SELF-EFFICACY FOR MANAGING CHRONIC CONDITIONS

A Brief Guide to the PROMIS Self-Efficacy Instruments

Adult Instruments
PROMIS Item Bank v1.0 – Self-Efficacy for Managing Emotions
PROMIS Short Form v1.0 – Self-Efficacy for Managing Emotions 4a
PROMIS Short Form v1.0 – Self-Efficacy for Managing Emotions 8a
PROMIS Item Bank v1.0 – Self-Efficacy for Managing Symptoms
PROMIS Short Form v1.0 – Self-Efficacy for Managing Symptoms 4a
PROMIS Short Form v1.0 – Self-Efficacy for Managing Symptoms 8a
PROMIS Item Bank v1.0 – Self-Efficacy for Managing Daily Activities
PROMIS Short Form v1.0 – Self-Efficacy for Managing Daily Activities 4a
PROMIS Short Form v1.0 – Self-Efficacy for Managing Daily Activities 8a
PROMIS Item Bank v1.0 – Self-Efficacy for Managing Social Interactions
PROMIS Short Form v1.0 – Self-Efficacy for Managing Social Interactions 4a
PROMIS Short Form v1.0 – Self-Efficacy for Managing Social Interactions 8a
PROMIS Item Bank v1.0 – Self-Efficacy for Managing Medications and Treatments
PROMIS Short Form v1.0 – Self-Efficacy for Managing Medications and Treatments 4a
PROMIS Short Form v1.0 – Self-Efficacy for Managing Medications and Treatments 8a

ABOUT SELF-EFFICACY

"Self-efficacy for Managing Chronic Conditions" is defined as an individual's confidence in his/her ability to successfully perform specific tasks or behaviors related to one's health in a variety of situations.

The PROMIS adult Self-Efficacy item banks assess self-reported current level of confidence in managing chronic conditions, including confidence in managing daily activities, managing emotions, managing medications and treatments, managing social interactions and managing symptoms. The self-efficacy item banks are universal rather than disease-specific. The respondent should be an adult (age 18+) and have at least one chronic health condition.

1. Self-Efficacy for Managing Symptoms: The items include assessment of the person's level of confidence to manage/control their symptoms, to manage their symptoms in different settings (home, public place, an unfamiliar place) and to keep his/her symptoms from interfering with work, sleep, relationships or recreational activities.

2. Self-Efficacy for Managing Emotions: The items include assessment of the person's level of confidence to manage/control symptoms of anxiety, depression, helplessness, discouragement, frustration, disappointment and anger. Items also explore the presence of strategies to manage stress and loss.

3. Self-Efficacy for Managing Daily Activities: The items include assessment of the person's confidence in performing various activities of daily living (ADLs) without assistance. Items also assess exercise, sexual activities and managing activities in challenging situations (travelling, bad weather).

4. Self-Efficacy for Managing Medications and Treatments: The items include assessment of the person's confidence in managing medication schedules of different complexity. Items also assess managing medication and other treatments in challenging situations such as when travelling, when running out of medication, and when adverse effects are encountered.

5. Self-Efficacy for Managing Social Interactions: The items include assessment of the person's confidence in participating in social activities and getting help when necessary. Items also assess managing communication with others about their medical condition, including communication with health professionals.

INTRODUCTION TO ASSESSMENT OPTIONS

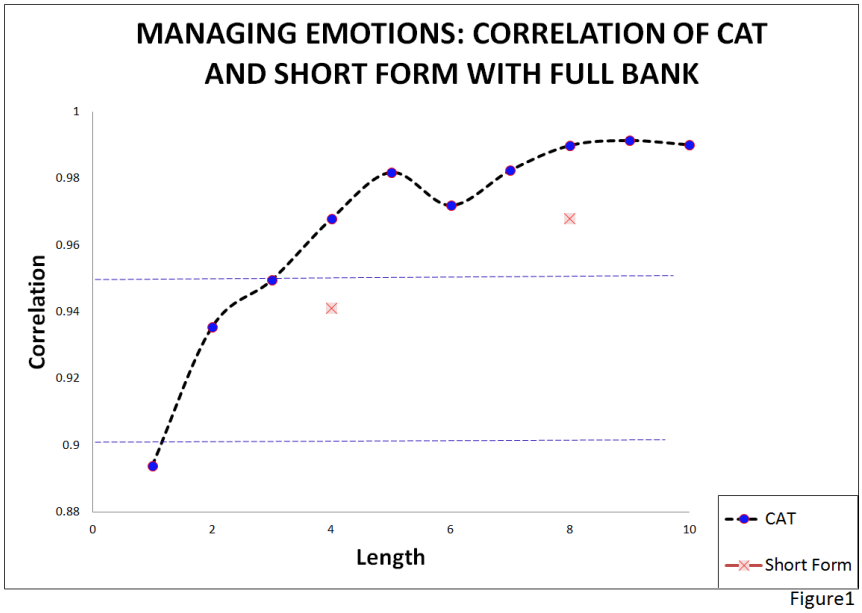


Figure1

There are two options for administration of the self-efficacy item banks: short forms and computer adaptive tests (CAT). When administering a short form, instruct participants to answer all of the items (i.e., questions or statements) presented. With the CAT, the participant's responses guide the system's choice of subsequent items from the full item bank (ranging from 23 to 35 items for each item bank). Although items differ across respondents taking the CAT, scores are comparable across participants. Some investigators may prefer to ask the same questions of all respondents or of the same respondent over time, to enable more direct comparability across people or time. In these cases, or when paper administration is preferred, a short form would be more desirable than the CAT. This guide provides information on all of the self-efficacy short forms and CAT instruments.

Whether one uses a short form or CAT, the score metric is Item Response Theory (IRT), a family of statistical models that link individual questions to an underlying trait or concept of self-efficacy represented by all items in the item bank. When choosing between a CAT versus a short form, it is useful to consider the demands of computer-based assessment, and the psychological, physical, and cognitive burden placed on respondents as a result of the number of questions asked.

