidney Disease	601	3.5	2.6
	Arthritis	5,468	4.0	2.5
	Osteoarthritis	3,000	4.3	2.5
	Migraines	3,551	3.8	2.7
	Asthma	3,551	3.8	2.7
	COPD	2,169	3.7	2.7
	Diabetes	2,764	3.5	2.6
	Cancer	3,474	2.3	2.3
	Depression	5,456	3.6	2.7
	Anxiety	3,797	3.7	2.7
	Alcohol/Drug	835	3.3	2.6
	Sleep Disorder	2,823	4.2	2.7
	HIV ³	147	3.4	2.9
Spinal Cord Injury	857	4.8	2.6	
Multiple Sclerosis	190	4.5	2.8	
Parkinson's Disease	47	3.8	3.1	
Epilepsy	239	3.6	2.9	
ALS ⁴	13	5.6	3.7	
Number of Chronic Conditions	None	3,654	1.3	1.7
	One	4,029	1.8	2.0
	Two or more	13,083	3.3	2.6
Number of Disabling Conditions	None	12,404	1.7	1.9
	One	4,137	3.3	2.4
	Two or more	4,225	4.7	2.6
General Health	Poor	911	5.7	2.6
	Fair	3,490	4.4	2.5
	Good	7,123	2.8	2.3
	Very Good	7,031	1.8	1.9
	Excellent	2,540	0.9	1.5

¹ N=Sample size

² SD= Standard deviation

³ HIV=Human immunodeficiency virus

⁴ ALS=Amyotrophic lateral sclerosis

⁵ Condition=self-reported medical condition



D. Physical Function

Table PF-1: Descriptive Statistics for Physical Function

Variable	Level	N ¹	Mean	SD ²
Population	Overall	15,725	47.9	9.5
Gender	Female	8,175	47.0	9.6
	Male	7,549	48.9	9.4
Education ³	Some HS or less	415	44.9	10.4
	HS graduate/GED	2,398	46.5	10.0
	>HS	12,899	48.3	9.4
Age	<35	2,421	53.8	8.2
	35-44	1,962	50.6	9.7
	45-54	2,781	47.2	10.3
	55-64	3,716	46.0	9.5
	65-74	2,728	46.3	8.4
	75+	2,117	45.1	7.8

¹ N=Sample size

² SD= Standard deviation

³ HS=High school; GED=Equivalent to a high school degree

Table PF-2: Physical Function T-score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	39.5	38.5	40.8	35.6	37.4	40.0	47.2	42.2	37.7	37.6	39.2	38.7
25	41.3	40.1	42.5	36.9	39.3	41.8	48.7	44.1	39.6	39.3	40.8	40.0
30	42.7	41.7	44.1	38.1	41.0	43.2	50.2	45.9	41.5	40.8	42.0	41.2
35	44.2	43.1	45.4	39.5	42.4	44.7	51.3	47.3	43.3	42.3	43.1	42.2
40	45.6	44.5	46.6	40.8	44.1	46.0	52.8	48.7	45.0	43.6	44.4	43.0
45	46.8	45.9	47.8	42.5	45.6	47.2	54.2	50.1	46.3	45.0	45.4	44.0
50	48.1	47.2	49.1	44.0	46.7	48.4	55.2	51.3	47.6	46.1	46.4	44.9
55	49.4	48.4	50.3	45.3	48.0	49.8	56.7	52.8	49.1	47.4	47.4	46.0
60	50.7	49.8	51.5	47.0	49.4	50.9	57.4	54.4	50.6	48.6	48.4	46.8
65	52.0	51.1	53.1	48.3	50.8	52.2	58.6	56.0	52.0	50.0	49.6	47.8
70	53.5	52.6	54.7	50.6	52.2	53.8	58.7	57.4	53.7	51.2	50.9	48.9
75	55.4	54.4	56.7	52.5	54.2	55.7	59.8	58.6	55.4	52.7	52.0	50.1
80	57.4	56.7	58.5	55.2	56.0	57.4	60.6	59.5	57.4	54.6	53.3	51.5

