

The Similarities subtest of the *Wechsler Adult Intelligent Scale* (WAIS) is widely used in the assessment of the elderly to evaluate verbal concepts. It is one of the best choice to evaluate verbal skills without influence of other cognitive functions and it is vulnerable to any change in the ability to form concepts. The purpose is to describe the psychometrical characteristics of this brief and modified 5-item version in a Brazilian sample.

METHOD

Data was obtained from clinical evaluation of 84 consecutive outpatients [51 women, mean age: 76.6 yrs (± 7.7), mean education: 4yrs (± 3.7)] of the geriatric service in a public hospital at Brasília, Brazil. Using PARSCALE, the 2-parameter partial credit model of Item Response Theory (IRT) was used to evaluate the items.

Table 1. Age and Dementia Clinical Rating (CDR) of participants

Age	CDR					Total
	0	0.5	1.0	2.0	not rated	
61 - 70	7	4	1	1	2	15
71 - 75	5	6	6	3	2	22
76 - 80	4	10	9	0	1	24
81 - 85	5	2	3	1	0	11
86+	0	4	5	3	0	12
Total	21	26	24	8	5	84

RESULTS

The frequencies in the categories of response are presented in table 2. The Cronbach's alpha was 0.83, indicating good internal consistency of the Similarities subtest.

Tabela 2. Frequency in each category of response

Items	Frequency in the Categories (N)		
	wrong	Partial credit	success
1. Orange-Banana	36	6	42
2. Cat-Lion	56	17	11
3. Pants-Shirt	43	6	35
4. Hammer-Pliers	23	39	22
5. Rose-Daisy	31	6	47

As seen in table 3, the most discriminative items (alpha) were also the most difficult (delta): Cat-Lion=1.26; Pants-Shirt=1.29; Orange-Banana=1.18; Rose-Daisy=0.98. Mean total scores were: CDR-0= 6.7(3.3); CDR-0.5 =4.9(3.5); CDR-1 =3.7(3.0), and CDR-2=2.5(2.3). Total scores in the 4 CDR groups were compared using an ANOVA: [F(3.75) = 4.7, $p=0.004$]. It was possible diferenciating CDR-0 from CDR-1 ($p=0.015$) and CDR-2 ($p=0.015$) groups, according to Figure 1.

Table 3. Discrimination and difficulty of the item, Pearson and polisserial correlation.

Items	Two-parameters logistic model				Item-Total Correlation	
	alpha	S.E.	delta	S.E.	Pearson	Polisserial
1. Orange-Banana	1,18	0,25	-0,11	0,15	0,83	1,01
2. Cat-Lion	1,26	0,48	0,91	0,21	0,72	0,90
3. Pants-Shirt	1,29	0,28	0,12	0,15	0,84	1,02
4. Hammer-Pliers	0,79	0,25	0,01	0,18	0,70	0,77
5. Rose-Daisy	0,98	0,18	-0,30	0,16	0,80	0,97
Mean	1,10	0,21	0,13	0,46		