Figure 1 illustrates the correlations (strength of relationship) of the Self-Efficacy for Managing Emotions full item bank with a) the CAT of varying lengths and b) two short forms. The figures of all five item banks are presented in Appendix I. The correlation of CAT scores with the full bank score is greater than a short form of any length. A

longer CAT or longer short form offers greater correlation, as well as greater precision. When evaluating precision, not all questions are equally informative. The flexibility of the CAT to choose more informative questions offers more precision.

SHORT FORM DIFFERENCES

Short Forms of either 4 items or 8 items are available for each of the 5 Self-Efficacy item banks. Similar selection criteria guided the choice of items to include for each short form version. The longer version of the short form will provide a more precise score with less error than the shorter short form. However, this does increase the respondent burden.

SCORING THE INSTRUMENT

Short Forms: PROMIS instruments are scored using item-level calibrations. This means that the most accurate way to score a PROMIS instrument is to utilize scoring tools within the PROMIS Assessment Center or API (application programming interface) that look at responses to each item for each participant. Data collected in either of these platforms will automatically score in this way. We refer to this as "response pattern scoring." Response pattern scoring can be used with the self-efficacy instruments when data was collected on paper or in another software package through the Assessment Center Scoring Service. Because response pattern scoring is more accurate than the use of raw score/scale score look up tables, it is preferred. However, if you are not able to use response pattern scoring, you can use the instructions below which rely on raw score/scale score look-up tables.

Each question has five response options ranging in value from one to five. To find the total raw score for a short form with all questions answered, sum the values of the response to each question. For example, for the 8-item form, the lowest possible raw score is 8; the highest possible raw score is 40 (see all short form scoring tables in the Appendices).

A score can be approximated if a participant skips a question. If items are missing, first check how many items were answered. For the 8-item short forms, confirm that 4 or 50% of items, were answered. The 4-item short form can only be scored with complete data. After confirming that enough responses were provided, sum the response scores from the items that were answered. Multiply this sum by the total number of items in the short form. Finally, divide by the number of items that were answered. For example, if a respondent answered 5 of 8 questions and answered all items with the second lowest response option (2), you would sum all responses (10), multiply by the number of items in the short form (8) and divide by the number of items that were answered (5). Here (10x8)/5=16. If the result is a fraction, round up to the nearest whole number. This is a pro-rated raw score.

Again, the formula is:

$$\frac{\text{(Raw sum x number of items on the short form)}}{\text{Number of items that were actually answered}}$$

Locate the applicable score conversion table in Appendices and use the appropriate table to translate the total raw score or pro-rated score into a T-score for each participant. The T-score rescales the raw score into a standardized score with a mean of 50 and a standard deviation (SD) of 10. Therefore a person with a T-score of 40 is one SD below the mean. Note that Assessment Center and the API will convert a participant's pattern of

responses to a standardized T-score after they have finished a CAT. The standardized T-score is reported as the final score for each participant.

For the PROMIS Self-Efficacy 8-item short form for Managing Emotions, a raw score of 10 converts to a T-score of 27.82 with a standard error (SE) of 2.65 (see scoring table for the 8-item short form of the construct of Managing Emotions in Appendix II). The scoring tables of all five constructs are presented in Appendix II. Thus, the 95% confidence interval around the observed score ranges from 22.62 to 33.01 (T-score $\pm$ (1.96*SE) or 27.82 $\pm$ (1.96*2.65).

For pro-rated scores, this calculation assumes that responses are missing at random. This is not always true. Therefore, use caution when interpreting the final pro-rated T-score.

CAT: A minimum number of items (4) must be answered in order to receive a score for a Self-Efficacy CAT. The first item is selected because it provides the most information about people with chronic conditions. The response to this item will guide the system's choice of the next item for the participant. The participant's response to this item will dictate the selection of the following question, and so on. As additional items are administered, the potential for error is reduced and confidence in the respondent's score increases. CAT will continue until either the standard error drops below a specified level, or the participant has answered the maximum number of questions (12), whichever occurs first.

For most PROMIS instruments, a score of 50 is the average for the United States general population with a standard deviation of 10 because calibration testing was performed on a large sample of the general population. However, the self-efficacy for managing chronic conditions instruments were calibrated on a sample with chronic disease conditions, and so a score of 50 represents the average of the calibration sample which have chronic illness. For these instruments, a score of 50 likely represents the norm for people who are less healthy than the general population. The T-score is provided with an error term (Standard Error or SE). The Standard Error is a statistical measure of variance and represents the "margin of error" for the T-score.

Important: *A higher PROMIS T-score represents more of the concept being measured.* For example, a T-score of 55 on the PROMIS Self-Efficacy for Managing Emotions indicates that the respondent has greater self-efficacy for managing their emotions than the general chronic condition population (half a standard deviation higher).

STATISTICAL CHARACTERISTICS

There are four key features of the score for self-efficacy:

- **Reliability**: The degree to which a measure is free of error. It can be estimated by the internal consistency of the responses to the measure, or by correlating total scores on the measure from two time points when there has been no true change in what is being measured (for z-scores, reliability = $1 - SE^2$).

- **Precision**: The consistency of the estimated score (reciprocal of error variance).
- **Information:** The precision of an item or multiple items at different levels of the underlying continuum (for z-scores, information = $1/SE^2$).
- **Standard Error (SE):** The possible range of the actual final score based upon the scaled T-score. For example, with a T-score of 52 and a SE of 2, the 95% confidence interval around the actual final score ranges from 48.1 to 55.9 (T-score $\pm$ (1.96*SE) = 52 $\pm$ 3.9 = 48.1 to 55.9).

The final score is represented by the T-score, a standardized score with a mean of 50 and a standard deviation (SD) of 10.

In **Figure 2** (4-item and 8-item short forms for Managing Emotions), the two dotted horizontal lines each represent a degree of internal consistency reliability (i.e., .90 or .95) typically regarded as sufficient for an accurate individual score. The shaded blue region marks the range of the scale where measurement precision is comparable to the reliability of .90 for the 8-item form. Figure 2 also tells us where on the scale the form is most informative based upon the T-score. This form would typically be more informative than a short form with fewer items.

