PAIN CATASTROPHIZING SCALE: DEVELOPMENT OF THE SINHALESE VERSION

R. W. PALLEGAMA*[1], S.P.A.G. ARIYAWARDENA[1], A.W.RANASINGHE[1], M.A.M. SITHEEQUE[1] AND A. GLAROS[2]

[1]Faculty of Dental Sciences, University of Peradeniya,[2] Kansas City University of Medicine and Biosciences, Kansas City, USA

Introduction

Pain catastrophizing is a cognitive and affective process that relates strongly to exaggerated negative orientation towards noxious stimuli (negative appraisal about pain and its consequences). Starting from the previous work by many investigators, Sullivan and Bishop in 1995 produced the Pain Catastrophizing Scale (PCS), a reliable and valid model to quantify catastrophizing as a distinctive measure. The model, which was valid for both clinical and nonclinical populations, includes 13 items in three components (rumination, magnification and helplessness). PCS facilitated research in understanding the psychological processes that lead to heightened physical and emotional distress in response to aversive stimulations.

Therefore, it was our aim to methodically translate and adapt PCS into Sinhala Language and to examine the psychometric properties of the resulting Sinhala Version of the PCS (PCS-SIN) in a sample of chronic pain patients.

Materials and methods

The following steps were employed in the translation and adaptation of the PCS-SIN (Beaton et al., 2000). (i) Translation: Forward translations were performed by three (one informed and two uninformed) translators. (ii) Synthesis of translations: The three translations were synthesized to a composite using all translations and the original questionnaire. (iii) Back translation: Back Translation by another independent translator. (iv) Comparison of back translation: Back translation and the original English questionnaire were sent to a native English speaker, the fifth author of the study for comparison and recommendations. (v) Comments from experts: Comments were sought from experts (health and language professionals) including translators and investigators, and the translated version (PCS-SIN) was finalized. (vi) Pretest: The pre-final version of PCS-SIN was tested in a group of 12 patients. The sample of patients used for pretesting the questionnaire included 6 patients with chronic orofacial pain, 3 patients with chronic head ache, 3 patients with back pain and cervical pain. (vii) Preliminary testing for retention of psychometric properties: Testing for internal consistency, reliability, construct validity, and responsiveness.

For preliminary testing of the psychometric properties, the PCS-SIN was administered to a convenience sample of 40 patients (20 orofacial pain patients and 20 from other pain categories) recruited from patients attending the Oral Medicine Clinic of the Dental Hospital (Teaching) and patients attending other pain clinics in Kandy and Matale Hospitals. The selection criteria were: presence of pain for more than three months, pain intensity of more than 20mm recorded on a 100mm Visual Analogue Scale, the ability to read and understand Sinhala language judged on the ability to read and understand a standard daily newspaper published in Sinhala, age between 16 to 50 years and willingness to volunteer and give written informed consent. Exclusion Criteria were: patients with a history of established psychological disorders or history of treatments for chronic psychological disorders, and patients with a history of head injury followed by unconsciousness and or neurological deficits.

Results

The team successfully translated and adapted the PCS-SIN version following all the prescribed steps. Item to total correlations (γ) ranged from 0.49 to 0.78 (P< 0.001). Components to total correlations were: rumination, γ=0.89, P=0.001; magnification, γ=0.81, P=0.001; helplessness γ=0.94, P=0.001. Total scores of the components and the total of PCS showed acceptable distributions on Stem and Leaf Plots. Exploratory Statistics revealed that the distributions of all these variables were consistent with the normality standards. Cronbach's Alpha calculated for rumination, magnification, helplessness and total score were 0.8, 0.48, 0.86 and 0.91 respectively. When explored using the Pearson Correlation Coefficient, pain intensities showed a moderate association with the total score of PCS-SIN (γ=0.44, P= 0.003).

Discussion

Acceptable standards of translation and adaptation procedures have been practiced. The PCS-SIN version shows high item to total and component to total correlation equal to the original version of the PCS. The results also show that the internal consistency of the PCS-SIN is high and comparable to the original versions and other translated versions of PCS (Miro et al., 2008). The moderate association of pain intensity levels with the total score of PCS-SIN indicates that the new version is measuring a construct comparable to the original.

Conclusion

This study revealed that the translated and adapted version of the PCS to Sinhala Language (PCS-SIN) is reliable and valid to be used in Sinhala speaking individuals with chronic pain in Sri Lanka.

The further steps required for assessing the score level attributes in a wider population including healthy individuals are being addressed in an extended study.

Acknowledgement

This research was supported by a grant from University of Peradeniya (RG/2007/18/D).

Reference

Beaton DE, Bombardier C, Guillemin F, Ferraz MB (2000). Guidelines for the process of cross-cultural adaptation of self-reported measures. *Spine*. 25: 3186-3191.

Miro J, Nieto R, Huguet A (2008). The Catalan version of the Pain Catastrophizing Scale: a useful instrument to assess catastrophic thinking in whiplash patients. *J Pain* 9: 397-406.

Sullivan MJL, Bishop SR (1995). The Pain Catastrophizing Scale: Development and Validation. *Psychological Assessment* 7: 524-532.