

ABILITY TO PARTICIPATE IN SOCIAL ROLES AND ACTIVITIES MEASURE DIFFERENCES

A brief guide to differences between the PROMIS[®] Ability to Participate in Social Roles and Activities v2.0 instruments:

ADULT
PROMIS Item Bank v2.0 – Ability to Participate in Social Roles and Activities
PROMIS Item Bank v2.0 – Ability to Participate in Social Roles and Activities (recommended)
PROMIS Item Bank v2.0 – Ability to Participate in Social Roles and Activities (screen-to-CAT)
PROMIS Short Form v2.0 – Ability to Participate in Social Roles and Activities 4a
PROMIS Short Form v2.0 – Ability to Participate in Social Roles and Activities 6a
PROMIS Short Form v2.0 – Ability to Participate in Social Roles and Activities 8a
PROMIS Short Form v2.0 – Ability to Participate in Social Roles and Activities-OA-Knee 8a

OA=osteoarthritis

ABOUT ABILITY TO PARTICIPATE IN SOCIAL ROLES AND ACTIVITIES

The PROMIS adult Ability to Participate in Social Roles and Activities item bank assesses the perceived ability to perform one's usual social roles and activities. Items are worded negatively in terms of perceived limitations, but responses are reverse-coded so that higher scores represent fewer limitations (better abilities). The item bank does not use a time frame (e.g., over the past seven days) when assessing ability to participate in social roles and activities.

Ability to Participate in Social Roles and Activities instruments are available for adults (ages 18+).

INTRODUCTION TO ASSESSMENT OPTIONS

There are two administration options for assessing Ability to Participate in Social Roles and Activities: short forms and computer adaptive test (CAT). When administering a short form, instruct participants to answer all of the items (i.e., questions or statements) presented. With CAT, participant responses guide the system's choice of subsequent items from the full item bank (35 items in total). Although items differ across respondents taking CAT, scores are comparable across participants.

Some administrators may prefer to ask the same question of all respondents or of the same respondent over time, to enable a more direct comparability across people or time. In these cases, or when paper administration is preferred, a short form would be more desirable than CAT. This guide provides information on all Ability to Participate in Social Roles and Activities short form and CAT instruments.

CAT: A minimum number of items (e.g., 4) must be answered in order to receive a score for Ability to Participate in Social Roles and Activities CAT. The response to the first item will guide the system's choice of the next item for the participant. The participant's response to the second 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 (e.g., on the T-score metric 3.0), or the participant has answered the maximum number of questions (e.g., 12), whichever occurs first. For some CATs, specifically "recommended" and "screen-to-CAT" there are additional stopping rules. These include stopping when the standard error isn't improving much or if a respondent is asymptomatic. For details on the exact stopping rules for Ability to Participate in Social Roles and Activities CATs, see below.

CAT versus Short Form: 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 a presumed underlying trait or concept of ability to participate in social roles and activities represented by all items in the item bank. When choosing between CAT and 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 full bank with CAT and with short forms of varying length. 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 CAT to choose more informative questions offers more precision.

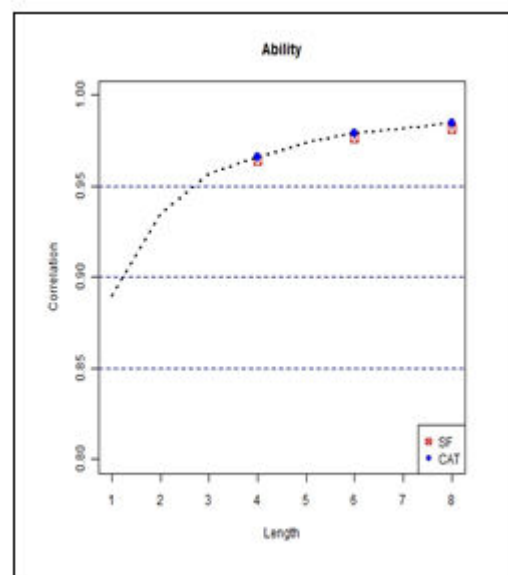


Figure 1

VERSION DIFFERENCES

Standard, Recommended, and Screen-to-CAT Stopping Rules: The standard, recommended, and screen-to-CAT Adult Ability to Participate in Social Roles and Activities-computer adaptive tests are based on the exact same item banks, but utilize different stopping rules. The PROMIS Bank v2.0 – Ability to Participate in Social Roles and Activities measure is administered by default as computer adaptive tests using the following standard stopping rules:

