

How does PROMIS compare to other HRQOL measures?

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Advantages of Short-Forms Developed from Item Banks

- Select a set of items that are matched to the severity level of the target population.
- All scales built from the same item bank are linked on a common metric.

Depressive
Symptoms
Form C

Depression
Symptoms
Form A

Depression
Symptoms
Form B

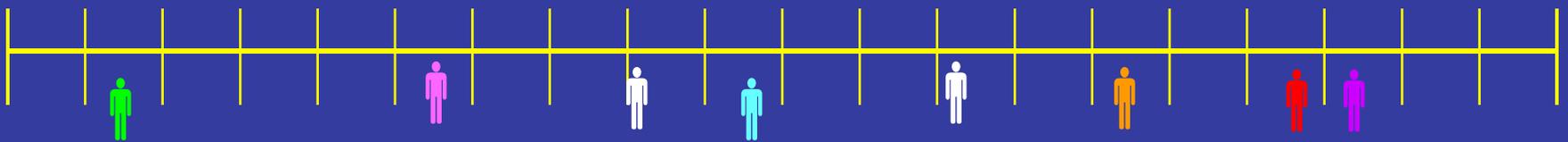
no
depression

mild
depression

moderate
depression

severe
depression

extreme
depression



Depressive Symptoms Item Bank

Item
1

Item
2

Item
3

Item
4

Item
5

Item
6

Item
7

Item
8

Item
9

Item
 n

Computerized Adaptive Testing (CAT)

- CAT selects each question to be administered based on a person's response to previously administered questions.
- By iteratively estimating a person's standing on the domain (e.g., depressive symptoms) and administering the most informative items, the maximum possible level of precision can be obtained with the fewest number of questions.

Example of Short Forms and CAT

- Compare results from respondents based on two different depressive symptoms short forms, CAT, and full item bank.
- Do they produce equivalent results?
- Implications for use of alternate PROMIS short forms in clinical trials.

Respondent (n = 752) Characteristics

Responded to the 28 items in the PROMIS depressive symptoms item bank

- Mean age = 51 (18-93 range)
- 52% female
- 78% white, 10% Hispanic, 10% black
- 22% high school graduate or less

Ordering of 28 Depressive Symptom items, Least to Most Severe

(Short Form A and B items indicated with superscript)

#	Item	#	Item
1	I felt sad ^b	15	I felt guilty
2	I felt disappointed in myself ^a	16	I felt that I was not as good as other people
3	I felt unhappy ^b	17	I felt that nothing was interesting ^b
4	I felt discouraged about the future ^a	18	I felt like a failure ^a
5	I felt pessimistic	19	I felt that my life was empty ^b
6	I felt emotionally exhausted	20	I felt that I was not needed
7	I had trouble feeling close to people	21	I felt that I had nothing to look forward to ^a
8	I felt lonely	22	I felt upset for no reason
9	I felt depressed	23	I felt helpless ^b
10	I found that things in my life were overwhelming ^a	24	I felt that nothing could cheer me up ^a
11	I had trouble making decisions	25	I felt hopeless ^b
12	I felt ignored by people	26	I felt worthless ^a
13	I withdrew from other people	27	I felt that I wanted to give up on everything ^b
14	I felt that I was to blame for things	28	I felt I had no reason for living ^a

Form A Items

#	<i>In the past 7 days...</i>	Mean	% Never
2	I felt disappointed in myself.	2.05	41
4	I felt discouraged about the future.	2.03	44
10	I found that things in my life were overwhelming.	1.85	51
18	I felt like a failure.	1.68	62
21	I felt that I had nothing to look forward to.	1.61	65
24	I felt that nothing could cheer me up.	1.56	66
26	I felt worthless.	1.51	71
28	I felt I had no reason for living.	1.29	82