¹ HS=High school

² GED=Equivalent to a high school degree



Table PF-3: Physical Function T-Scores for Clinical Subgroups and Levels of Self-rated General Health

Variable	Category	N ¹	Mean	SD ²
Condition ⁵	Hypertension	646	38.8	8.1
	Angina	396	37.6	7.5
	Coronary Artery	263	38.6	6.9
	Heart Failure	404	37.0	7.1
	Heart Attack	276	38.6	7.5
	Stroke	174	35.7	7.6
	Liver Disease	114	40.1	9.8
	Kidney Disease	111	38.5	8.5
	Arthritis	2,156	38.4	7.4
	Osteoarthritis	1,311	38.0	7.0
	Migraines	1,233	44.3	9.9
	Asthma	1,024	40.3	8.6
	COPD	1,165	38.3	7.1
	Diabetes	522	38.0	8.1
	Cancer	499	43.0	8.2
	Depression	1,538	41.3	9.4
	Anxiety	1,154	42.0	9.7
	Alcohol/Drug	75	43.3	9.5
	Sleep Disorder	932	40.0	9.0
	HIV ³	67	43.4	9.2
	Spinal Cord Injury	555	36.5	8.0
	Multiple Sclerosis	115	35.4	8.2
	Parkinson's Disease	24	35.9	9.2
Epilepsy	57	40.7	9.8	
ALS ⁴	8	33.3	15.4	
Number of Chronic Conditions	None	2,254	56.1	6.8
	One	2,806	52.5	7.9
	Two or more	10,665	45.0	8.9
Number of Disabling Conditions	None	8,761	52.5	7.5
	One	3,285	44.8	8.4
	Two or more	3,679	39.7	8.3
General Health	Poor	773	33.8	6.5
	Fair	2,810	40.0	7.6
	Good	5,285	46.9	7.8
	Very Good	5,050	52.4	7.3
	Excellent	1,805	56.6	6.6

¹ N=Sample size

² SD= Standard deviation

³ HIV=Human immunodeficiency virus

⁴ ALS=Amyotrophic lateral sclerosis

⁵ Condition=self-reported medical condition



E. Social Function: Satisfaction with Participation in Social Roles and Satisfaction with Participation in Discretionary Social Activities

Table SF Sat-1: Descriptive Statistics for Social Function

Variable	Level	N ¹		Mean		SD ²	
		SSR ⁴	SDSA ⁵	SSR ⁴	SDSA	SSR ⁴	SDSA
Population	Overall	726	729	49.4	49.3	10.7	10.7
Gender	Female	359	362	48.5	48.5	10.8	10.7
	Male	367	367	50.2	50.1	10.5	10.7
Education ³	Some HS or less	13	13	43.5	44.9	7.9	6.5
	HS graduate/GED	113	112	48.4	48.8	11.1	10.9
	>HS	599	603	49.7	49.5	10.6	10.7
Age	<35	142	146	48.5	47.8	9.1	9.7
	35-44	97	97	47.0	46.3	10.9	10.8
	45-54	148	146	48.8	48.8	9.8	10.2
	55-64	111	115	50.0	49.5	12.1	11.7
	65-74	84	81	51.5	52.3	11.0	10.6
	75+	101	100	51.3	52.6	11.4	10.0

¹ N=Sample size

² SD= Standard deviation

³ HS=High school; GED=Equivalent to a high school degree

⁴ PROMIS Satisfaction with Social Roles (SSR)

⁵ PROMIS Satisfaction with Discretionary Social Activities (SDSA)