- Minimum number of items administered = 4
- Stop when one of these occurs:
 - 12 items are administered OR
 - Standard error is below 0.3 on the theta metric (3.0 on the T-score metric)

The PROMIS Bank v2.0 – Ability to Participate in Social Roles and Activities (recommended) measure uses the following stopping rules:

- Minimum number of items administered = 4
- Stop when one of these occurs:
 - 8 items are administered OR
 - Standard error is below 0.3 on the theta metric (3.0 on the T-score metric) OR
 - Standard error changes by less than 0.01 on the theta metric (0.1 on the T-score metric)

The PROMIS Bank v2.0 – Ability to Participate in Social Roles and Activities (screen-to-CAT) measure uses the following stopping rules:

- If the response to the first item is the “healthiest” response, then stop.
- If the response to the first item is NOT the “healthiest” response, proceed with the “recommended” CAT stopping rules.

SHORT FORM DIFFERENCES

There are 3 adult short forms. Items were selected based on content and psychometric characteristics. Short form items are nested or overlap (e.g., an 8-item short form is the 4-item short form plus two additional items).

Selecting a Short Form

In selecting between short forms, the difference is instrument length. The reliability and precision of the short forms within a domain is highly similar. If you are working with a sample in which you want the most precise measure, select the longest short form. If you have little room for additional measures but really wanted to capture something as a secondary outcome, select one of the shorter instruments (e.g., 4-item short form.)

The **PROMIS Short Form v2.0 – Ability to Participate in Social Roles and Activities-OA-Knee 8a** measure consists of 8 items from the PROMIS Item Bank v2.0 - Ability to Participate in Social Roles and Activities. The Ability to Participate in Social Roles and Activities-OA (osteoarthritis)-Knee 8a is designed to measure self-reported ability to perform one's usual social roles and activities. Items assess condition-specific issues but do not specifically reference knee arthritis. In this way, the measure uses generic/universal items that could be used in other patient populations, but the measure's content is tailored to people with knee arthritis. Like other PROMIS Ability to Participate in Social Roles and Activities measures, this measure assesses current perceptions rather than perceptions over a specified time period.

SCORES

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. You can read more about the calibration and centering samples on HealthMeasures.net (<http://www.healthmeasures.net/score-and-interpret/interpret-scores/promis>). 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 positively-worded concepts like Ability to Participate in Social Roles and Activities, a T-score of 60 is one SD better than average. By comparison, an Ability to Participate in Social Roles and Activities T-score of 40 is one SD worse than average.

STATISTICAL CHARACTERISTICS

There are four key features of the score for Ability to Participate in Social Roles and Activities:

- **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.

Figure 2 is a sample of the statistical information for the Ability to Participate in Social Roles and Activities CAT.

More information is available at HealthMeasures.net.

Scaling Model Used For Calibration		Graded Response Model
Total Number of Items		35

Sample	N	Alpha Reliability
PROMIS Supplement Full-Bank	1125	0.99

Score Distributions									
	Mean	SD	P5	P10	P25	P50	P75	P90	P95
Raw	122.20	33.65	60.00	78.00	102.00	125.00	146.00	169.00	175.00
Scale	48.77	9.09	34.85	38.21	43.25	48.56	53.54	61.01	69.30

										Min	Max
Scale Score	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	20.5	69.3
SE	1.79	.47	.11	.08	.09	.12	.68	3.18	11.25		
Reliability	.00	.78	.99	.99	.99	.98	.54	.00	.00		

Figure 2

PREVIEW OF SAMPLE ITEM

Figure 3 is an excerpt from the paper version of the eight-item short form. This is the paper version format used for all Ability to Participate in Social Roles and Activities instruments. It is important to note, CAT is not available for paper administration.

		Never	Rarely	Sometimes	Usually	Always
SRPPER11_CaPS	I have trouble doing all of my regular leisure activities with others	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1
SRPPER18_CaPS	I have trouble doing all of the family activities that I want to do	☐ 5	☐ 4	☐ 3	☐ 2	☐ 1

Figure 3

FREQUENTLY ASKED QUESTIONS (FAQs)

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

Review the HealthMeasures website at www.healthmeasures.net.

Q: Are these instruments available in other languages?

Yes! Look at the HealthMeasures website (<http://www.healthmeasures.net/explore-measurement-systems/promis/intro-to-promis/available-translations>) for current information on PROMIS translations.

Q: Can I make my own short form?

Yes, custom short forms can be made by selecting any items from an item bank. This can be scored using the Scoring Service (https://www.assessmentcenter.net/ac_scoring-service).