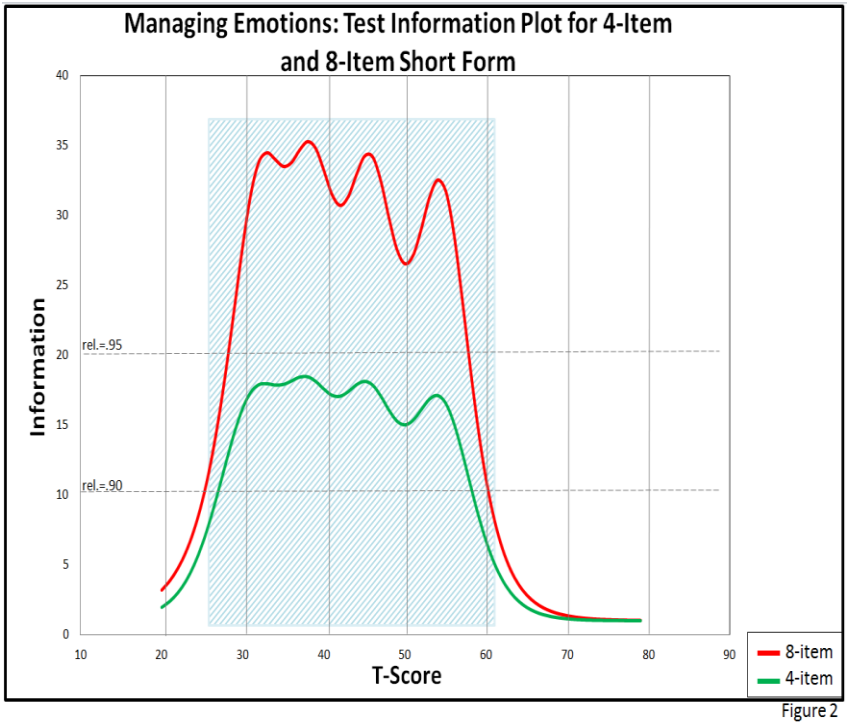


Figure 2

Figure 2 (4-item and 8-item short forms for Managing Emotions) also tells us where on the scale the form is most informative based upon the T-score: the 8-item short form is more informative than the 4-item form.

The information plots of all five domains are provided in Appendix III.

Figure 3 is a sample of the statistical information for Managing Emotions.

Managing Emotions: Statistical Information

Scaling Model Used For Calibration	Graded Response Model (GRM)
Total Number of Items	25

Sample	**N**	**Alpha Reliability**
PROMIS Wave 1 Full Bank	1070	0.978

Score Distributions									
	Mean	**SD**	**P5**	**P10**	**P25**	**P50**	**P75**	**P90**	**P95**
Raw	75.00	29.30	29.10	34.20	49.50	75.00	100.50	115.80	120.90
Scale	42.00	10.52	25.13	28.38	34.04	41.67	29.88	56.09	59.71

										Min	**Max**
Scale Score	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	22.72	64.98
SE	0.67	0.34	0.14	0.06	0.10	0.28	0.57	1.00	1.54		
Reliability	0.55	0.88	0.98	1.00	0.99	0.92	0.68	0.00	0.00		

Figure 3

PREVIEW OF SAMPLE ITEM

MANAGING EMOTIONS

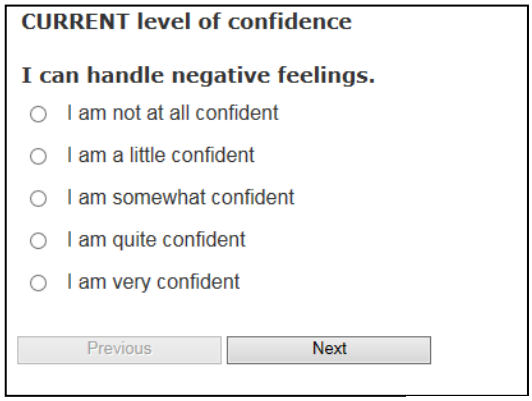
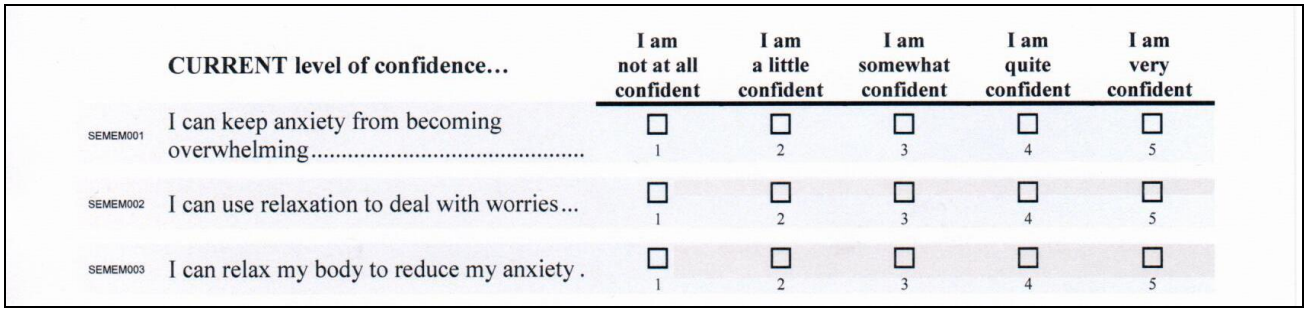


Figure 4

Figure 4 shows a self-efficacy item from Managing Emotions as it would appear to a study participant during data collection in Assessment Center. Several formats for presenting the items are available for computer-based administration through Assessment Center (see FAQ section).

Figure 5 is an excerpt from the paper version of the adult eight-item self-efficacy short form for Managing Emotions. This is the paper version format used for all self-efficacy instruments. It is important to note, CAT is not available for paper administration.



	CURRENT level of confidence…	I am not at all confident	I am a little confident	I am somewhat confident	I am quite confident	I am very confident
SEMEM001	I can keep anxiety from becoming overwhelming.....	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
SEMEM002	I can use relaxation to deal with worries...	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
SEMEM003	I can relax my body to reduce my anxiety .	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

FREQUENTLY ASKED QUESTIONS (FAQ)

Q: *I am interested in learning more. Where can I do that?*

All PROMIS instruments are available through Assessment Center (assessmentcenter.net). This includes use within Assessment Center as a data collection platform or from the homepage as a print-ready PDF.