PROMIS Validity and Interpretation Tables

Table SF Sat-2 SR: Social Role Function T-score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	40.9	40.3	41.6	37.4	39.5	41.2	41.2	38.1	40.9	38.7	43.4	41.0
25	41.9	41.4	43.3	38.1	41.2	42.2	41.8	40.0	41.8	41.8	44.0	41.9
30	43.5	42.2	44.7	38.8	42.0	44.2	42.6	41.8	43.6	44.2	44.3	45.7
35	45.0	44.0	46.6	40.7	43.4	45.7	44.0	42.4	45.3	46.8	46.9	47.4
40	46.7	45.4	48.2	41.1	44.9	47.3	45.0	44.2	46.6	47.7	48.8	49.1
45	48.1	46.7	49.2	41.3	47.1	48.4	46.3	45.3	47.7	48.6	49.8	49.8
50	49.1	47.9	50.0	41.4	48.7	49.3	48.2	47.1	48.7	50.1	50.2	50.2
55	50.2	48.9	50.2	42.5	49.5	50.2	49.6	48.3	49.1	50.2	51.7	50.7
60	50.4	50.2	51.4	43.1	50.2	50.7	50.2	49.4	50.2	50.7	53.9	52.4
65	52.0	50.8	53.1	43.9	51.5	52.1	51.6	50.1	50.9	52.4	55.6	55.8
70	54.2	52.8	54.7	46.8	54.4	54.2	52.9	50.5	53.2	55.6	57.1	56.6
75	55.9	55.1	56.3	49.1	55.7	56.1	54.0	51.2	54.5	61.0	60.7	61.4
80	58.7	57.1	60.0	51.7	57.0	60.0	54.8	56.3	56.3	62.9	63.1	63.2
85	62.6	62.5	63.1	55.5	62.9	62.7	57.3	59.1	60.1	67.9	67.9	67.9
90	67.9	67.9	67.9	57.5	67.9	67.9	60.6	63.2	62.5	67.9	67.9	67.9
95	67.9	67.9	67.9	58.4	67.9	67.9	67.9	67.9	67.9	67.9	67.9	67.9
100	67.9	67.9	67.9	58.4	67.9	67.9	67.9	67.9	67.9	67.9	67.9	67.9

¹ HS=High school

² GED=Equivalent to a high school degree



PROMIS Validity and Interpretation Tables

Table SF Sat-2 DSA: Discretionary Social Activity T-score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	40.7	39.5	41.5	38.6	40.4	40.8	39.5	38.0	40.8	39.9	44.9	43.9
25	42.0	41.2	43.0	40.3	42.1	42.1	40.9	38.2	41.9	41.5	45.6	44.9
30	43.9	42.5	44.5	41.5	43.8	44.1	43.1	38.9	42.5	44.1	47.1	46.5
35	44.9	44.5	45.7	41.6	44.5	45.1	44.4	40.7	44.9	44.9	48.2	48.5
40	46.3	45.6	46.8	43.5	45.3	46.7	44.9	42.1	46.0	46.1	49.1	50.2
45	47.4	46.8	48.1	44.8	46.0	47.7	46.1	44.4	47.6	48.1	50.1	51.2
50	48.5	47.7	49.6	44.9	47.2	48.9	46.5	46.3	48.8	50.6	52.0	51.7
55	50.1	49.1	50.9	44.9	49.9	50.2	47.6	46.9	49.3	51.6	52.9	52.9
60	51.4	50.5	52.2	45.0	50.9	51.5	48.9	47.7	50.2	52.5	53.3	53.3
65	52.6	51.8	52.9	45.5	52.2	52.8	50.8	48.6	51.5	52.9	54.5	54.7
70	53.3	52.9	54.0	48.7	52.9	53.4	52.3	51.0	52.5	53.5	56.9	57.3
75	55.0	53.5	57.0	51.2	53.6	55.2	54.1	52.6	53.4	55.2	58.9	59.1
80	57.3	55.4	59.0	53.1	56.8	58.2	55.9	53.6	55.4	60.8	61.6	62.8
85	61.5	60.0	63.7	53.9	60.9	62.4	58.5	56.8	63.3	64.4	68.9	68.9
90	68.9	68.9	68.9	54.3	68.9	68.9	62.3	63.1	64.8	68.9	68.9	68.9
95	68.9	68.9	68.9	54.6	68.9	68.9	68.9	68.9	68.9	68.9	68.9	68.9
100	68.9	68.9	68.9	54.6	68.9	68.9	68.9	68.9	68.9	68.9	68.9	68.9

¹ HS=High school

² GED=Equivalent to a high school degree



PROMIS Validity and Interpretation Tables

Table SF Sat-3: Social Function T-Scores for Clinical Subgroups and Levels of Self-rated General Health

