

TALSA Scoring Manual: Phoneme Discrimination

Test Description:

Phoneme Discrimination is a test of input (receptive) phonological processing. The patient/client hears two words or two nonwords and decides whether they sound the same or different. The use of one and five second intervals between the words or nonwords assesses verbal short-term and working memory.

Test Variations:

1. Words – 1 second interval consisting of **8** items.
2. Words – 5 second interval consisting of **8** items.
3. Non- Words – 1 second interval consisting of **8** items.
4. Non- Words – 1 second interval consisting of **8** items.

Scoring each Question

Scoring is done on a 3-point scale as follows:

- 1** – Wrong answer
- 2** - Partially met criteria. Partial credit is allowed when the patient/client gives the correct answer but responds early (i.e., before the beep) or late (i.e., after the response screen has disappeared.) The clinician can indicate the reason in the comment section.
- 3** – Correct answer

Scoring the Subtest

1. Calculate the total raw score: Add up the point values for each item. For any 8-item form, the lowest possible raw score is 8; the highest possible raw score is 24. For the 12 item forms, the lowest possible raw score is 12; the highest possible raw score is 36.
2. Determine the T-score: Use the appropriate cross-walk table to determine the T-score. The T-score rescales the raw score into a standardized score with a mean of 50 and a standard deviation (SD) of 10. The standardized T-score is reported as the final score for each participant. The 95% confidence interval can be determined as T-score \pm (1.96*SE).

Note: All questions on the form must be answered in order to produce the most valid summed score. However, if a respondent answers at least 50% of the items (e.g. 4 items for any of the 8 item tests) the following algorithm can be used to derive a score. For these pro-rated raw scores, use caution when interpreting the final pro-rated T-score.

$$\text{Pro-rated raw summed score} = \frac{(\text{Sum of the item responses answered}) * (\text{number of items on the form})}{(\text{number of items actually answered})}$$

If the result is a fraction, round up to the nearest whole number.

Example: The patient answered only 6 items on an 8 item subtest and received a raw score of 13.

$$\frac{13 \times 8}{6} = 17.3 \rightarrow \text{so round to } 17$$

The T-score calculation is based on 171 subjects who completed 1 or more TALSA sub-tests between 2008 - 2019. These subjects consisted of both neurotypical controls (n=36) and subjects with aphasia (n=135). The inclusion of both neurotypical controls and adults with various levels of aphasia support measuring change across the spectrum of capabilities.

Response pattern scoring: TALSA instruments can also be scored using item-level calibrations referred to as “response pattern scoring” which provides a more accurate score as it is based on the actual pattern of the respondent’s answers (so based on exactly which items were correct or not). The TALSA investigators would be glad to support this if you contact us.

SCORE SHEET – Phoneme Discrimination [Wrong = 1 point, Partially Correct = 2 points, Correct = 3 points]

1.1 Phoneme Discrimination Words 1s				
#	ITEMS	Response	Points	Comments
1	plane plane	yes		
2	carriage cabbage	no		
3	parrot parrot	yes		
4	funnel funnel	yes		
5	tank bank	no		
6	pig pit	no		
7	summer supper	no		
8	road road	yes		
RAW TOTAL (sum points)				
T-Score (from crosswalk table below)				Standard Error (from table below)
1.2 Phoneme Discrimination Words 5s				
#	ITEMS	Response	Points	Comments
1	summer supper	no		
2	tank bank	no		
3	parrot parrot	yes		
4	funnel funnel	yes		
5	carriage cabbage	no		
6	plane plane	yes		
7	road road	no		
8	pig pit	no		
RAW TOTAL (sum points)				
T-Score (from crosswalk table below)				Standard Error (from table below)
1.3 Phoneme Discrimination Nonwords 1s				
#	ITEMS	Response	Points	Comments
1	fuppel luppel	no		
2	fask rask	no		
3	limmer limmer	yes		
4	prise pite	no		
5	sig sig	yes		
6	tish tish	yes		
7	tarritch tabbitch	no		
8	sarelet sarelet	yes		
RAW TOTAL (sum points)				
T-Score (from crosswalk table below)				Standard Error (from table below)
1.4 Phoneme Discrimination Nonwords 5s				
#	ITEMS	Response	Points	Comments
1	sarelet sarelet	yes		
2	fask rask	no		
3	tarritch tabbitch	no		
4	tish tish	yes		
5	fuppel luppel	no		
6	limmer limmer	yes		
7	prise pite	no		
8	sig sig	yes		
RAW TOTAL (sum points)				
T-Score (from crosswalk table below)				Standard Error (from table below)

Scoring Cross-walk Tables [Raw scores to T-scores]

1.1 Phoneme Discrimination Word 1s			
8-item Form: Sum Score to T-Score Conversion Table			
Raw summed score	T-Score	Standard Error (SE)	Severity
8	12	1.8	Severe
9	15	1.8	
10	17	.905	
11	20	.905	
12	23	.905	
13	26	.905	
14	28	.905	
15	31	.905	
16	34	.905	
17	37	.905	
18	40	.905	
19	42	.905	Mod
20	45	.905	
21	48	.905	Mild
22	51	.905	
23	54	.905	WNL
24	56	.905	

1.3 Phoneme Discrimination Nonword 1s			
8-item Form: Sum Score to T-Score Conversion Table			
Raw summed score	T-Score	Standard Error (SE)	Severity
8	15	1.8	Severe
9	21	.898	
10	23	.898	
11	26	.898	
12	28	.898	
13	29	.898	
14	33	.898	
15	35	.898	
16	38	.898	
17	40	.898	
18	43	.898	
19	45	.898	
20	48	.898	Mild
21	50	.898	
22	52	.898	WNL
23	55	.898	
24	57	.898	

1.2 Phoneme Discrimination Word 5s			
8-item Form: Sum Score to T-Score Conversion Table			
Raw summed score	T-Score	Standard Error (SE)	Severity
8	12	1.8	Severe
9	15.2	1.2	
10	17.8	1.2	
11	20.2	1.2	
12	23.4	1.2	
13	26.3	.905	
14	28.9	.905	
15	31.8	.905	
16	34.6	.905	
17	37.4	.905	
18	40.1	.905	
19	42.9	.905	Mod
20	45.7	.905	
21	48.4	.905	Mild
22	51.2	.905	
23	54.0	.905	WNL
24	56.7	.905	

1.4 Phoneme Discrimination Nonword 5s			
8-item Form: Sum Score to T-Score Conversion Table			
Raw summed score	T-Score	Standard Error (SE)	Severity
8	15	1.8	Severe
9	18	.898	
10	20	.898	
11	24	.898	
12	26	.898	
13	29	.898	
14	32	.898	
15	34	.898	
16	37	.898	
17	40	.898	
18	42	.898	
19	45	.898	
20	48	.898	Mild
21	50	.898	
22	53	.898	WNL
23	56	.898	
24	58	.898	