Assessment Center is a free online research management tool. It enables researchers to create study-specific websites for capturing participant data securely. Studies can include measures within the Assessment Center library, as well as custom instruments created or entered by the researcher. PROMIS instruments (short forms, CAT, profiles) are a central feature of the instrument library within Assessment Center.

Statistical information and development history about PROMIS items and instruments are available for review at healthmeasures.net. To learn more, contact healthmeasures@northwestern.edu.

Q: *Do I need to register with PROMIS to use these instruments?*

Yes, to get a copy of these instruments, we ask that you register with Assessment Center and endorse the PROMIS Terms and Conditions of Use, so that we are better able to track who has accessed instruments. Assessment Center is available at assessmentcenter.net. Click the "Request PDFs of PROMIS Instruments" button.

Q: *Are these instruments available in other languages?*

Many PROMIS instruments are available in other languages on Assessment Center. The PROMIS group is also working to translate the Self-Efficacy item banks into other languages. Information on available translations is updated periodically at http://nihpromis.org/measures/translations.

Q: Can I make my own short form?

Yes, custom self-efficacy short forms can be made by selecting any items from the item bank. Instructions for creating a custom short form in Assessment Center can be found in the Assessment Center User Manual https://www.assessmentcenter.net/UserManuals.aspx. You can score custom short forms using the Assessment Center Scoring Service (https://www.assessmentcenter.net/ac_scoringservice).

Q: How do I handle multiple responses when administering a short form on paper?

Guidelines on how to deal with multiple responses have been established. Resolution depends on the responses noted by the research participant.

- If two or more responses are marked by the respondent, and they are next to one another, then a data entry specialist will be responsible for randomly selecting one of them to be entered and will write down on the form which answer was selected. *Note: To randomly select one of two responses, the data entry specialist will flip a coin (heads - higher number will be entered; tails – lower number will be entered).To randomly select one of three (or more) responses, a table of random numbers should be used with a statistician's assistance.*
- If two or more responses are marked, and they are NOT all next to one another, the response will be considered missing.

Q: *What is the minimum change on a PROMIS instrument that represents a clinically meaningful difference?*

This question is related to an area of active research in the PROMIS network, namely the determination of the "minimally important difference" or "MID" for a PROMIS instrument. A manuscript in the *Journal of Clinical Epidemiology* outlines the process for MIDs for adult PROMIS measures and estimates the MIDs for six PROMIS-Cancer scales: Yost, K. J., Eton, D. T., Garcia, S. F., & Cella, D. (2011). Minimally important differences were estimated for six PROMIS-Cancer scales in advanced-stage cancer patients. *Journal of Clinical Epidemiology, 64(5)*, 507-16. The Self-efficacy for Managing Chronic Conditions banks have not been tested for MIDs at this time.

As described in that manuscript, the MID is a tool to enhance the interpretability of patient-reported outcomes and is often defined as the "the smallest difference in score in the domain of interest which patients perceive as beneficial and which would mandate, in the absence of troublesome side effects and excessive cost, a change in the patient's management" (Jaeschke R, Singer J, Guyatt GH. Measurement of health status. Ascertaining the minimal clinically important difference. *Controlled Clinical Trials* 1989; 10(4):407-415). You can read more about MIDs on the HealthMeasures site under Interpretation (healthmeasures.net).

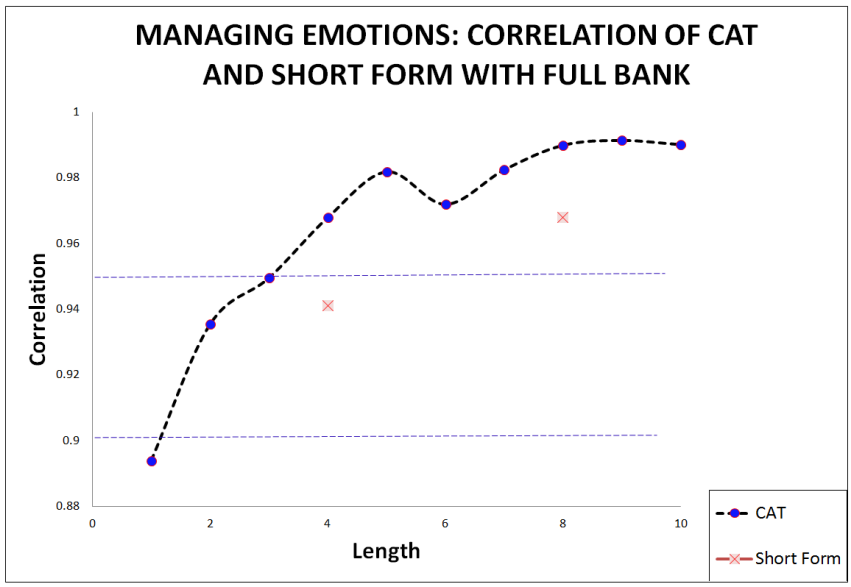
Q: What is the research evidence for use of the Self-efficacy for Managing Chronic Conditions banks?

The Self-efficacy for Managing Chronic Conditions banks were calibrated in 1087 subjects from 2 data sources: 837 patients seen at the University of Maryland Neurology Ambulatory Center, with epilepsy (n=171), multiple sclerosis (MS, n=166), neuropathy (n=163), Parkinson disease (PD, n=170), and stroke (n=167); and in 250 subjects recruited from an online internet sample of adults with general chronic conditions. Scores were compared with one legacy scale: the Stanford Self-Efficacy for Managing Chronic Disease 6-Item Scale and with 5 PROMIS® short forms: Global Health (Physical and Mental), Physical Function, Fatigue, Depression, and Anxiety. Scores were also compared with physician-rated severity (no, mild, moderate, severe) and disability scales (Modified Rankin, Barthel Index) for the neurologic center samples only. Data was cross-sectional only. As of summer 2015, the banks have not been validated in any samples beyond the calibration sample at this time, and no longitudinal data is available.