Variable	Category	N ¹		Mean		SD ²	
		SSR ⁶	SDSA ⁷	SSR ⁶	SDSA ⁷	SSR ⁶	SDSA ⁷
Condition ⁵	Hypertension	263	262	49.9	50.2	11.2	11.1
	Angina	36	35	44.6	45.9	10.6	11.7
	Coronary Artery	20	18	45.2	48.3	12.6	14.9
	Heart Failure	15	17	41.5	44.3	11.6	10.7
	Heart Attack	22	23	44.9	47	12.7	13.1
	Stroke	21	20	48.2	48.2	10.7	9.8
	Liver Disease	32	31	44.6	45.8	12.6	12.3
	Kidney Disease	13	13	46.9	47.1	9.2	9.8
	Arthritis	167	168	47.9	49.5	11.8	11.6
	Osteoarthritis	72	72	45.8	48	11.5	11.7
	Migraines	123	124	46.9	47.5	11	10.7
	Asthma	101	100	48.6	49.2	10.5	11.1
	COPD	34	33	44.8	45.8	11.4	9.6
	Diabetes	83	82	47.6	48.4	12.6	11.4
	Cancer	46	48	50.6	51.6	11.6	11
	Depression	166	166	43.7	44	10.9	10.5
	Anxiety	112	111	43.9	45.3	11.1	10.8
	Alcohol/Drug	24	24	43.4	42.4	10.2	11.5
	Sleep Disorder	74	76	41.9	42.9	10.4	9.8
	HIV ³	4	4	35.3	37.9	9.8	11.7
	Spinal Cord Injury	11	10	41.3	44.9	7.2	6.2
	Multiple Sclerosis	1	1	51	53.9	x	x
Parkinson's Disease	0	0	x	x	x	x	
Epilepsy	5	5	54.5	54.7	8	3.1	
ALS ⁴	0	0	x	x	x	x	
Number of Chronic Conditions	None	193	193	51.8	50.9	9.8	10.3
	One	171	174	50.6	49.5	9.5	9.8
	Two or more	362	362	47.5	48.4	11.3	11.2
Number of Disabling Conditions	None	513	517	51.9	51.4	9.8	10.2
	One	121	120	46.6	47.8	9.3	9.2
	Two or more	92	92	38.9	39.5	9.7	9.2
General Health	Poor	12	11	34.8	33.2	12.2	8.7
	Fair	76	76	40.5	42.3	9	9.2
	Good	275	279	48.3	48.5	9.9	9.9
	Very Good	268	269	51.7	51.3	9.8	10.4
	Excellent	95	94	54.9	53.3	9.8	10.4

¹ N=Sample size

² SD= Standard deviation

³ HIV=Human immunodeficiency virus

⁴ ALS=Amyotrophic lateral sclerosis

⁵ Condition=self-reported medical condition

⁶ PROMIS Satisfaction with Social Roles (SSR)

⁷ PROMIS Satisfaction with Discretionary Social Activities (SDSR)

F. Global Mental Health

Table GMH-1: Descriptive Statistics for Global Mental Health Score

Variable	Level	N ¹	Mean	SD ²
Population	Overall	21,133	49.8	10
Gender	Female	10,992	49.1	10
	Male	10,130	50.6	10
Education ³	Some HS or less	550	45.1	11
	HS graduate/GED	3,284	48.0	10
	>HS	17,265	50.3	10
Age	<35	3,662	48.4	10
	35-44	3,032	48.0	10
	45-54	3,855	47.7	11
	55-64	4,601	49.6	10
	65-74	3,227	53.1	9
	75+	2,727	53.4	9

