

Scoring the PEDI-SCI AM Short Forms

Scoring the SF requires two steps. First, you must calculate the raw score and then you must use a transformation table to convert the raw score to a standardized score. The process of scoring is described below.

Calculating the Raw Score

Each response on the SF has a corresponding value between 0 (cannot do/unable to do) and 4 (easy/without difficulty) (Table 1). To calculate the raw score, sum the corresponding values of the responses to each SF item. The **raw score** is calculated by summing the numbers of each item on the SF. Figure 1 is an example demonstrating that the raw score of 39 was obtained by summing the numbers that correspond with the response option selected.

Table 1: Response Options and Corresponding Numerical Value

Child Self-Report Response	Numerical Score	Parent Report Response
Cannot Do	0	Unable To Do
Really Hard	1	Much Difficulty
Hard	2	Some Difficulty
A Little Hard	3	Little Difficulty
Easy	4	Without Difficulty

Converting the Raw Score to a Standardized Score

Each PEDI-SCI AM SF has a unique transformation table that must be used to convert the raw score to a standardized score (T-Score). SF score transformation tables are NOT interchangeable. In other words, every transformation table is different, and you must make sure that you use the one that has been developed for specific SFs. To ensure that the correct transformation table is used, each SF title is indicated directly above the raw score column (Figure 2).

Using the example from Figure 1 where the raw score was calculated to be 39, Figure 2 is the transformation table (for the Daily Routines and Self-Care Paraplegia Scale) that would be used to convert the raw score to the standardized score (T-Score). Once the raw score is found in column 1 on the transformation table, column 2, labeled T-Scale, would give the corresponding Standardized score (T-Score). In this example, the Standardized Score (T-Score) is 55.27 as indicated in Figures 1 and 2.

Figure 1: Short Form Example

Child Daily Routines and Self-Care, Paraplegia						
Check the box that is most like you.	Cannot Do	Really Hard	Hard	A Little Hard	Easy	Item Score
1. Including fixing my clothes, set up, and clean up, <i>without</i> any splints, I can complete my bowel program.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input checked="" type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	2
2. I can wash my hair in the shower or bath.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
3. I can take off my socks.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
4. I can put on jeans.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input checked="" type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	2
5. I can put on my sneakers.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
6. I can clean my entire body in the shower or bath.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input checked="" type="checkbox"/> ₃	<input type="checkbox"/> ₄	3
7. I can put on gym shorts.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
8. I can put on my T-shirt (short-sleeve, pull-over)	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
9. When sitting in my wheelchair, I can bring my foot up, like when I put on socks or shoes.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
10. I can clean my upper body.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
11. I can ride a bike using my arms.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
Total Raw Score						39
Standardized (T-Scale) Score						55.27

39 is the sum of all item scores on this SF

Figure 2: Transformation Table

Child Daily Routines & Self-Care, Paraplegia Raw Score	T-Scale	Standard Error
0	28.57	4.49
1	32.53	3.18
2	33.21	3.19
3	34	3.27
4	34.65	3.31
5	36.1	2.64
6	36.76	2.58
8	38.17	2.37
9	38.84	2.23
10	39.4	2.17
11	39.96	2.1
12	40.51	2.03
13	41.03	1.97
14	41.51	1.93
15	41.98	1.88
16	42.44	1.84
17	42.9	1.81
18	43.33	1.79
19	43.75	1.77
20	44.17	1.75
21	44.58	1.74
22	44.99	1.74
23	45.4	1.74
24	45.81	1.75
25	46.22	1.77
26	46.64	1.79
27	47.07	1.82
28	47.51	1.86
29	47.96	1.9
30	48.44	1.95
31	48.95	2.03
32	49.53	2.17
33	50.07	2.25
34	50.67	2.34
35	51.43	2.53
36	52.69	3.2
37	53.19	3.22
38	53.96	3.34
39	55.27	3.72
40	57.33	4.37
41	57.96	4.37
42	59.19	4.54
43	61.62	4.94
44	65.63	6.13

Be sure to check the title on each transformation table to make sure you are using the correct one.

Why are PEDI-SCI AM Short Form raw scores converted to standardized scores?

Raw scores are mathematically converted to a Standardized Score (T-Score) with the SF Score Transformation Tables so that scores can be compared across SFs and CATs.

How is the Standardized Score (T-Score) interpreted?