APPENDIX I. FIGURES SHOWING CORRELATION BETWEEN CAT VS. FULL ITEM BANK AND SHORT FORM VS. FULL ITEM BANK

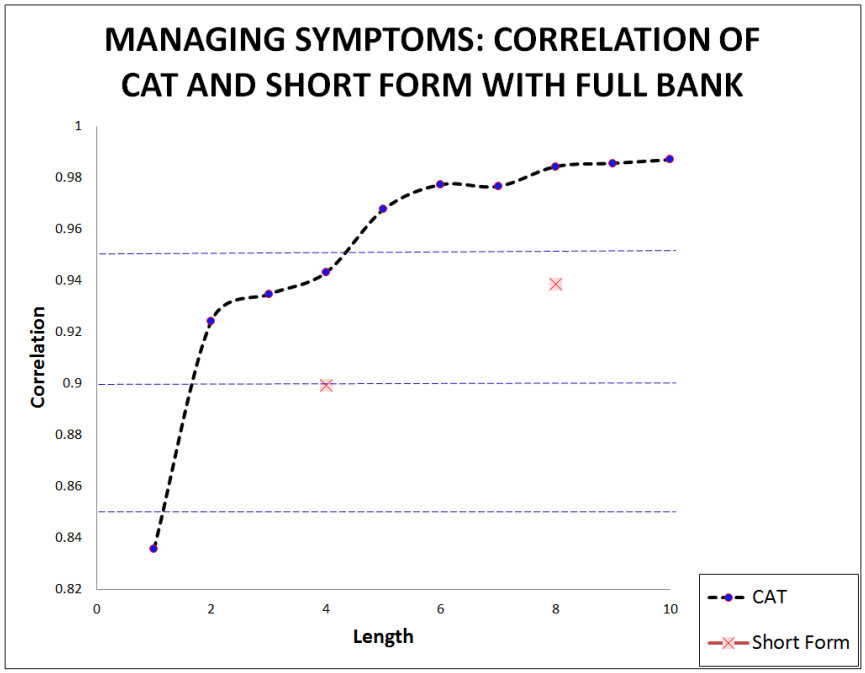
MANAGING EMOTIONS

PROMIS Short Form v1.0 – Self-Efficacy for Managing Emotions (4a, 8a), CAT and Full Bank



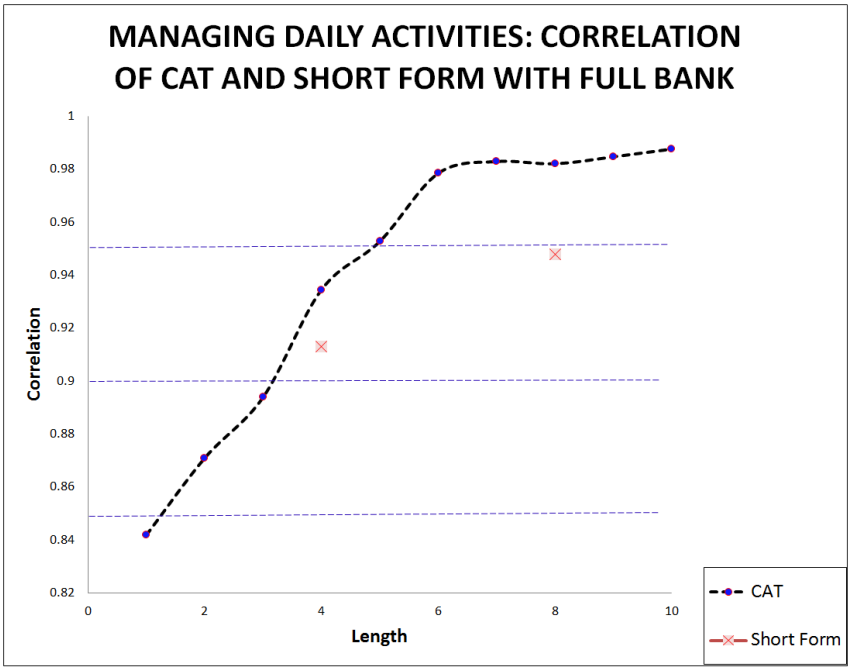
MANAGING SYMPTOMS

PROMIS Short Form v1.0 – Self-Efficacy for Managing Symptoms (4a, 8a), CAT and Full Bank



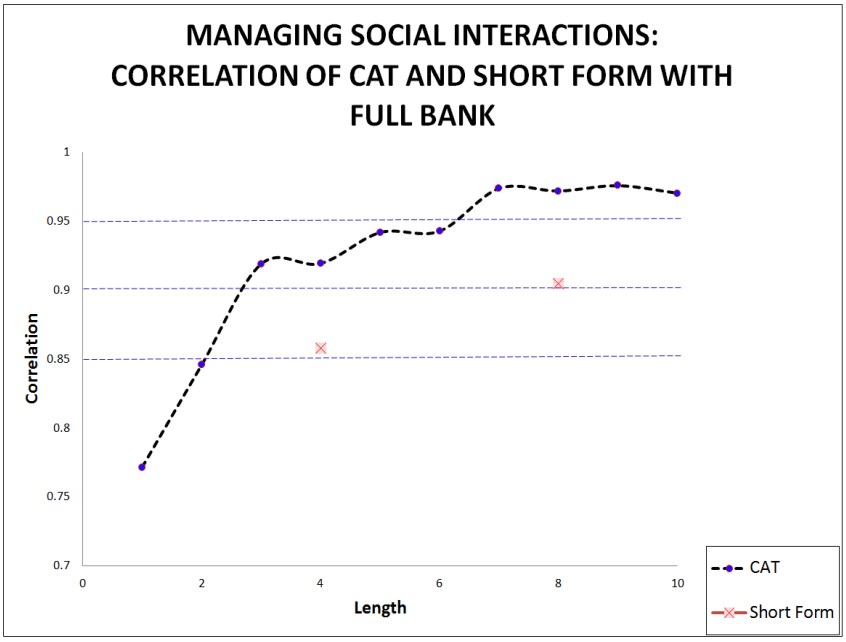
MANAGING DAILY ACTIVITIES

PROMIS Short Form v1.0 – Self-Efficacy for Managing Daily Activities (4a, 8a), CAT and Full Bank



