TRANSLATION OF THE VOICE HANDICAP INDEX (VHI) TO SINGHALESE – INSIGHTS FROM THE PROCEDURE

Background

A voice problem would be of great concern for a person who needs to use their voice constantly in their occupation or social life. People with voice disorders are frequently referred for Speech Therapy to resolve their voice difficulties. Currently in Sri Lanka, endoscopic imaging methods and perceptual evaluations are carried out to identify voice disorders and their effects. However, worldwide, clinicians and policymakers are increasingly recognising the importance of identifying the effect of the voice dysfunction at a personal level in order to improve patient management and treatment. This is considered a significant factor as research shows that the impact of voice problems does not depend merely on the severity of the impairment, but that it also depends on how an individual perceives, reacts, and adjusts to the problem (Yiu, 2002).

Rationale for the study

Currently there are no psychometrically valid instruments to assess the impact of voice disorders in use in Sri Lanka. Such an instrument would be of value, as it would provide an insight to the implications of the voice disorder on the individual’s quality of life. The information would contribute to treatment planning and provide outcome measurements after treatment. The results can be used to evaluate the effectiveness of a specific treatment method (Mathieson 2001 p 463). Therefore developing an instrument to identify the impact of voice disorders in our country can be considered important.

The literature review identified several self-administered assessments that deal with the physical and psychosocial impact of voice disorders. A psychometric evaluation of quality of life instruments in voice disorders by Franic, Bramlett and Bothe (2005) identified the Voice Handicap Index (VHI) as one of the two highest scoring instruments in the review. The VHI is regarded as the “gold standard” for assessment of voice self-perception (Kasper et al 2010) and is considered the most patient-friendly questionnaire containing the most relevant information about voice related quality of life (Franic, Bramlett and Bothe 2005). The VHI has been translated and culturally adapted to the languages of many countries as a valid instrument (Núñez-Batalla et al 2007). This includes several European languages such as French, Greek, Dutch, Danish, German, Portuguese and Spanish. In Asia, the VHI has been translated to Chinese (Lam et al 2006), Filipino (Lim et al 2010) and Hindi (Datta et al 2011).

Lam et al (2006) identify the VHI as one of the most psychometrically robust and well studied instruments measuring quality of life. Therefore, the VHI was selected as the instrument to translate and validate.

Objectives of the study

- To translate and culturally adapt the Voice Handicap Index (VHI) into Singhalese
- To validate the translated VHI for use in Sri Lanka

Focus for the presentation

- The translation process and lessons learnt during the procedure
Methodology

Translation

The Voice Handicap Index (VHI) is a 30-item instrument developed by Jacobson et al as a tool to self-measure the psychosocial handicapping effects of voice disorders. The questionnaire consists of three sub scales; emotional, physical and functional, with 10 items from each scale. Items in the physical subscale are statements that relate to either the person’s perception of laryngeal discomfort or the voice characteristics, such as the pitch being too low or too high. The emotional subscale indicates the patient’s affective responses to the voice disorder and the functional subscale includes statements that describe the impact of a person’s voice on his daily activities (Kandogan and Sanal 2005).

The forward-backward procedure given by the European Organization for Research and Treatment of Cancer was used for translation. (Cull et al 2002 p 8,9, 12,14) All the translators are native Singhalese speakers who have a high degree of proficiency in English, and include professional translators, speech therapists and other professionals in the health service.

Two independent translators carried out the forward translation from English to Singhalese. The agreed items from the translations were accepted for the provisional translation. Disagreements were resolved after discussion between the translators and the coordinator. This process resulted in a provisional forward translation.

Two other translators back translated the provisional forward translation to English, without reference to the English original. The results were compared to the original English version. Where there was agreement between the English translations and the original, the corresponding items from the forward translation were accepted for pilot testing. Differences were discussed and resolved or revised by repeating the forward-backward translation process.

The provisional forward translation was then pre-tested on 10 people with voice problems. They gave feedback on the wording of each item, indicating if they were difficult to answer, confusing, difficult to understand, upsetting /offensive or should have been asked in a different way.