Response Options: *Never, Rarely, Sometimes, Often, Always*



Form B Items

#	<i>In the past 7 days...</i>	Mean	% Never
1	I felt sad.	2.08	36
3	I felt unhappy.	2.05	39
9	I felt depressed.	1.87	50
17	I felt that nothing was interesting.	1.69	55
19	I felt that my life was empty.	1.67	64
23	I felt helpless.	1.56	67
25	I felt hopeless.	1.53	68
27	I felt I wanted to give up on everything.	1.46	73

Response Options: *Never, Rarely, Sometimes, Often, Always*

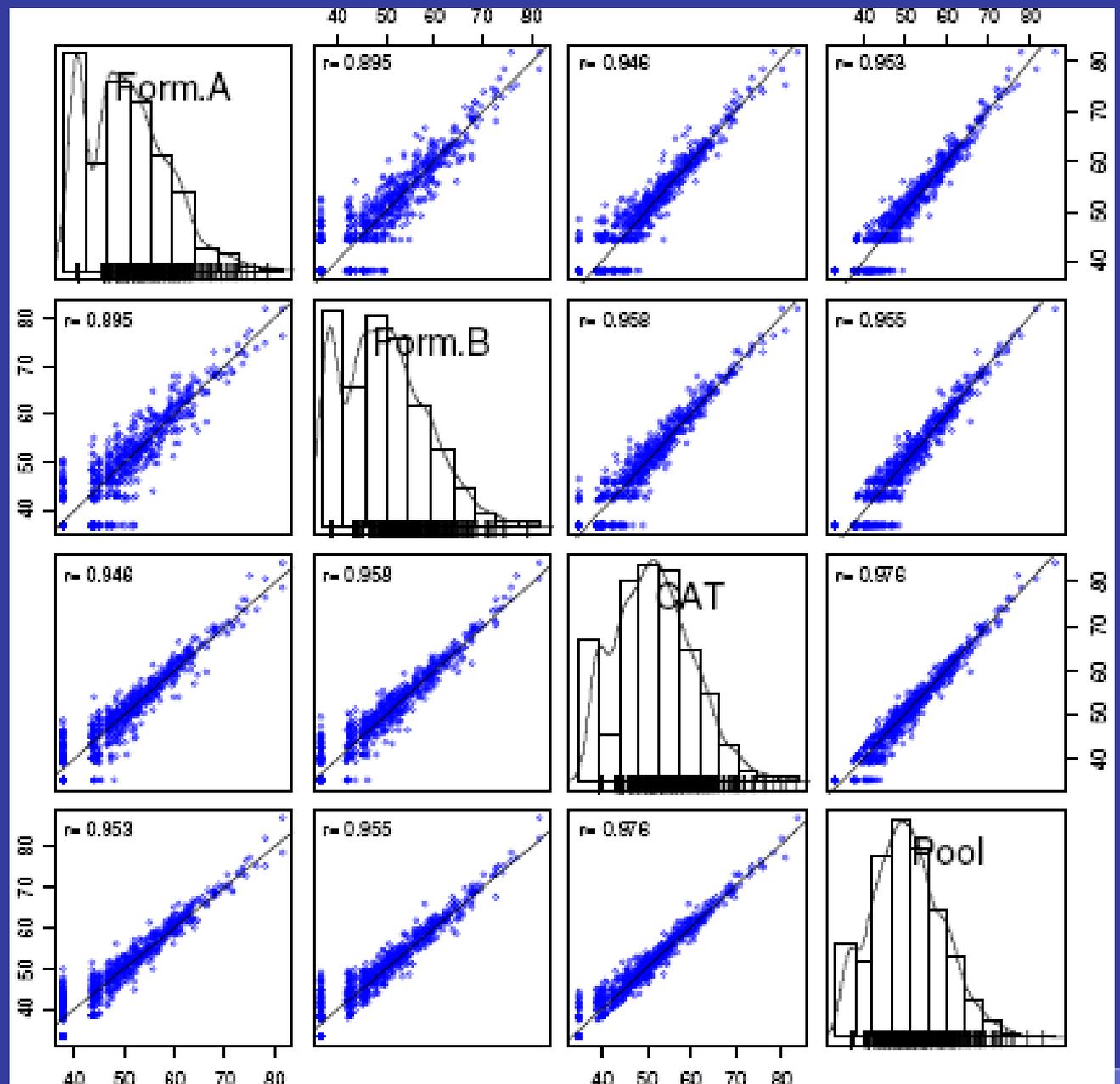
Mean, Minimum and Maximum Scores

	Form A (8 items)	Form B (8 items)	CAT (8 items)	Full Bank (28 items)
Mean	49	49	49	49
Minimum	38	37	35	33
Maximum	82	82	84	86

