

INSTRUMENTAL SUPPORT MEASURE DIFFERENCES

A brief guide to differences between the PROMIS® Instrumental Support instruments:

ADULT
PROMIS Item Bank v2.0 – Instrumental Support PROMIS Short Form v2.0 – Instrumental Support 4a PROMIS Short Form v2.0 – Instrumental Support 6a PROMIS Short Form v2.0 – Instrumental Support 8a

ABOUT INSTRUMENTAL SUPPORT

Quality of social support refers to functional aspects of supportive relationships, i.e., interpersonal relationships that serve particular functions. This includes the interactive process by which emotional, instrumental or informational support is obtained from one's social network. It also includes companionship, feeling cared for and valued as a person, communication with others, and feelings of belonging and trust. Measures of social support generally seek information about a person's perception of the availability or adequacy of resources provided by others.

The PROMIS Instrumental Support item banks assess self-reported perceived availability of assistance with material, cognitive or task performance. The instrumental support short forms are universal rather than disease-specific. The item bank does not use a time frame (e.g., over the past seven days) when assessing instrumental support.

Instrumental Support instruments are available for adults (ages 18+).

INTRODUCTION TO ASSESSMENT OPTIONS

There are two administration options for assessing instrumental support: 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 a CAT, participant responses guide the system's choice of subsequent items from the full item bank (11 items in total for adults). Although items differ across respondents taking a 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 a CAT. This guide provides information on all instrumental support short form and CAT instruments.

CAT: A minimum number of items (4 for adult CAT) must be answered in order to receive a score for the Instrumental Support 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 (on

the T-score metric 3.0 for adult and adult cancer CATs and 4.0 for peds and parent proxy CATs), or the participant has answered the maximum number of questions (12), whichever occurs first.

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 instrumental support represented by all items in the item bank. When choosing between a CAT and 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 a 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 a CAT to choose more informative questions offers more precision.

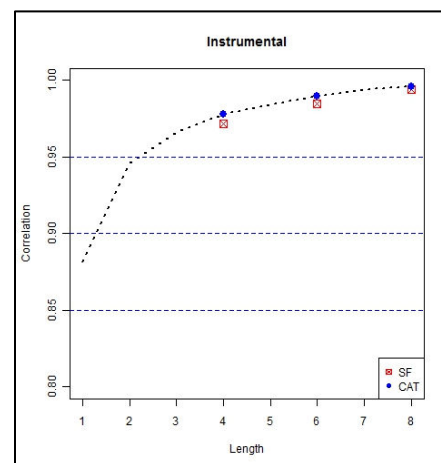


Figure 1

VERSION DIFFERENCES

There is no version of Instrumental Support that existed before v2.0. The initial Instrumental Support item bank was named v2.0 in order to be consistent with the Ability to Participate in Social Roles and Activities v2.0 and Satisfaction with Social Role and Activities v2.0 instruments.

SHORT FORM DIFFERENCES

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).

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 Instrumental Support, a T-score of 60 is one SD better than average. By comparison, an Instrumental Support T-score of 40 is one SD worse than average.

STATISTICAL CHARACTERISTICS

There are four key features of the score for instrumental support:

- **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).

Scaling Model Used For Calibration	Graded Response Model
Total Number of Items	11

Sample	N	Alpha Reliability
PROMIS Supplement Full-Bank	845	0.96

Score Distributions									
	Mean	SD	P5	P10	P25	P50	P75	P90	P95
Raw	42.14	11.38	19.00	25.00	35.00	44.00	52.00	55.00	55.00
Scale	51.64	9.23	36.82	40.08	45.58	51.21	58.14	66.20	66.20

	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	Min	Max
Scale Score	10.0	20.0	30.0	40.0	50.0	60.0	70.0	80.0	90.0	25.4	66.2
SE	5.10	1.12	.25	.15	.16	.26	1.25	6.26	28.34		
Reliability	.00	.00	.94	.98	.98	.93	.00	.00	.00		

Figure 2

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 available for the adult Instrumental Support CAT.

More information is available at www.HealthMeasures.net.

PREVIEW OF SAMPLE ITEM

Figure 3 is an excerpt from the paper version of the adult eight-item short form. This is the paper version format used for all instrumental support instruments. It is important to note that the CAT is not available for paper administration.

		Never	Rarely	Sometimes	Usually	Always
CCC31052x	Do you have someone to help you if you are confined to bed?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5
CCC31055x	Do you have someone to take you to the doctor if you need it?	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

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/117-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).