¹ N=Sample size

² SD= Standard deviation

³ HS=High school; GED=Equivalent to a high school degree

Table GMH-2: Global Mental Health T-score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	41.4	40.6	42.2	34.8	39.3	42.2	40.1	39.4	38.2	40.3	45.0	46.1
25	42.8	42.8	43.9	36.4	41.4	43.7	42.2	41.4	40.1	42.8	46.7	47.8
30	44.5	43.9	45.3	38.5	42.8	45.0	42.9	42.8	42.5	44.5	48.1	48.8
35	46.3	45.0	46.7	41.0	44.5	46.7	45.0	44.5	43.3	45.3	50.5	50.5
40	48.0	46.7	48.8	42.7	45.3	48.1	46.5	45.3	45.0	47.8	51.1	51.9
45	49.3	48.4	50.5	43.7	47.2	49.7	47.8	46.7	46.5	48.8	52.8	52.8
50	50.5	49.7	51.9	44.5	48.8	51.1	49.0	48.6	48.1	50.5	53.6	53.6
55	51.9	51.1	53.5	46.5	50.4	52.6	50.5	49.7	49.7	51.9	53.8	54.6
60	53.6	52.0	53.6	49.1	51.5	53.6	51.9	51.9	51.6	53.6	55.3	55.3
65	53.8	53.6	55.3	50.5	52.8	54.6	53.6	52.8	52.8	53.6	57.2	56.7
70	55.3	54.6	56.3	51.9	53.6	55.9	53.6	53.6	53.6	55.3	57.8	57.6
75	57.4	55.9	57.6	53.6	55.3	57.6	55.3	55.3	55.3	57.4	59.5	59.5
80	59.1	57.6	59.5	54.7	56.4	59.5	56.7	57.5	57.5	59.1	61.4	60.9

¹ HS=High school

² GED=Equivalent to a high school degree

Table GMH-3: Global Mental Health T-Scores for Clinical Subgroups and Levels of Self-rated General Health

Variable	Category	N ¹	Mean	SD ²
Condition ⁵	Hypertension	795	42.1	10.3
	Angina	463	41.1	10.8
	Coronary Artery	312	44.0	10.8
	Heart Failure	470	44.2	10.2
	Heart Attack	326	43.6	10.4
	Stroke	208	42.4	10.6
	Liver Disease	133	39.6	11.8
	Kidney Disease	131	43.7	10.4
	Arthritis	2,714	45.2	10.4
	Osteoarthritis	1,315	45.3	10.7
	Migraines	1,492	43.3	10.6
	Asthma	1,241	44.0	10.5
	COPD	1,310	44.4	10.5
	Diabetes	628	42.3	10.1
	Cancer	547	47.3	9.8
	Depression	1,865	34.8	7.9
	Anxiety	1,429	35.5	8.6
	Alcohol/Drug	95	35.8	10.3
	Sleep Disorder	1,123	38.6	10.0
	HIV ³	82	39.2	10.3
	Spinal Cord Injury	627	44.2	10.7
	Multiple Sclerosis	143	42.7	9.9
	Parkinson's Disease	33	40.3	12.1
Epilepsy	68	40.3	10.7	
ALS ⁴	12	39.7	15.8	
Number of Chronic Conditions	None	3,656	53.7	8.6
	One	4,030	52.7	9.0
	Two or more	13,088	47.9	10.6
Number of Disabling Conditions	None	12,407	53.0	8.8
	One	4,138	49.0	9.3
	Two or more	4,229	41.3	10.2
General Health	Poor	912	35.9	9.9
	Fair	3,491	42.1	9.2
	Good	7,128	47.8	8.4
	Very Good	7,032	53.9	7.6
	Excellent	2,541	60.1	7.6

¹ N=Sample size

² SD= Standard deviation

³ HIV=Human immunodeficiency virus

⁴ ALS=Amyotrophic lateral sclerosis

⁵ Condition=self-reported medical condition

G. Global Physical Health

Table GPH-1: Descriptive Statistics for Global Physical Health Score

Variable	Level	N ¹	Mean	SD ²
Population	Overall	21,133	49.0	10.4
Gender	Female	10,992	48.6	10.3
	Male	10,130	49.4	10.4
Education ³	Some HS or less	550	44.2	11.9
	HS graduate/GED	3,284	46.9	10.6
	>HS	17,265	49.5	10.2
Age	<35	3,662	50.7	9.0
	35-44	3,032	49.0	10.3
	45-54	3,855	47.3	11.1
	55-64	4,601	47.7	11.0
	65-74	3,227	49.9	10.2
	75+	2,727	49.9	9.8