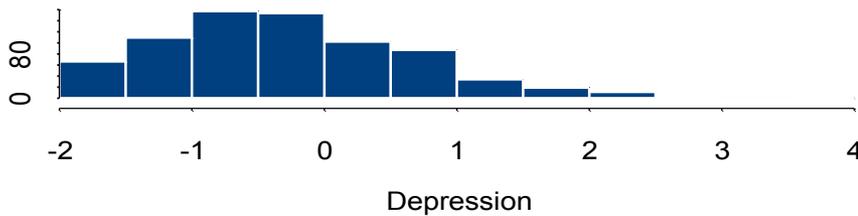
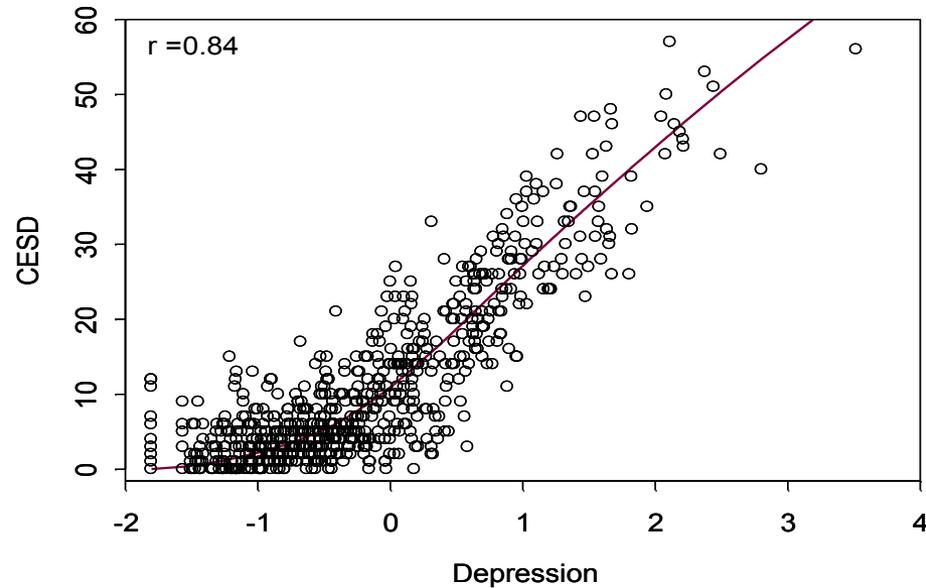
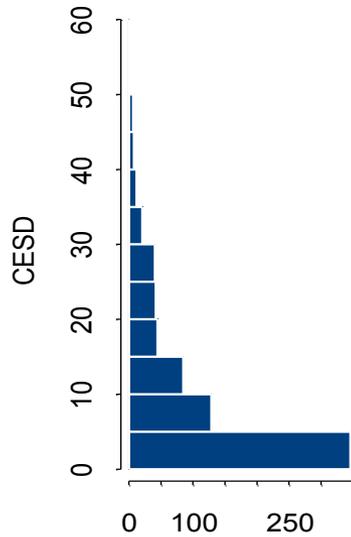
Correlations Among Forms

	Form A	Form B	CAT
Form A	1.000		
Form B	0.895	1.000	
CAT	0.946	0.958	1.000
Bank	0.953	0.955	0.976

Scale Score Comparisons: Short Forms, CAT (8 items) and Full-Bank (28 Items)