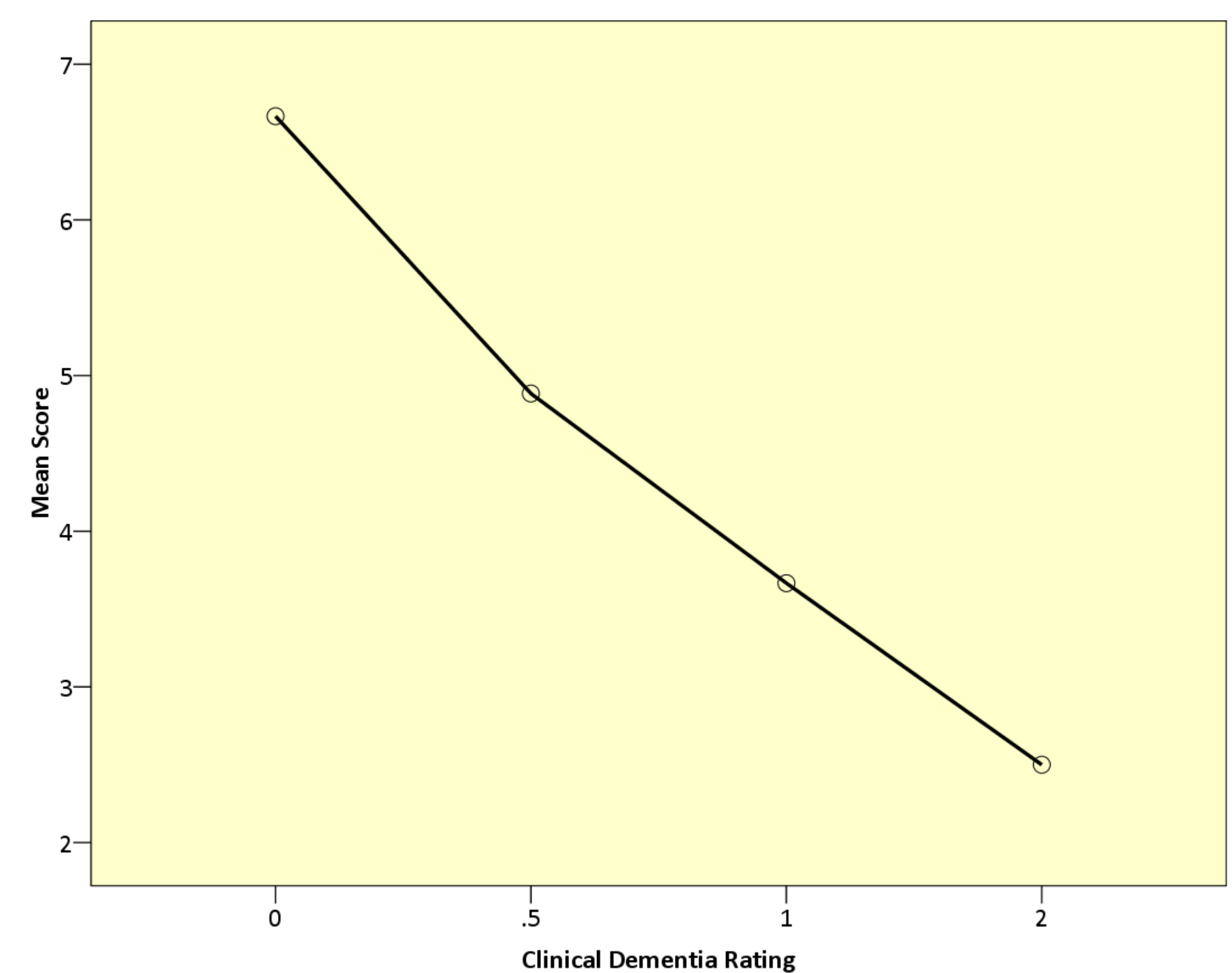


Figure 1. Relation between CDR and Mean Score.

Figure 2 shows the characteristic curves of the items. They demonstrate that the partial credit (0.5 points) offers more information about items 2 and 4 and very little about items 1, 3 and 5 (blue curves). Therefore, the transformation of partial credit items in dichotomous ones (right and wrong) is not recommended.