¹ N=Sample size

² SD= Standard deviation

³ HS=High school; GED=Equivalent to a high school degree

Table GPH-2: Global Physical Health T-score Percentile (Total and by Demographic Subgroup)

Percentile	Total	Gender		Education			Age					
		Female	Male	Some HS ¹ or less	HS Grad/ GED ²	>HS	<35	35-44	45-54	55-64	65-74	75+
20	39.9	39.9	39.9	34.1	36.7	40.6	43.3	40.3	37.0	37.3	40.7	41.7
25	42.2	42.1	42.2	35.4	39.1	43.2	45.5	42.5	38.9	39.6	43.9	43.9
30	44.1	43.9	44.7	37.1	41.3	45.0	46.6	44.7	41.3	42.5	45.0	45.0
35	45.7	45.0	46.2	39.1	43.9	46.1	47.8	46.1	43.9	44.1	46.1	46.1
40	46.6	46.6	47.5	40.7	45.0	47.0	47.8	47.0	45.0	45.5	47.0	47.0
45	47.8	47.5	47.8	42.9	46.1	47.8	49.0	47.8	46.6	46.6	47.8	47.8
50	48.5	48.5	48.5	44.0	47.0	49.0	51.1	48.5	47.8	47.8	50.0	50.0
55	51.0	50.5	51.4	45.9	47.8	51.4	51.7	51.0	48.5	48.5	51.8	51.4
60	52.1	51.7	53.3	47.8	49.0	53.6	54.3	51.7	50.8	51.0	54.1	54.0
65	54.7	54.0	54.9	48.5	51.4	54.8	54.9	54.7	52.2	53.4	55.7	54.9
70	55.7	54.9	55.7	51.1	53.9	55.7	55.7	55.7	54.7	54.9	55.7	55.7
75	55.7	55.7	57.3	52.9	54.9	55.8	56.3	55.7	55.7	55.7	57.3	55.7
80	57.3	57.3	57.5	54.9	55.7	57.5	57.3	57.3	57.3	57.3	57.5	57.5

¹ HS=High school

² GED=Equivalent to a high school degree

Table GPH-3: Global Physical Health T-Scores for Clinical Subgroups and Levels of Self-rated General Health

Variable	Category	N ¹	Mean	SD ²
Condition ⁵	Hypertension	795	37.6	9.3
	Angina	463	35.5	8.7
	Coronary Artery	312	36.6	8.5
	Heart Failure	470	35.4	8.1
	Heart Attack	326	36.5	8.8
	Stroke	208	36.4	9.4
	Liver Disease	133	36.9	9.9
	Kidney Disease	131	37.1	10.3
	Arthritis	2,714	40.7	9.4
	Osteoarthritis	1,315	40.4	9.8
	Migraines	1,492	43.4	10.5
	Asthma	1,241	39.7	9.7
	COPD	1,310	37.1	8.8
	Diabetes	628	36.5	8.4
	Cancer	547	43.6	9.9
	Depression	1,865	39.3	9.7
	Anxiety	1,429	40.1	9.8
	Alcohol/Drug	95	39.8	10.4
	Sleep Disorder	1,123	38.1	9.5
	HIV ³	82	38.0	9.7
	Spinal Cord Injury	627	40.0	9.4
	Multiple Sclerosis	143	37.7	9.2
	Parkinson's Disease	33	37.7	12.3
Epilepsy	68	40.8	10.5	
ALS ⁴	12	37.9	16.4	
Number of Chronic Conditions	None	3,656	55.6	8.1
	One	4,030	53.3	8.6
	Two or more	13,088	45.8	10.1
Number of Disabling Conditions	None	12,407	53.3	8.4
	One	4,138	46.3	8.7
	Two or more	4,229	38.8	8.9
General Health	Poor	912	26.2	2.9
	Fair	3,491	36.2	3.0
	Good	7,128	45.9	2.9
	Very Good	7,032	55.4	2.9
	Excellent	2,541	65.5	2.4

¹ N=Sample size

² SD= Standard deviation

³ HIV=Human immunodeficiency virus

⁴ ALS=Amyotrophic lateral sclerosis

⁵ Condition=self-reported medical condition