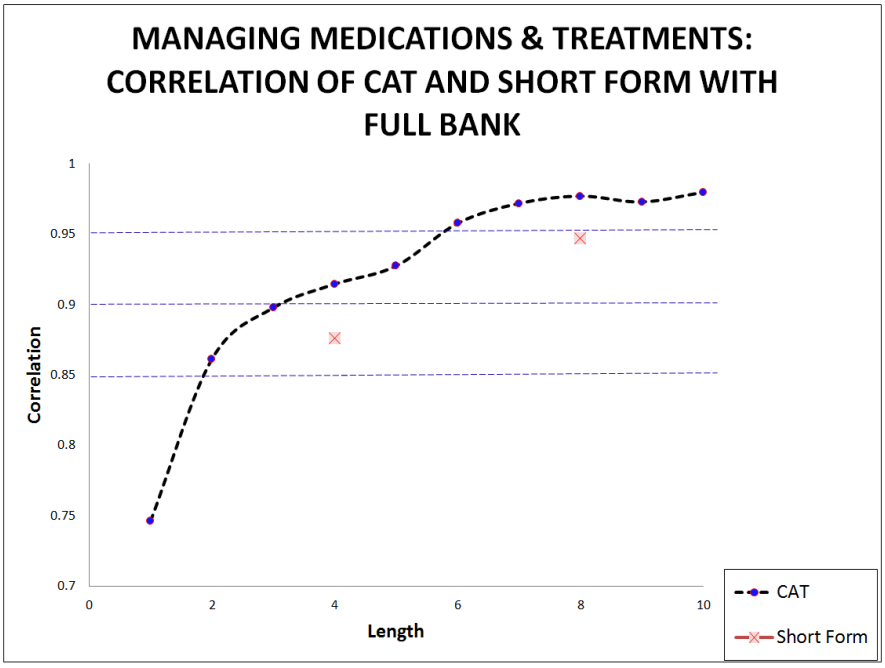
MANAGING SOCIAL INTERACTIONS

PROMIS Short Form v1.0 – Self-Efficacy for Managing Social Interactions (4a, 8a), CAT and Full Bank



MANAGING MEDICATIONS AND TREATMENTS

PROMIS Short Form v1.0 – Self-Efficacy for Managing Medications and Treatments (4a, 8a), CAT and Full Bank



APPENDIX II-SCORING TABLES

PROMIS SHORT FORM V1.0 – SELF-EFFICACY FOR MANAGING EMOTIONS 4A & 8A

MANAGING EMOTIONS 8-Item Short Form *Short Form Conversion Table*		
Raw Score	T-score	SE
8	22.72	4.05
9	26.01	2.99
10	27.82	2.65
11	29.34	2.35
12	30.63	2.14
13	31.77	2.01
14	32.81	1.94
15	33.78	1.90
16	34.70	1.87
17	35.59	1.86
18	36.47	1.86
19	37.35	1.87
20	38.25	1.89
21	39.15	1.90
22	40.06	1.91
23	40.97	1.92
24	41.88	1.92
25	42.79	1.92
26	43.72	1.93
27	44.68	1.93
28	45.67	1.95
29	46.69	1.97
30	47.72	1.98
31	48.76	2.00
32	49.81	2.00
33	50.89	2.00
34	52.01	1.99
35	53.20	2.00
36	54.47	2.06
37	55.87	2.20
38	57.55	2.54
39	59.83	3.09
40	64.98	5.10

SE=Standard Error

MANAGING EMOTIONS 4-Item Short Form *Short Form Conversion Table*		
Raw Score	T-score	SE
4	24.82	4.05
5	29.01	2.80
6	31.42	2.54
7	33.41	2.44
8	35.20	2.40
9	36.93	2.41
10	38.67	2.43
11	40.43	2.43
12	42.18	2.43
13	43.98	2.45
14	45.88	2.48
15	47.86	2.51
16	49.89	2.51
17	52.02	2.55
18	54.38	2.65
19	57.29	3.06
20	63.45	5.31

SE=Standard Error

PROMIS SHORT FORM V1.0 – SELF-EFFICACY FOR MANAGING SYMPTOMS 4A & 8A

MANAGING SYMPTOMS 8-Item Short Form *Short Form Conversion Table*		
Raw Score	T-score	SE
8	22.67	4.14
9	26.08	3.09
10	27.85	2.82
11	29.30	2.57
12	30.55	2.40
13	31.65	2.27
14	32.65	2.18
15	33.58	2.12
16	34.46	2.08
17	35.31	2.06
18	36.14	2.06
19	36.96	2.05
20	37.77	2.06
21	38.58	2.07
22	39.39	2.07
23	40.20	2.08
24	41.02	2.09
25	41.85	2.10
26	42.69	2.11
27	43.56	2.13
28	44.44	2.14
29	45.35	2.14
30	46.27	2.15
31	47.21	2.16
32	48.18	2.17
33	49.19	2.19
34	50.26	2.23
35	51.42	2.30
36	52.71	2.43
37	54.16	2.60
38	55.95	2.91
39	58.35	3.41
40	63.85	5.39

SE=Standard Error

MANAGING SYMPTOMS **4-Item Short Form** *Short Form Conversion Table*		
Raw Score	T-score	SE
4	24.93	4.44
5	28.72	3.32
6	30.87	3.07
7	32.85	2.87
8	34.64	2.78
9	36.34	2.78
10	37.99	2.80
11	39.59	2.82
12	41.16	2.86
13	42.79	2.93
14	44.56	2.97
15	46.41	2.96
16	48.27	2.97
17	50.26	3.09
18	52.75	3.37
19	55.90	3.71
20	62.12	5.73

SE=Standard Error

PROMIS SHORT FORM V1.0 – SELF-EFFICACY FOR MANAGING DAILY ACTIVITIES 4A & 8A

DAILY ACTIVITIES 8-Item Short Form *Short Form Conversion Table*		
Raw Score	T-score	SE
8	23.70	4.37
9	27.10	3.34
10	28.48	3.13
11	29.95	2.82
12	31.17	2.61
13	32.26	2.40
14	33.22	2.26
15	34.11	2.14
16	34.92	2.04
17	35.68	1.97
18	36.39	1.92
19	37.07	1.88
20	37.73	1.85
21	38.37	1.84
22	39.00	1.84
23	39.62	1.83
24	40.24	1.83
25	40.86	1.85
26	41.49	1.86
27	42.13	1.87
28	42.77	1.89
29	43.43	1.92
30	44.11	1.96
31	44.82	2.00
32	45.58	2.08
33	46.39	2.17
34	47.29	2.32
35	48.31	2.51
36	49.71	3.09
37	51.00	3.31
38	52.79	3.71
39	54.83	4.02
40	60.74	6.05

