Translation, adaptation and cross-cultural validation of hearing handicap inventory for adult in Malay language (Article) (Open Access)

Zam, T.Z.H.T.Z., Dzulkarnain, A.A.A., Rahmat, S., Jusoh, M.
Department of Audiology and Speech-Language Pathology, Kulliyyah of Allied Health Sciences, International Islamic University Malaysia, Kuantan, Pahang, Malaysia

Abstract
Background and Objectives: Since a self-reported questionnaire for hearing-impaired listeners is not available in Malay language yet, it is important to develop or translate any available existing questionnaires. The aim of this study was to translate, adapt and validate the Hearing Handicap Inventory for Adult (HHIA) to be used by the audiologist among the hearing-impaired population in Malaysia. Subjects and Methods: The HHIA was translated to Malay language using forward-backward translation techniques by four panellists (two for each level). The translated HHIA was then reconciled and harmonized for cultural aspects and content of the questionnaire by the researchers and two expert panels before being pilot-tested among 10 hearing-impaired patients. Questionnaire validation was conducted among 80 adults with a hearing loss to calculate for Cronbach’s α (internal reliability), Spearman’s correlation (inter-item correlation) and factor analysis. Results: None of the translated items were removed from the scale. The overall Cronbach’s α was 0.964; 0.927 and 0.934 for both social and emotional subscales, respectively. The factor analysis (force-concept inventory) demonstrated a two-structure with a strong correlation between all items in either component 1 or 2, that resembled the original scale. The Mann-Whitney test revealed significantly higher scores for those adults with a hearing loss than those adults with normal hearing. Conclusions: The Malay HHIA has been successfully translated and validated for the purpose of determining the psychosocial aspects of adults with hearing loss in the local population. © 2019 The Korean Audiological Society and Korean Otological Society.

Author keywords
Hearing loss, Malaysia, Psychosocial, Questionnaire

Funding details

| Funding sponsor | Funding number | Acronym |
|-----------------|----------------|---------|
| International Islamic University Malaysia | RIGS 16-125-0289, RIGS 15-035-0035 | IIUM |
| Foundation for Fundamental Research on Matter | FRGS15-236-0477 | FOM |
| Ministry of Higher Education, Malaysia | | MOHE |

Funding text
The authors wish to acknowledge the Ministry of Higher Education of Malaysia through the Fundamental Research Grant scheme (FRGS) (FRGS15-236-0477) and the International Islamic University Malaysia through the Research Initiative Grant Scheme (RIGS) (RIGS 15-035-0035 and RIGS 16-125-0289) for funding this research. We also wish to acknowledge Global Hearing Precision and Eartistic Hearing and Balance centre for their contributions in recruiting study participants. Special thanks to Swiss Medicare Sdn Bhd for their contributions in providing hearing aids in this study.

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References (28)

1. Lynn, M.R.
   Determination and quantification of content validity
   (1986) *Nursing Research*, 35 (6), pp. 382-386. Cited 2010 times.

2. Aiello, C.P., de Lima, I.I., Ferrari, D.V.
   Validity and reliability of the hearing handicap inventory for adults  
   (Open Access) (2011) *Brazilian Journal of Otorhinolaryngology*, 77 (4), pp. 432-438. Cited 19 times.
   http://www.scielo.br/pdf/bjorl/v77n4/v77n4a05.pdf
   doi: 10.1590/S1808-86942011000400005

3. Ciorba, A., Bianchini, C., Pelucchi, S., Pastore, A.
   The impact of hearing loss on the quality of life of elderly adults  
   (Open Access) (2012) *Clinical Interventions in Aging*, 7, pp. 159-163. Cited 153 times.
   http://www.dovepress.com/getfile.php?fileID=12983
   doi: 10.2147/CIA.S26059

4. Dalton, D.S., Cruickshanks, K.J., Klein, B.E.K., Klein, R., Wiley, T.L., Nondahl, D.M.
   The Impact of Hearing Loss on Quality of Life in Older Adults  
   (Open Access) (2003) *Gerontologist*, 43 (5), pp. 661-668. Cited 540 times.
   http://gerontologist.oxfordjournals.org/
   doi: 10.1093/geront/43.5.661

5. Cox, R.M., Alexander, G.C.
   The International Outcome Inventory for Hearing Aids (IOI-HA): Psychometric properties of the english version
   (2002) *International Journal of Audiology*, 41 (1), pp. 30-35. Cited 179 times.
   doi: 10.3109/14992020209101309

6. Cox, R.M., Alexander, G.C., Beyer, C.M.
   Norms for the International Outcome Inventory for Hearing Aids
   (2003) *Journal of the American Academy of Audiology*, 14 (8), pp. 403-413. Cited 76 times.
   http://www.ingentaconnect.com/content/aaa/jaaa/2003/00000014/00000008/art00002

7. Newman, C.W., Weinstein, B.E., Jacobson, G.P., Hug, G.A.
   The hearing handicap inventory for adults: Psychometric adequacy and audiometric correlates
   (1990) *Ear and Hearing*, 11 (6), pp. 430-433. Cited 247 times.
   doi: 10.1097/00003446-199012000-00004

View at Publisher
Ventry, I.M., Weinstein, B.E. (1982) *Ear and Hearing*, 3 (3), pp. 128-134. Cited 555 times. doi: 10.1097/00003446-198205000-00006

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Berkanovic, E. (1980) *American Journal of Public Health*, 70 (12), pp. 1273-1276. Cited 135 times. doi: 10.2105/AJPH.70.12.1273

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Guillemin, F., Bombardier, C., Beaton, D. (1993) *Journal of Clinical Epidemiology*, 46 (12), pp. 1417-1432. Cited 3021 times. doi: 10.1016/0895-4356(93)90142-N

View at Publisher

Monzani, D., Genovese, E., Palma, S., Rovatti, V., Borgonzoni, M., Martini, A. (2007) *Acta otorhinolaryngologica Italica: organo ufficiale della Società italiana di otorinolaringologia e chirurgia cervico-facciale*, 27 (4), pp. 186-191. Cited 18 times.