Correlation of Depressive Symptoms Bank with CESD

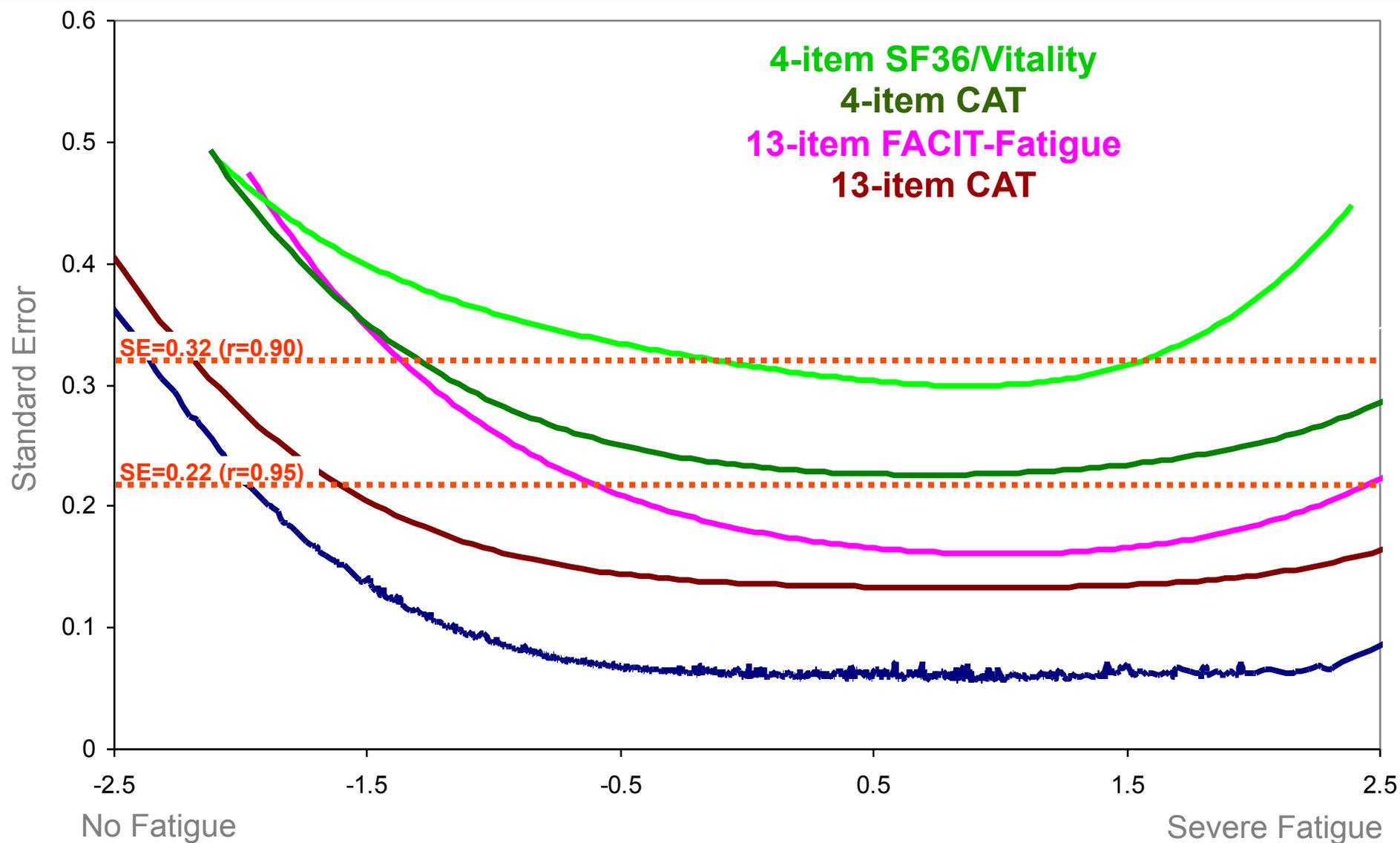


Fatigue

- Experience and Impact
 - 95-item bank
- Legacy Instruments
 - SF-36 Vitality Scale (4 items)
 - FACIT-Fatigue Scale (13 items)

Comparison of Measurement Precision

Full-length Item Bank vs. Legacy vs. CAT vs. Short-form



PROMIS Fatigue Short Form

In the past 7 days ...

