

Developing a cultural adaptation of the Oxford Visual Perception Screen (OxVPS) for use with Filipinos after stroke

Introduction

- Visual Perception is defined by Kolb and Whishaw (as cited in [1]) as “cognitive processes which interpret and assign meaning to what is visually available,” with examples of deficits including:
 - alexia (problems with reading) and
 - apperceptive agnosia, which is the inability to recognise objects, draw or copy a figure [2]
 - Edmans et al. (as discussed in [3]) indicated that visual perception impairments affect 76% of (systematically screened) stroke survivors, but Rowe et al. found that only 20% is picked up in standard testing [4].
 - These impairments are connected to adverse effects for well-being, quality of life, and functional recovery in stroke rehabilitation [1].
 - Despite the evident significance of VP deficits, there is an issue with the underdiagnosis of visual perception deficits [4].
- The OxVPS (Oxford Visual Perception Screening) is an easily accessible solution for this problem.
- In the Philippines: stroke is the “second leading cause of death and [...] top five leading causes of disability” [5]
 - A cultural adaptation and translation of the OxVPS would allow for increased availability of this screening anywhere for Filipino speakers.

This pilot study thus aims to ask the following – Will this translated screening test:

- 1) Be suitable for the target population and
- 2) be of similar difficulty and acceptability to the English version?

Methodology

We followed the Oxford Cognitive Screen (OCS) translation and linguistic validation protocol [6] with the assistance of two forward translators (English to Filipino) and one back (Filipino to English) after completing the cultural adaptation – notable examples include:

- the original OxVPS had “cow” and “bus”, which are not as widely known as carabao (a water buffalo, often perceived as a national symbol of the Philippines) and jeepneys (the most popular mean of public transportation).

Participants:

8 native Filipino (Tagalog) speakers from the ages of 40-60 with no history of stroke or any neurological disease.

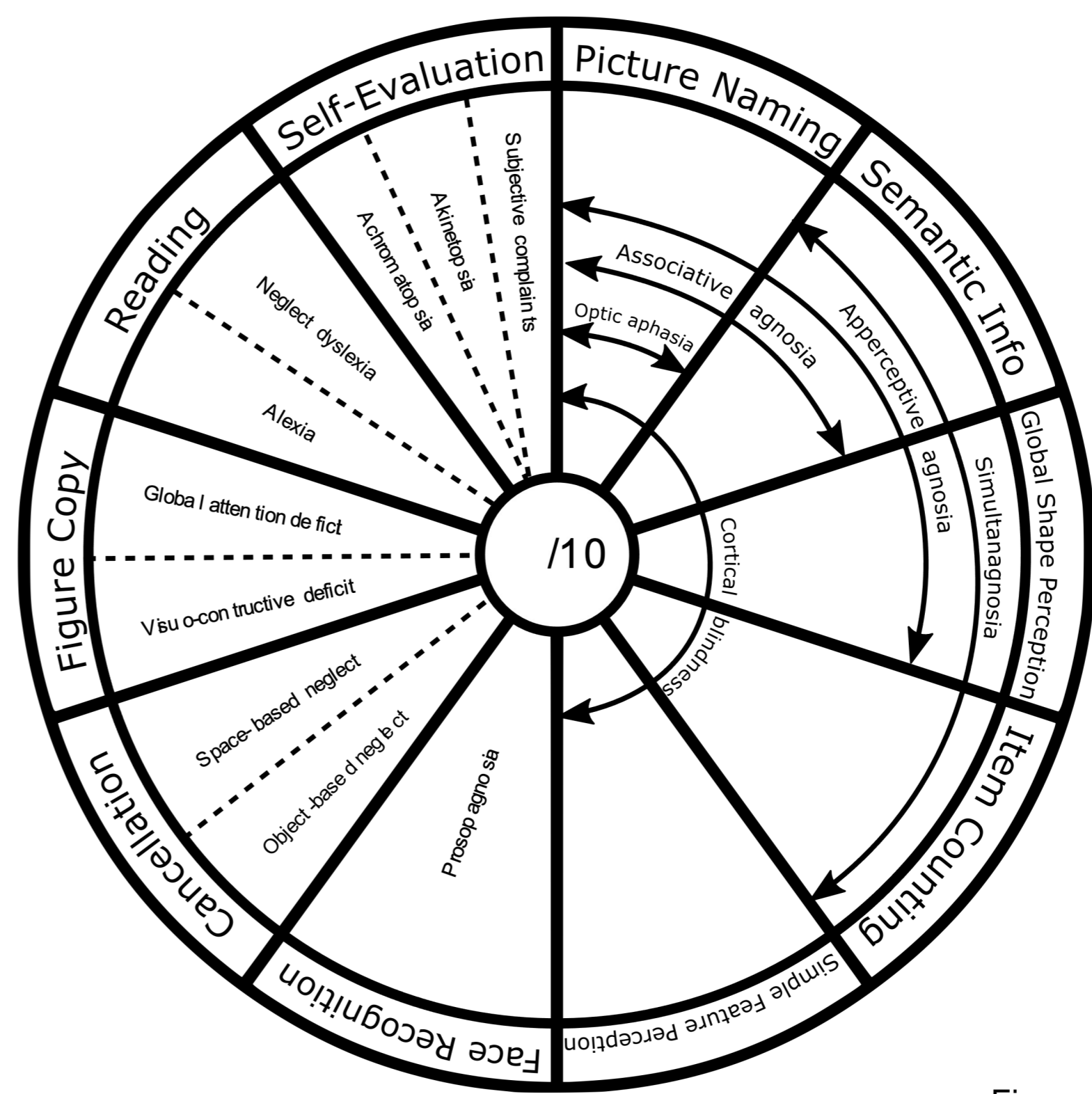
Procedure:

1. The pilot study occurred on Zoom or Teams.
2. Participants were to partake in nine translated tasks testing: picture naming, semantic information, global shape perception, item counting, single feature perception, face recognition, cancellation, figure copying and reading.
3. After completion of tasks, participants were asked to provide feedback about the language (whether the translations were coherent), the cultural adaptations and whether they had any general feedback.