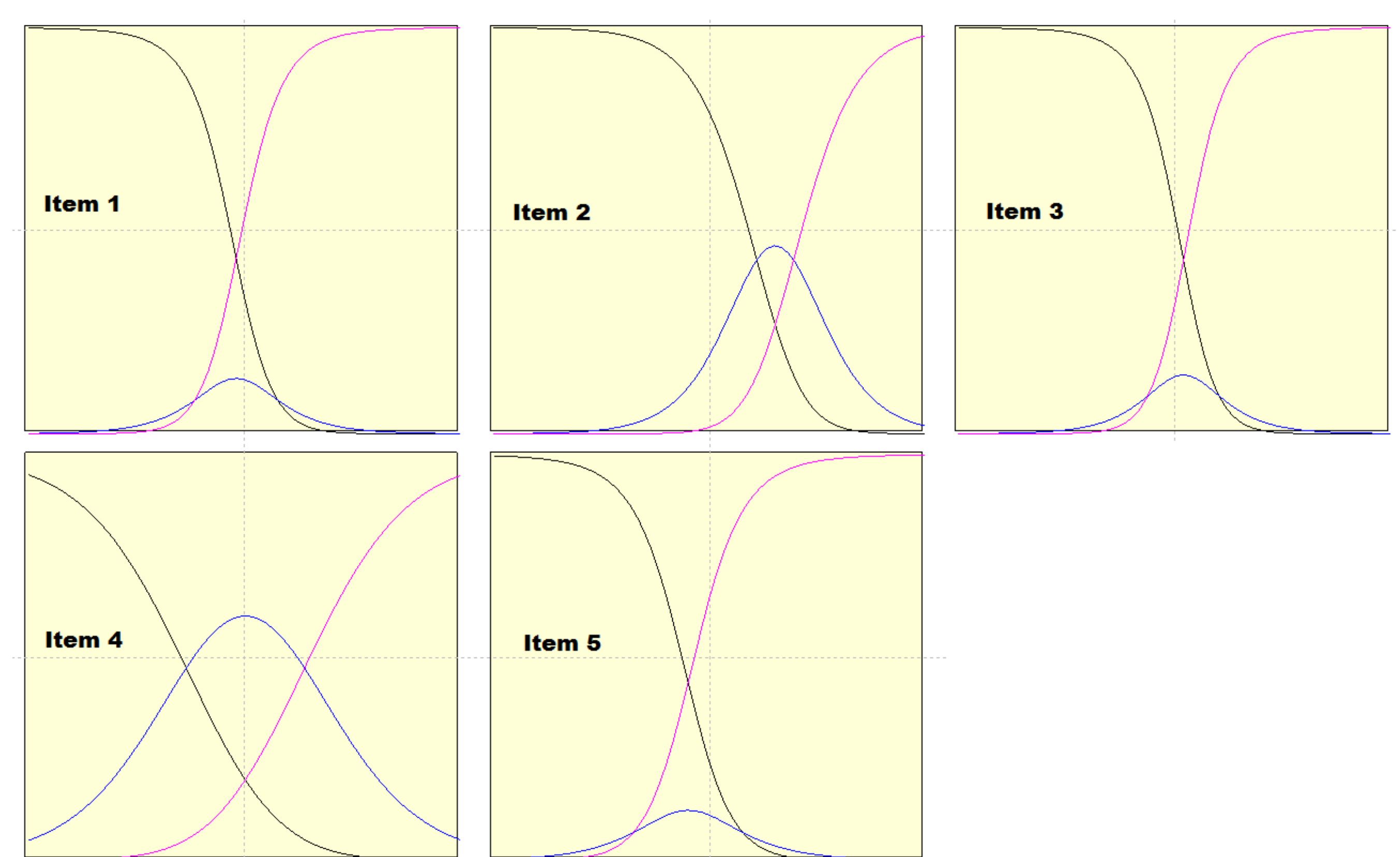


Figure 2. Characteristic curves of the Similarities subtest items.

DISCUSSION

The lack of representativeness of responses in category 0.5 in items 1, 3 and 5 (six answers on each item) influenced the curves, suggesting that a larger sample of subjects should be used. The Similarities subtest is very informative among people with skills between -0.5 and 0.5 of the sample (Figure 3).