SE=Standard Error

DAILY ACTIVITIES 4-Item Short Form *Short Form Conversion Table*		
Raw Score	T-score	SE
4	26.02	4.44
5	29.83	3.31
6	31.73	3.10
7	33.32	2.95
8	34.78	2.82
9	36.16	2.69
10	37.45	2.64
11	38.70	2.62
12	39.95	2.63
13	41.24	2.67
14	42.60	2.74
15	44.07	2.88
16	46.03	3.59
17	47.94	3.91
18	50.32	4.32
19	52.79	4.55
20	59.26	6.48

SE=Standard Error

PROMIS SHORT FORM V1.0 – SELF-EFFICACY FOR MANAGING SOCIAL INTERACTIONS 4A & 8A

SOCIAL INTERACTIONS 8-Item Short Form *Short Form Conversion Table*		
Raw Score	T-score	SE
8	20.01	4.26
9	22.94	3.42
10	24.64	3.13
11	26.11	2.86
12	27.37	2.65
13	28.48	2.48
14	29.47	2.35
15	30.38	2.26
16	31.22	2.19
17	32.01	2.14
18	32.77	2.11
19	33.50	2.08
20	34.21	2.07
21	34.91	2.06
22	35.61	2.06
23	36.31	2.06
24	37.01	2.07
25	37.71	2.08
26	38.43	2.09
27	39.16	2.10
28	39.90	2.12
29	40.67	2.13
30	41.46	2.15
31	42.29	2.17
32	43.15	2.20
33	44.06	2.24
34	45.05	2.31
35	46.14	2.42
36	47.40	2.63
37	48.82	2.83
38	50.66	3.20
39	53.24	3.78
40	59.82	6.13

SE=Standard Error

SOCIAL INTERACTIONS 4-Item Short Form *Short Form Conversion Table*		
Raw Score	T-score	SE
4	23.08	4.36
5	26.52	3.46
6	28.30	3.30
7	30.07	3.11
8	31.68	2.96
9	33.14	2.87
10	34.53	2.83
11	35.89	2.81
12	37.26	2.81
13	38.65	2.83
14	40.10	2.84
15	41.64	2.87
16	43.33	2.99
17	45.12	3.05
18	47.37	3.32
19	50.47	3.82
20	58.19	6.45

SE=Standard Error

PROMIS SHORT FORM V1.0 – SELF-EFFICACY FOR MANAGING MEDICATIONS AND TREATMENTS 4A & 8A

MEDICATIONS AND TREATMENTS **8-Item Short Form** *Short Form Conversion Table*		
Raw Score	T-score	SE
8	19.05	3.86
9	21.98	3.01
10	23.53	2.79
11	24.86	2.59
12	26.00	2.44
13	27.01	2.32
14	27.94	2.25
15	28.81	2.21
16	29.64	2.18
17	30.44	2.17
18	31.22	2.16
19	31.99	2.17
20	32.76	2.17
21	33.52	2.19
22	34.28	2.21
23	35.06	2.23
24	35.85	2.25
25	36.65	2.28
26	37.47	2.30
27	38.30	2.32
28	39.15	2.35
29	40.03	2.37
30	40.93	2.41
31	41.88	2.46
32	42.89	2.53
33	43.99	2.64
34	45.20	2.80
35	46.56	3.03
36	48.20	3.48
37	49.91	3.73
38	52.15	4.20
39	54.95	4.66
40	60.74	6.31

SE=Standard Error

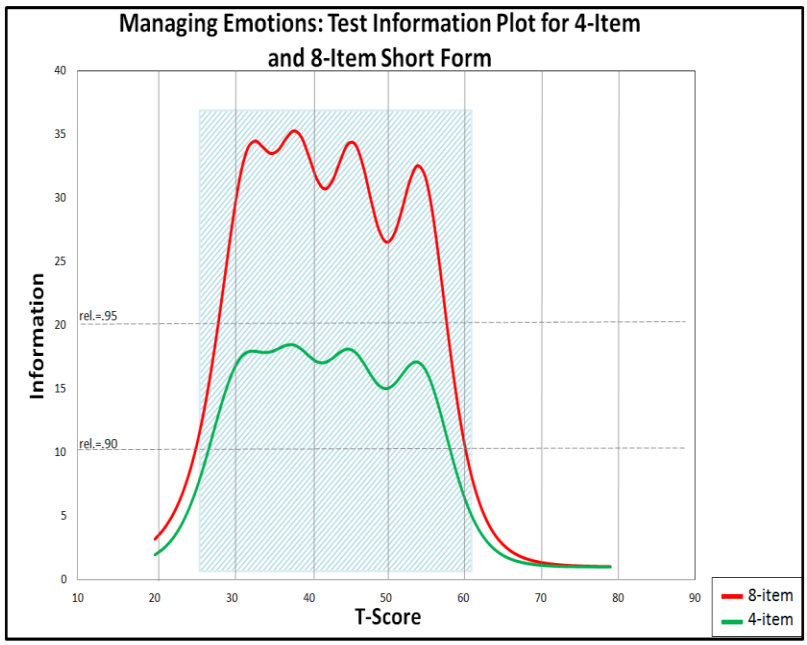
MEDICATIONS AND TREATMENTS 4-Item Short Form *Short Form Conversion Table*		
Raw Score	T-score	SE
4	22.01	4.00
5	25.50	3.12
6	27.34	3.01
7	29.10	2.81
8	30.68	2.76
9	32.14	2.73
10	33.55	2.75
11	34.97	2.81
12	36.45	2.91
13	37.98	3.00
14	39.53	3.07
15	41.17	3.22
16	43.16	3.77
17	45.16	3.88
18	47.90	4.29
19	50.91	4.59
20	58.08	6.74