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Figure 1. Summary of results



- PALAKA
- ISDA
- DAHON
- BUTIKI
- PUNO

Figure 2. Example of translated picture naming task

Results

We requested feedback at the end of the screening test, in which there was a generally positive consensus:

- 1) Easy to understand
- 2) No request for changes in wording

The difficulty level also appears to be very similar, with the Filipino and English tests appearing to have the same average scores.

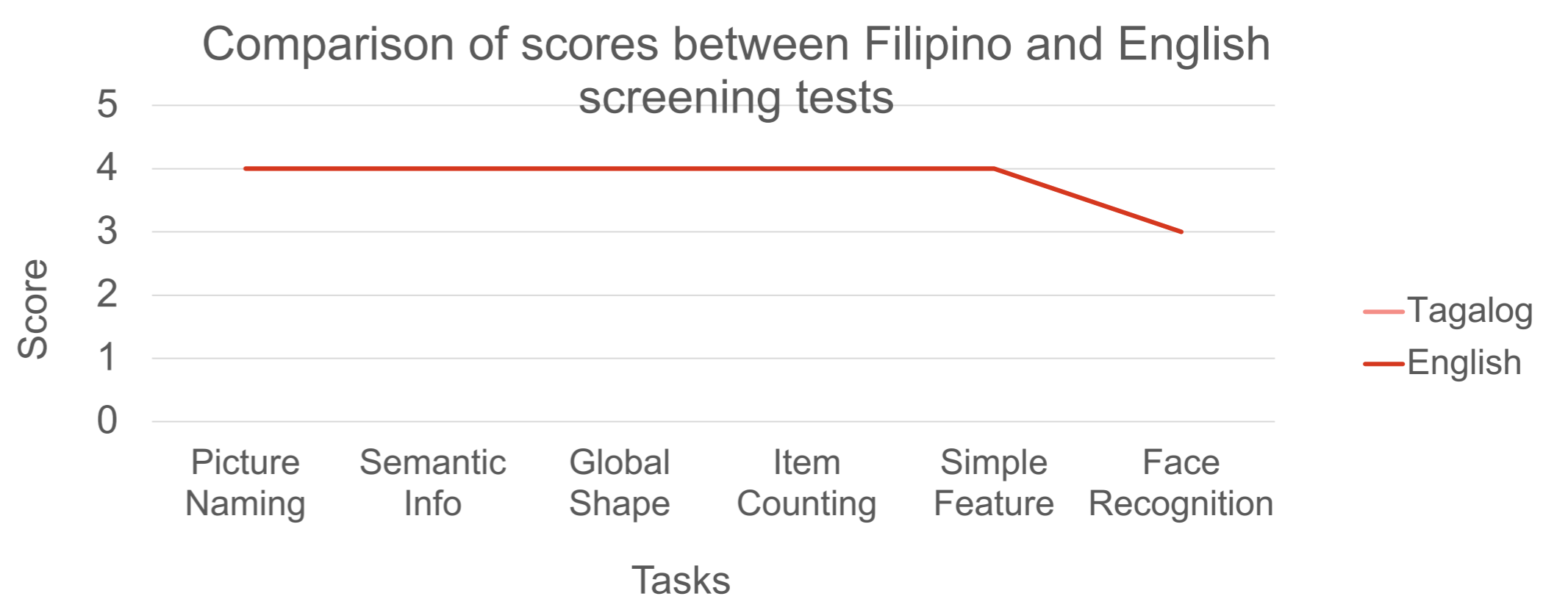


Figure 3. Line graph depicting average scores from Filipino pilot and English screening tests

Outcome measure per task	Tagalog				English			
	N	Median	IQR	10 th centile	N2	Median	IQR	10 th centile
Cancellation								
Object asymmetry	3	0	0	0	80	0	0-0	0
Space Asymmetry	3	0	0	0	80	0	0-0	0
Time (sec)	3	44.8	0	44.8	79	47	36-62.5	79.2
Figure Copy								
Total	8	60	60-60	60	80	60	60-60	59
Strategy	8	1	1-1	1	80			
Reading								
Reading Speed (wpm)	8	102	96-96	101	78	137	129-144	114
Alexia	8				78	10	10-10	10

Figure 4. Comparison data of remaining screening task scores

Conclusion

- With a raw % agreement of 0.9 (almost perfect level of agreement), compared to the moderate Kappa measure (0.6), one can assume that the translations are appropriate.
- Looking at the similarity of the median scores, it is reasonable to conclude that: the translated screening test is suitable for the target population and is of similar difficulty and acceptability to the English version.
- We envisage that this screening test has potential for future use with Filipinos.

[1] Michael J. Colwell, Nele Demeyere & Kathleen Vancleef (2021) Visual perceptual deficit screening in stroke survivors: evaluation of current practice in the United Kingdom and Republic of Ireland, Disability and Rehabilitation, DOI: 10.1080/09638288.2021.1970246
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