		Never	Rarely	Some- times	Often	Always
FATEXP 20	How often did you feel tired?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
FATEXP 5	How often did you experience extreme exhaustion?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
FATEXP 18	How often did you run out of energy?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
FATIMP 33	How often did your fatigue limit you at work (include work at home)?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
FATIMP 30	How often were you too tired to think clearly?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
FATIMP 21	How often were you too tired to take a bath or shower?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
FATIMP 40	How often did you have enough energy to exercise strenuously?	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

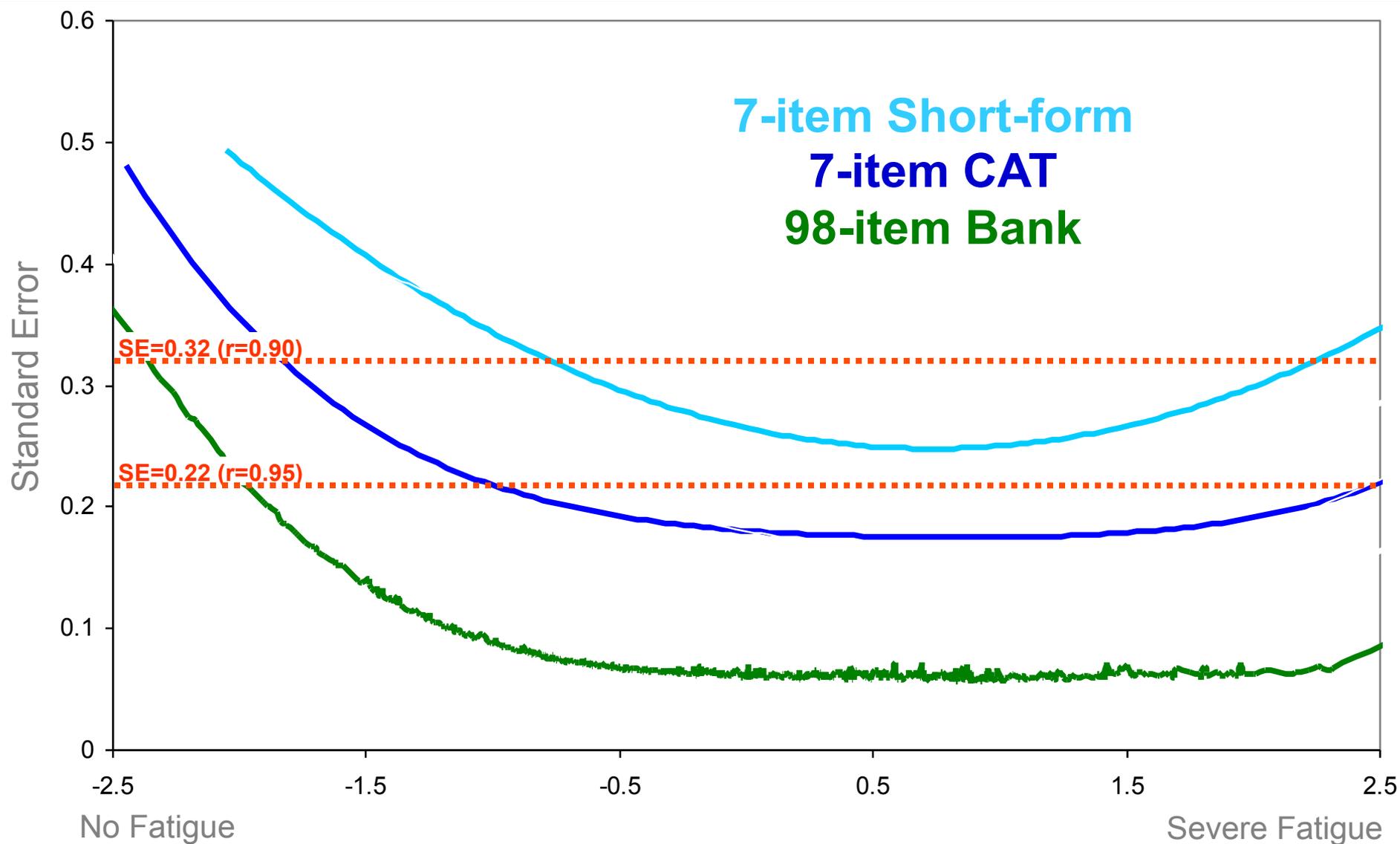


Patient-Reported Outcomes Measurement Information System
Dynamic Tools to Measure Health Outcomes From the Patient Perspective