The Standardized Score (T-Score) places the participant's score on a common metric based on the calibration study sample of 382 children with SCI/D. The Standardized Score (T-Score) has a mean of 50 with a standard deviation of 10. Standardized Scores (T-Scores) can be interpreted as follows:

- PEDI-SCI AM SF scale score of 50 → the child's ability is similar to the ability of the children included in the calibration sample
- PEDI-SCI AM SF scale score of 40 → the child's ability is 1 standard deviation below the ability of children included in the calibration sample
- PEDI-SCI AM SF scale score of 60 → the child's ability is 1 standard deviation above the ability of the children included in the calibration sample

Table 2 provides characteristics of the sample used in the calibration study.

Table 2: Calibration Study Sample Characteristics

Age Range	8-21 years
Age Group Count	<5 years: 0 5-9 years: 17 10-14 years: 60 15-19 years: 255 20-21 years: 50
ASIA Impairment Scale Count	A: 205 B: 60 C: 56 D: 57
Diagnosis Count	Tetraplegia: 160 Paraplegia: 217
Motor Level Count	C1-C4: 35

	C5-T1: 133 T2-T6: 86 T7-L2: 102 L3-S5: 21
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What if a child or parent skips an item or several items on the SF?

The SF can be scored as long as the child (parent) answers more than half of the items on the SF. Use the following procedure to score the SF when items are skipped:

1. As shown in Figures 3 and 4, calculate the mean score for the completed items by:
 - a. Summing the values that correspond to the responses items that were answered
 - b. Divide the sum by the number of items that were answered
 - c. Round decimals to the closest whole number
2. Enter the mean score as the score for each unanswered item
3. Calculate the raw score as described above
4. Use the transformation tables to convert the raw score to a standardized score, as described above.

Figures 3 and 4 provide an example of how to score a SF with skipped items.

Figure 3

Child Daily Routines and Self-Care, Paraplegia

Check the box that is most like you.	Cannot Do	Really Hard	Hard	A Little Hard	Easy	Item Score
1. Including fixing my clothes, set up, and clean up, <i>without</i> any splints, I can complete my bowel program.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input checked="" type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	2
2. I can wash my hair in the shower or bath.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
3. I can take off my socks.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
4. I can put on jeans.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	
5. I can put on my sneakers.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
6. I can clean my entire body in the shower or bath.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input checked="" type="checkbox"/> ₃	<input type="checkbox"/> ₄	3
7. I can put on gym shorts.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
8. I can put on my T-shirt (short-sleeve, pull-over)	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
9. When sitting in my wheelchair, I can bring my foot up, like when I put on socks or shoes.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
10. I can clean my upper body.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input checked="" type="checkbox"/> ₄	4
11. I can ride a bike using my arms.	<input type="checkbox"/> ₀	<input type="checkbox"/> ₁	<input type="checkbox"/> ₂	<input type="checkbox"/> ₃	<input type="checkbox"/> ₄	
Total Raw Score						
Standardized (T-Scale) Score						

- | |
|---|
| <ol style="list-style-type: none"> 1. Sum of items answered: 33 2. Divide the sum of items answered (33) by the number of items answered (9): 3.67 3. Round to the closest whole number: 4 4. Mean Score: 4 |
|---|

Figure 4

Child Daily Routines and Self-Care, Paraplegia

Check the box that is most like you.	Cannot Do	Really Hard	Hard	A Little Hard	Easy	Item Score
1. Including fixing my clothes, set up, and clean up, <i>without</i> any splints, I can complete my bowel program.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input checked="" type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	2
2. I can wash my hair in the shower or bath.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	4
3. I can take off my socks.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	4
4. I can put on jeans.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	4
5. I can put on my sneakers.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	4
6. I can clean my entire body in the shower or bath.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input checked="" type="checkbox"/> 3	<input type="checkbox"/> 4	3
7. I can put on gym shorts.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	4
8. I can put on my T-shirt (short-sleeve, pull-over)	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	4
9. When sitting in my wheelchair, I can bring my foot up, like when I put on socks or shoes.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	4
10. I can clean my upper body.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	4
11. I can ride a bike using my arms.	<input type="checkbox"/> 0	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input checked="" type="checkbox"/> 4	4
Total Raw Score						41
Standardized (T-Scale) Score						57.96

5. Enter the mean score for unanswered items
 6. Calculate the Raw Score: 41
 7. Use the transformation table to covert the Raw Score to a Standardized Score (T-Scale): 57.96
 8. Standardized Score (T-Scale) = 57.96