De Araújo, P.G.V., Mondelli, M.F.C.G., Lauris, J.R.P., Richieri-Costa, A., Feniman, M.R. (2010) *Brazilian Journal of Otorhinolaryngology*, 76 (3), pp. 378-383. Cited 12 times. doi: 10.1590/S1808-86942010000300018

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Sato, M., Ogawa, K., Inoue, Y., Masuda, M. (2004) *Journal of Otolaryngology of Japan*, 107 (5), pp. 489-493. Cited 5 times. doi: 10.3950/jibiinkoka.107.489

View at Publisher

Brislin, R.W. (1986) *Field Methods in Cross-Cultural Research*, pp. 137-164. Cited 1902 times.
In: Lonner WJ, Berry JW, editors. 1st ed. Thousand Oaks, CA: SAGE Publications, Inc
15 Jones, P.S., Lee, J.W., Phillips, L.R., Zhang, X.E., Jaceldo, K.B.
An adaptation of Brislin's translation model for cross-cultural research
(2001) Nursing Research, 50 (5), pp. 300-304. Cited 302 times.
http://journals.lww.com/nursingresearchonline
doi: 10.1097/00006199-200109000-00008
View at Publisher

16 Zam, T.Z., Dzulkarnain, A.A., Rahmat, S., Jusoh, M.
Translation and adaptation of hearing handicap inventory for adult (HHIA) into Malay language: a pilot study
(2017) Int J Health Sci, 1, pp. 92-100.

17 Kline, R.B., Santor, D.A.
Principles & practice of structural equation modelling
(1999) Can Psychol, 40, p. 381. Cited 36 times.

18 Watson, R., Thompson, D.R.
Use of factor analysis in Journal of Advanced Nursing: Literature review
(2006) Journal of Advanced Nursing, 55 (3), pp. 330-341. Cited 103 times.
doi: 10.1111/j.1365-2648.2006.03915.x
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19 Horn, J.L.
A rationale and test for the number of factors in factor analysis
(1965) Psychometrika, 30 (2), pp. 179-185. Cited 3332 times.
doi: 10.1007/BF02294447
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20 Bardid, F., Huyben, F., Deconinck, F.J.A., De Martelaer, K., Seghers, J., Lenoir, M.
Convergent and divergent validity between the KTK and MOT 4-6 motor tests in early childhood
(2016) Adapted Physical Activity Quarterly, 33 (1), pp. 33-47. Cited 8 times.
http://journals.humankinetics.com/AfcStyle/DocumentDownload.cfm?
DType=DocumentItem&Documents=03%5FBardid%20APAQ%5F2014%2D0228%5F33%2D47%2Epdf
doi: 10.1123/APAQ.2015-0050
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21 Henseler, J., Ringle, C.M., Sarstedt, M.
A new criterion for assessing discriminant validity in variance-based structural equation modeling  (Open Access)
(2014) Journal of the Academy of Marketing Science, 43 (1), pp. 115-135. Cited 1571 times.
http://www.springer.com/business/journal/11747
doi: 10.1007/s11747-014-0463-8
View at Publisher

22 Sindhusake, D., Mitchell, P., Smith, W., Golding, M., Newall, P., Hartley, D., Rubin, G.
Validation of self-reported hearing loss. The blue mountains hearing study  (Open Access)
(2001) International Journal of Epidemiology, 30 (6), pp. 1371-1378. Cited 236 times.
http://ije.oxfordjournals.org/
doi: 10.1093/ije/30.6.1371
View at Publisher
23. Olusanya, B.
   Self-reported outcomes of aural rehabilitation in a developing country
   (2004) *International Journal of Audiology*, 43 (10), pp. 563-571. Cited 25 times.
   doi: 10.1080/14992020400050072

24. Taylor, B.
   (2007) *Self-report assessment of hearing aid outcome-an overview*. Cited 5 times.
   Hearing Aids-Adults [cited 2017 Jun 20]
   http://www.audiologyonline.com/articles/article_detail.asp?article_id=1888

25. Thammaiah, S., Manchaiah, V., Easwar, V., Krishna, R.
   Translation and adaptation of five English language self-report health measures to South Indian Kannada language
   (2016) *Audiol Res*, 6, p. 153. Cited 8 times.

26. Halai, A.D., Woollams, A.M., Lambon Ralph, M.A.
   Using principal component analysis to capture individual differences within a unified neuropsychological model of chronic post-stroke aphasia: Revealing the unique neural correlates of speech fluency, phonology and semantics (Open Access)
   (2017) *Cortex*, 86, pp. 275-289. Cited 31 times.
   http://www.cortex-online.org/
   doi: 10.1016/j.cortex.2016.04.016

27. Greenwald, A.G., Banaji, M.R.
   Implicit Social Cognition: Attitudes, Self-Esteem, and Stereotypes
   (1995) *Psychological Review*, 102 (1), pp. 4-27. Cited 2951 times.
   doi: 10.1037/0033-295X.102.1.4

28. Roux, P., Christophe, A., Passerieux, C.
   The emotional paradox: Dissociation between explicit and implicit processing of emotional prosody in schizophrenia
   (2010) *Neuropsychologia*, 48 (12), pp. 3642-3649. Cited 35 times.
   www.elsevier.com/locate/neuropsychologia
   doi: 10.1016/j.neuropsychologia.2010.08.021

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