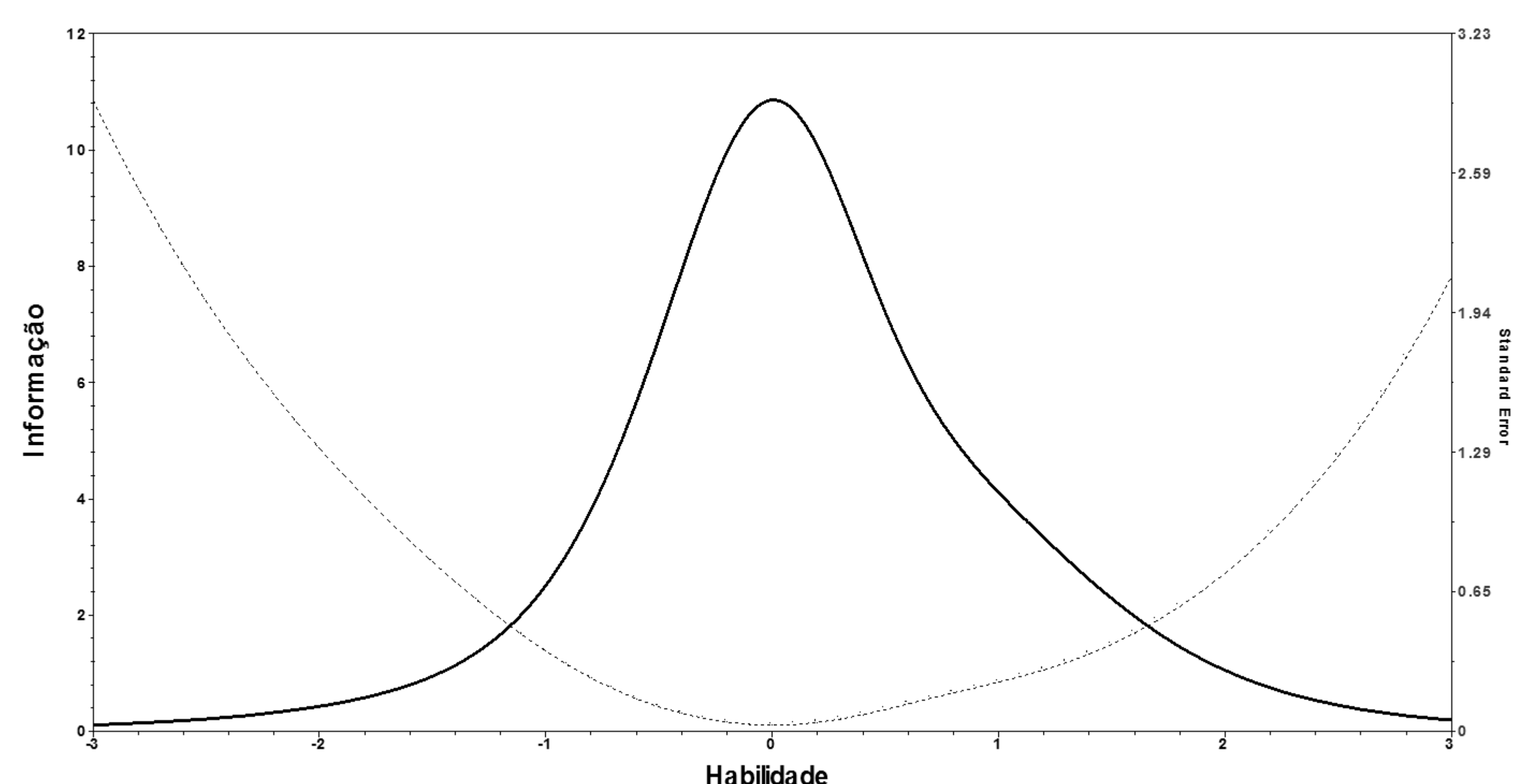


Figure 3. Total information curve of Similarities subtest.

REFERENCES

- Wechsler, D. Echelle d'intelligence de Wechsler pour adultes: WAIS. 2^{ème} edition, Paris: Centre de Psychologie Appliquée, 1970.
- Fabrigoule, C.; Lafont, S.; Letenneur, L.; Rouch, I. WAIS similarities subtest performances as predictors of dementia in elderly communities residents. *Brain Cogniton*, 1996, 30: 323-6.