ADAPTATION OF THE DEMENTIA DIAGNOSTICS *BRITISH SIGN LANGUAGE COGNITIVE SCREENING TEST*: A CROSS-LINGUISTIC COMPARISON OF LSQ AND DGS

Stéphanie Luna[1] and Lisa Stockleben[2]
1. University of Montreal, 2. University of Cologne

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theoretical issues in sign language research

Background

Using standardized tests (e.g.: MMSE) to assess cognition of Deaf signers **lacks validity due to the fact that norms used come from hearing individuals**[1,2].

→ language and cultural differences.

Clinical assessment of dementia of Deaf signers in Québec and Germany is **provided in spoken language or with the use of an interpreter** in the better case, which can lead to errors[3,4]. Assessment tools to evaluate cognitive deficits of older adult deaf signers **should be designed in sign language**[5]. The **British Sign Language Cognitive Screening Test (BSL-CST)** is worldwide the first sign language-based and Deaf culturally sensitive tool and accessible for adaptation.

Process

Analyzing differences between German **(DGS)**, Québec **(LSQ)** and British **(BSL)** Sign Language

Linguistic [7]

Native signers and interpreters
- Forward translation
- Expert panel Back-translation
- Pre-testing and cognitive interviewing
- Final version

Cultural [5,6]

Native signers, linguists and interpreters
- Suitability of items translated (e.g. iconicity, frequency, regional alternatives)
- Development of new items when untranslatable

Aim

- present the process of adaptations of the BSL-CST into LSQ and DGS
- expose a cross-linguistic comparison of the adaptation process into these two languages

Adaptations

T = Translation
A = Adaptation

LSQ	BSL-CST items	DGS
	ORIENTATION	
T	1. Name day, date, month, year, season 2. Name building, floor, town, country	T
	ATTENTION	
A+T	3. Fingerspell DEAF backward 4. Fingerspell CHRIS backward 5. Tap the table when you see the letter "A" 6. Months of the year backward	A+T
	MEMORY	
A+T	7. Memory immediate and delayed recall : BALL, TREE, PEN 8. Learn novel information about Deaf man (name, age, wife's name where lives and school attended) 9. Name of current prime minister, Name of former woman prime minister 10. First name of the Queen, Name of royal who died in a car crash	A+T
	VERBAL FLUENCY	
T	11. Semantic sign fluency for animals	T
	LANGUAGE	
A+T	12. Three-stage command: "Take the paper in your right hand." Fold in half. Put the paper on your lap. 13. Sentence production: "Look at the picture. There are two people. Tell me what they are doing." Response must contain two nouns and two verbs and be a coherent sentence. 14. BSL sentence repetition 15. BSL object naming 16. BSL picture naming 17. BSL Language comprehension questions	T+A?
	VISUOSPATIAL	
T	18. Copy overlapping pentagons 19. Copy wire cube 20. Perceptual abilities: Count the dots 21. Perceptual abilities: Identify degraded letters	T
	EXECUTIVE FUNCTION	
T	22. Clock drawing "Draw a clock face with numbers and hands to show 1:45" 23. Alternative trails: Draw a line alternating between numbers and letters	T

3. and 4. adapted to common names and word in LSQ : MARC and SOURD - issues?

7. PEN = regional differences, replace by VERT // TREE by THREE
8. Adapted to common names and schools
9. and 10. on Canada and American politicians

14. Sentences translated with LSQ grammar
15. Objects changed to CREDIT CARD and PILL (iconicity)
16. Picture changed (iconicity)
17. Cultural adaptation due to
- differences in concept understanding
- frequency of the sign presented

2. Consider buildings in Germany without a name

3. and 4. adapted to common names and word in DGS: challenge of FA for older signers (e.g. PMS)
6. Varieties of month signs

8. Adapted to common names and schools
9. German politicians
10. *item not yet finalised*: e.g. attack on German politician in 1990? sports?

14. Sentences translated with DGS grammar
15. -17. *current DGS rating study for investigating familiarity and iconicity of lexical signs/test items*

Observations

- The BSL-CST as a sign language based and culturally sensitive tool, eradicates the typical "suitability issues" – well suited for adaptations
- Cultural adaptations based on **historical and geographic differences**, not on community differences (deaf vs hearing)
- Linguistic adaptations gravitate around **frequency** and **iconicity** of the signs presented.
- **Age-related differences in fingerspelling**:
  - LSQ and DGS older signers – little use of fingerspelling
  - BSL older signers – much use of fingerspelling

Acknowledgments

Partial references

1 - Baker, K., & Baker, F. (2011). The assessment of intellectual disability with deaf adults. *International Journal on Mental Health and Deafness, 1*(1), 23–36. | 2 - Taylor, J. (2017). *Translating the Mini-Mental State Exam into American Sign Language* (PhD). King's University College at Western University, Canada. | 3 - Hill-Briggs, F., Dial, J., Morere, D., & Joyce, A. (2007). Neuropsychological assessment of persons with physical disability, visual impairment or blindness, and hearing impairment or deafness. *Archives of Clinical Neuropsychology, 22*(3), 389-404. | 4 - Dean, P. M., Feldman, D. M., Morere, D., & Morton, D. (2009). Clinical Evaluation of the Mini-Mental State Exam with Culturally Deaf Senior Citizens. *Archives of Clinical Neuropsychology, 24*(8), 753-760. | 5 - Atkinson, J., Denmark, T., Marshall, J., Mummery, C., & Woll, B. (2015). Detecting Cognitive Impairment and Dementia in Deaf People: The British Sign Language Cognitive Screening Test. *Archives of Clinical Neuropsychology, 30*(7), 649-711. | 6 - Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the Process of Cross-Cultural Adaptation of Self-Report Measures. *Spine, 25*(24), 3186-3191. | 7 - World Health Organization. (2015). Process of translation and adaptation of instruments. Retrieved September 02, 2019, from https://www.who.int/substance_abuse/research_tools/translation/en/

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