Two different translators, independently reviewed the provisional translation to identify words or expressions that are not commonly used in everyday communication, and suggested modifications in order to make it culturally appropriate. Feedback received from pilot testing and cultural adaptation was used to rephrase the sentences after discussion with the translators.

Validation

Validation will be through these processes.

- Assessment of content validity
- Assessment of convergent- discriminant validity
- Assessment of construct validity

A panel of multidisciplinary experts comprising of two Otorhinolaryngologists, two speech therapists and a nurse assessed the questionnaire for content validity. Each item was given points out of 10 (minimum 0 and maximum 10) for its relevance, appropriateness and being acceptable locally. Average scores for each item was calculated. Seven points or more out of 10 was considered satisfactory for
validation. If the majority of assessors have given seven or more points, the results were considered acceptable even if the average score was below seven.

Convergent validity is defined as a correlation of 0.40 or greater between an item and its own scale (Hays et al. 1988). The VHI comprises three scales – Physical, Emotional, and Functional. If an item correlates significantly higher with its own scale than with another scale, it will be considered satisfactory.

Known group comparison, which measures the extent to which the questionnaire scores are able to discriminate subgroups of people known to differ from each other, will be used to assess construct validity (Abramson and Abramson 1999) The questionnaire will be given to dysphonic people and people with no voice complaints to assess construct validity of this questionnaire.

**Participants**

According to de Vet et al (2005) the general sample size for a study is four to ten persons per variable. The VHI has 30 items, therefore calculating as five participants per variable, 150 individuals with voice problems will be recruited. A further 50 individuals with no voice complaints will also be recruited as a control group. The dysphonic individuals will be patients from ENT clinics at the National Hospital Colombo, Kalubowila, Ragama, Kandy, Gampaha and Sri Jayawardenapura hospitals. Convenience sampling will be used. The non-dysphonic participants will be volunteers-, family members of patients and hospital staff who will be matched for age and gender with the dysphonic participants.

**Ethical considerations**

Translation and validation of the VHI is carried out as a part of a larger study researching the impact of communication disability on the quality of life after laryngectomy. The translated and validated VHI will be used to gather data on the voice related quality of life of laryngectomees during this study. Ethical clearance will be obtained for this study as a whole.

**Outcomes**

The study will be significant for, researchers, practitioners and policy makers. Currently there is a paucity of voice research carried out in Sri Lanka. The Voice Handicap Index is considered the gold standard for measuring voice related quality of life. Translating and validating it gives the opportunity for more research on various types of voice disorders and treatment processes in the future. Use of an instrument to find out how the patient feels about the voice problem and its effect in addition to other evaluations currently used, will enable speech therapists to gain a holistic view of the voice dysfunction. New knowledge can be incorporated into the therapists’ treatment planning and when teaching speech and language therapy students. This will lead to improved service delivery and a better quality of life for people with voice problems. Factors identified by using the VHI can be incorporated into policy decisions in order to meet the needs of people with voice problems. For example, the need for counseling patients or to prove the efficacy of providing voice-care instructions for professional voice uses.
Conclusion
Translating and validating the VHI to be used in Sri Lanka will add to the scholarly research and literature in the field as well as facilitate policy making and practice regarding service provision for people with voice disorders.

References
Cull A., Sprangers M., Kristin Bjordal , Neil Aaronson, Karen West and Andrew Bottomley on behalf of the EORTC Quality of Life Group, 2002, EORTC Quality Of Life Group Translation Procedure, Second Ed
de Vet ,H C.W., Ade`r Herman J., Caroline B. Terwee1 & Francois Pouwer , 2005, „Are factor analytical techniques used appropriately in the validation of health status questionnaires? A systematic review on the quality of factor analysis of the SF-36‘, Quality of Life Research 14: 1203–1218
Hays, RD, Hayashi, t., Carson, H and Ware JE., 1988, User“s guide to multi-trait analysis Program (MAP), Rand Corporation, Santa Monica, California