SE=Standard Error

APPENDIX III. ITEM INFORMATION AND T-SCORE PLOTS (4-ITEM AND 8-ITEM SHORT FORM)

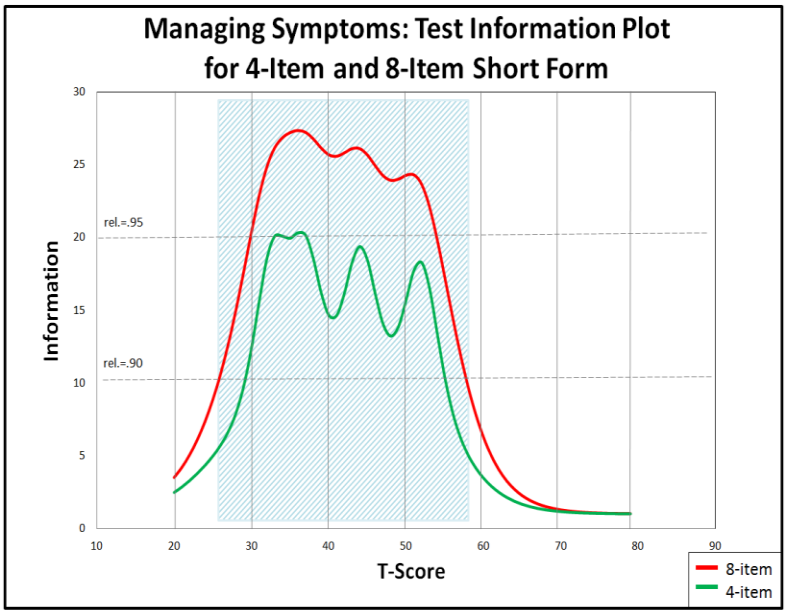
MANAGING EMOTIONS

PROMIS Short Form v1.0 – Self-Efficacy for Managing Emotions (4a, 8a)



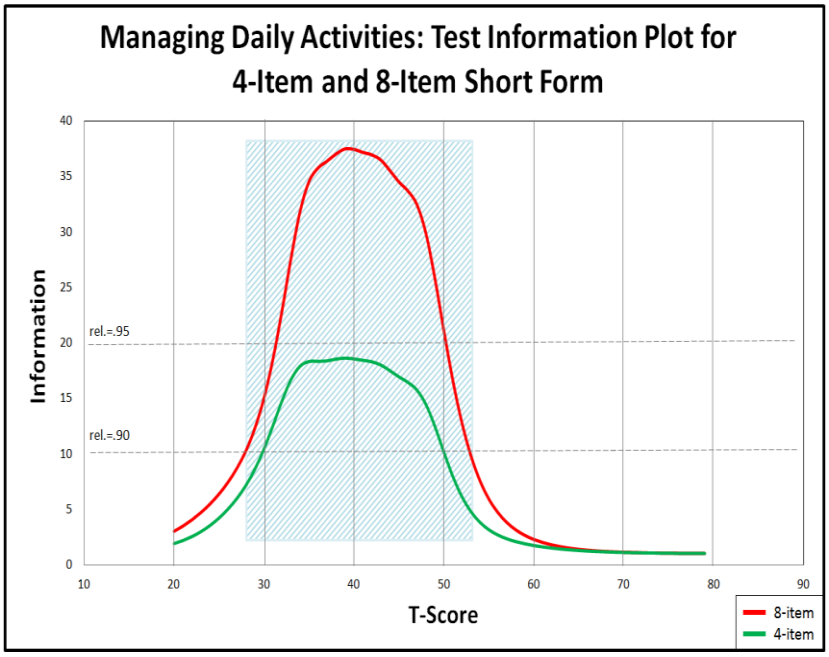
MANAGING SYMPTOMS

PROMIS Short Form v1.0 – Self-Efficacy for Managing Symptoms (4a, 8a)



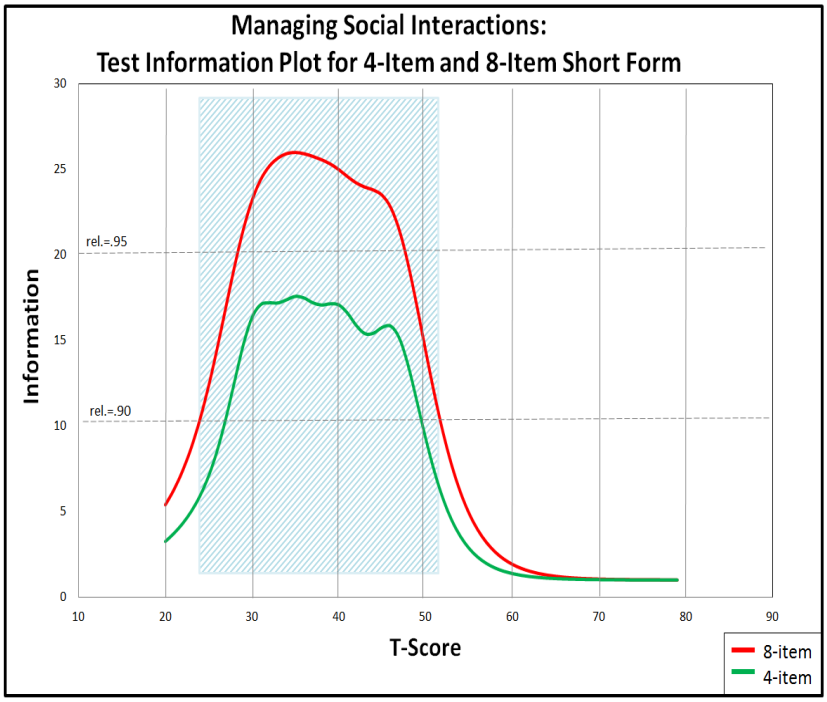
MANAGING DAILY ACTIVITIES

PROMIS Short Form v1.0 – Self-Efficacy for Managing Daily Activities (4a, 8a)



MANAGING SOCIAL INTERACTIONS

PROMIS Short Form v1.0 – Self-Efficacy for Managing Social Interactions (4a, 8a)



MANAGING MEDICATIONS AND TREATMENTS

PROMIS Short Form v1.0 – Self-Efficacy for Managing Medications and Treatments (4a, 8a)