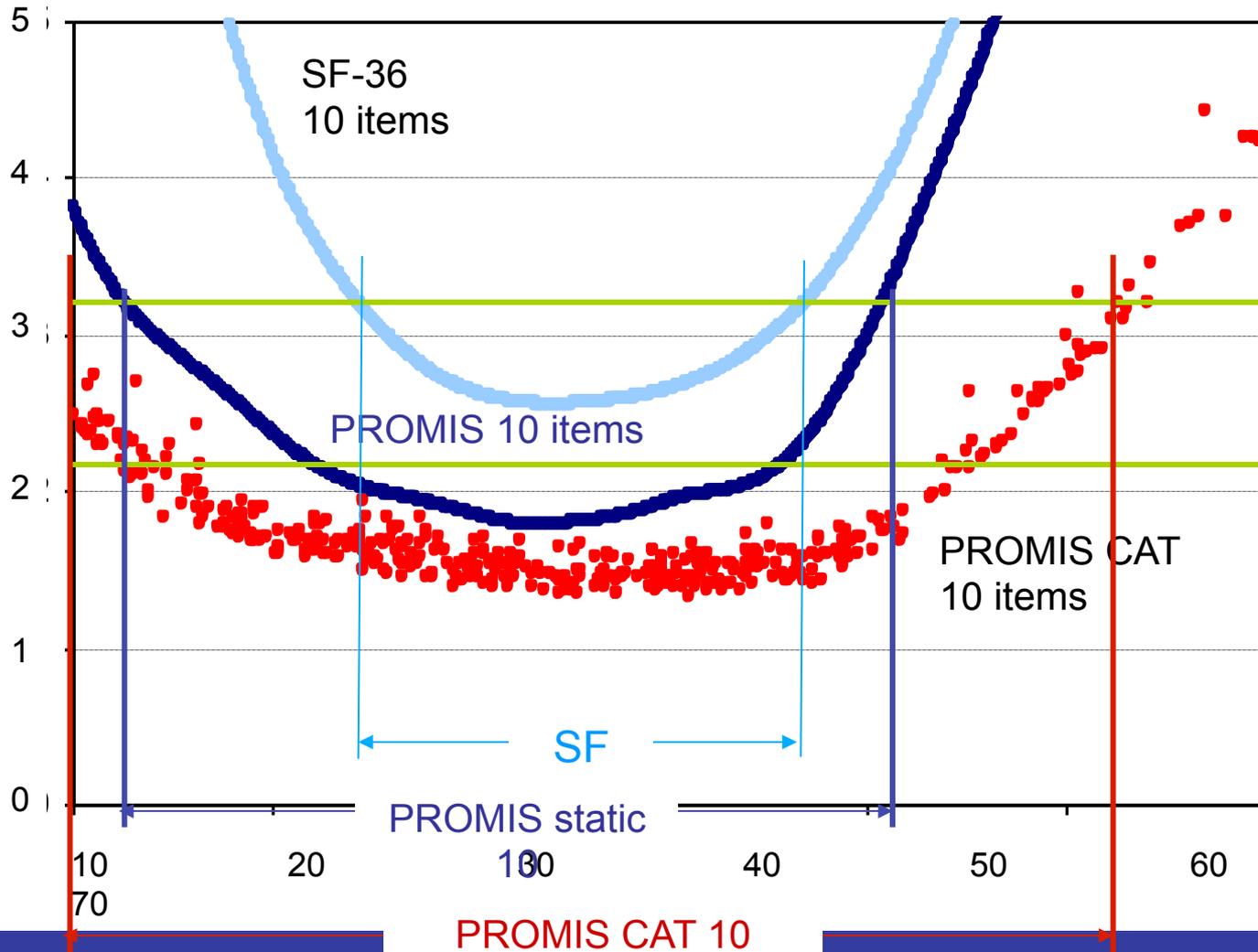


Comparison of Measurement Precision

Full-length Item Bank vs. Legacy vs. CAT vs. Short-form



Physical Functioning

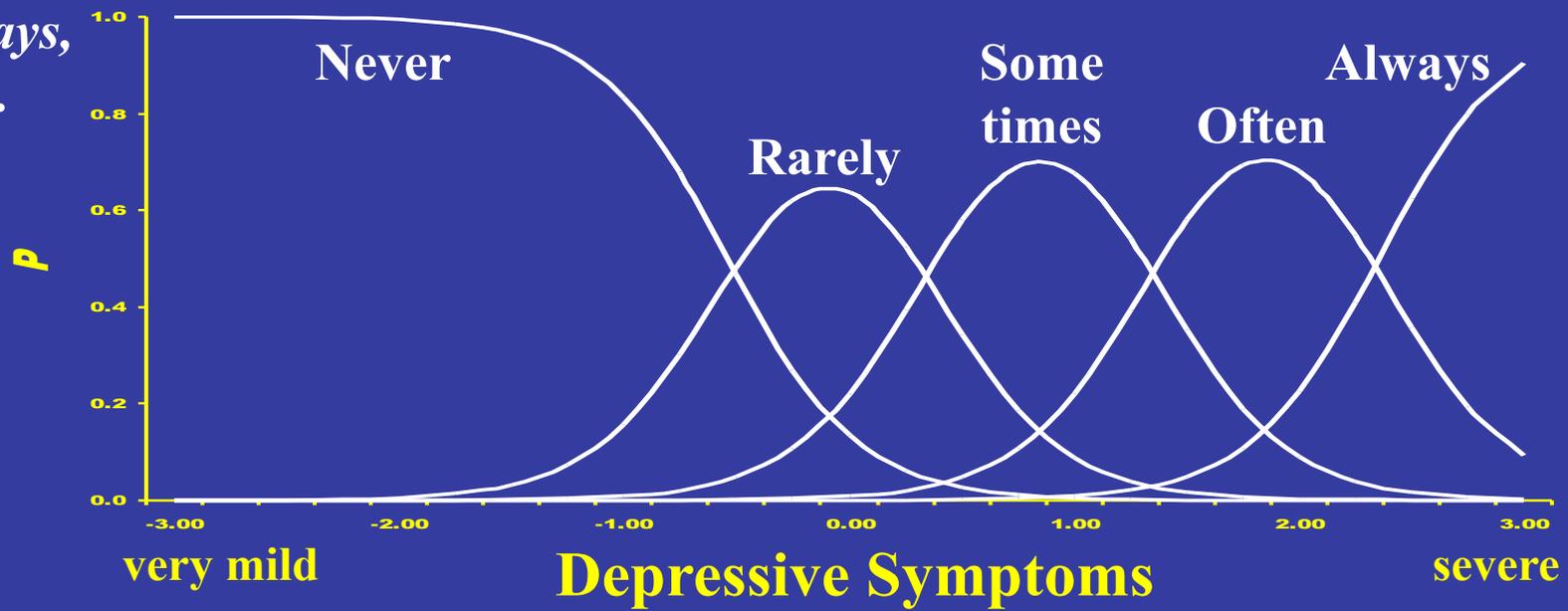


Questions?



Item Response Theory (IRT): Category Response Curves

*In the past 7 days,
I felt unhappy.*



*In the past 7 days,
I felt I had no
reason for living.*

