

Translation and linguistic validation of Korean version of short form of pelvic floor distress inventory-20, pelvic floor impact questionnaire-7

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The short forms of pelvic floor distress inventory (PFDI) and pelvic floor impact questionnaire (PFIQ) are useful disease specific questionnaires evaluating symptoms, quality of life for pelvic floor disorders. The purpose is to develop linguistic validation of the PFDI-20 and PFIQ-7 questionnaires. Three types of Korean version of questionnaires have been used in four locations of University Hospitals in Korea. Each version of questionnaires was developed by forward translation and back-translation by bilingual translators and was verified by the patients with pelvic floor disorder and healthy persons. For harmonization of 3 types of questionnaires, four authors reviewed, discussed all discrepancies, incorporated and produced a new version. The multi-step processes of translation and linguistic validation of the Korean version of PFDI-20 and PFIQ-7 questionnaire were completed. Further process of validation of Korean version of these questionnaires is required.

Keywords: Pelvic organ prolapse; Questionnaire; Translations; Urinary incontinence

Introduction

In 2001, 2 condition specific quality of life instruments of pelvic floor distress inventory (PFDI) and pelvic floor impact questionnaire (PFIQ) were developed by Barber et al. [1]. The short forms of PFDI-20 and PFIQ-7 were also introduced and validated [2,3]. In the absence of validated questionnaires in Korean to evaluate symptoms and impact on quality of life, this study was designed to translate and culturally adapt PFDI-20 and PFIQ-7 in order to provide a useful instrument for clinical use and academic research in Korea.

Materials and methods

The English version of the PFDI-20 and PFIQ-7 was translated into Korean with the use of a back-translation method and the cross-cultural translation process was undertaken by four investigators in three separate sites of university hospitals. At first, the first author (E.H.Y.) had taken the permission for translation and acquisition of the original version of

questionnaires from the original authors of questionnaires by e-mail. The translation was performed independently by two medical students who were fluent in English, Korean, and medical terminology. They were born in Korea and had resided in an English-speaking nation for at least 5 years. Two medical students reviewed two separate translated versions and produced a translated version. A gynecologist who did not see the original English questionnaires nor did

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consult with others translated back into English. This back-translated version was then compared with the original English version to ensure that no meaning or concepts were lost during the translation process, and a single preliminary combined Korean version was prepared. The preliminary Korean translation was then distributed to 5 patients with pelvic floor disorder and 5 healthy participants in order to identify problems in the comprehension of items, and minor corrections were made to produce the final Korean version. The investigators of this study were gathered for harmonization of separate 3 kinds of Korean version of these questionnaires. The contents were presented, examined and discussed. Then, after full exchange of ideas, an agreement in views was brought and final harmonized Korean version of the PFDI, and PFIQ was established.

Results

The two translators translated separately 20 questions of short form of PFDI and 21 items of PFIQ and reconciled with each other. The "experience" was translated into "feel". The "How much does it bother you?" as the question for measuring the response scale in PFDI was translated the sentence into "Aren't you feeling well?" and the "How do symptoms usually affect your activity?" as the question in PFIQ was translated the sentence into "Do symptoms prevent you from activity?" for adaptation for the Korean version. A third translator who has never seen these questionnaires translated the reconciled version into English version. The original version and back-translated version were compared. The discordant questions and items were newly forward-translated, and the translations were translated into English by the investigator and three translators. These processes were completed until new translation was accepted (Suppl. 1). The new translated version of PFDI and PFIQ was given to the 5 patients with pelvic floor disorder and 5 healthy participants for completing the questions and were interviewed for identifying their complete understanding and appropriate expressions of questions (Suppl. 1).

For harmonization, three kinds of separate Korean version of PFDI-20 and PFIQ-7 were homogenized into interrogative ones. For correct explanations, the questions was paraphrased with the addition of new words for emphasis of urgency in the second question of Colorectal-Anal Distress Inventory-8

and second question of Urinary Distress Inventory-6, conversion of word into sentence in the fifth question of Pelvic Organ Prolapse Distress Inventory (POPDI)-6 and condensation into a few words in the sixth question of POPDI-6 (Suppl. 1). All of the questions in the harmonized version reflected all of the discussions and corollary of the investigators. Thus, the harmonized Korean translation was revised and established as the final translation of short form of PFDI and PFIQ (Suppl. 2).

Discussion

Pelvic floor disorders collectively refer to the conditions of urinary and fecal incontinence, pelvic organ prolapse and other lower urinary and bowel tract dysfunction. The pelvic floor symptoms related to prolapse, lower urinary tract dysfunction, bowel dysfunction can impact a woman's daily activities and affect her quality of life. The understandings of which symptoms are attributable to the prolapse itself and which symptoms suggest the presence of another disease entity is also important. These considerations allow one to plan further evaluation and to counsel patients appropriately about treatment plans and resolution or persistence of bothered symptoms after treatment. The severity of pelvic floor symptoms can be measured from patient's perception and clinician's objective view. The most valid way of measuring the presence, severity, and impact of pelvic floor symptoms on a patient's activities and well-being is through the use of psychometrically robust self-administered questionnaires. The questionnaires for pelvic floor disorders can be separated into 3 categories. The first one is for measuring the presence of particular symptoms and their severity. The second one is for measuring quality of life and last one is for measuring sexual function.

PFDI is comprehensive symptom questionnaire designed for specifically for use in women with pelvic floor disorders. It assesses 46 pelvic floor symptoms and has 3 scales: a urinary scale, a colorectal scale, and a pelvic organ prolapse scale [1]. Its structure consists of asking the patients to indicate if they have a particular symptom and if so, they are asked to assess how much it bothers them on a 4-point scale. After then, a short version of PFDI-20 has been developed and has urinary, colorectal, and pelvic organ prolapse scales [2]. Both PFDI and the PFDI-20 have good reliability and validity and have demonstrated responsiveness in patients undergoing surgical and nonsurgical treatment for pelvic organ prolapse [4]. PFIQ

is a companion questionnaire to measure the extent to which lower urinary tract, lower gastrointestinal tract, and pelvic organ prolapse symptoms affect the quality of life of women with pelvic floor disorders. The PFIQ-7 is a short version of the PFIQ and both of them have good reliability and validity [4].

In translating the valid versions of English written questionnaire into other language, there must be cultural or language specific concerns, such as questions need to be adjusted according to cultural difference in different ethnic and racial populations while maintaining the meaning of the original questions. Translating questionnaire for cross-cultural research is fraught with methodological pitfalls that threaten research validity. Some flaws are difficult to detect, leading to the erroneous conclusion that cultural differences are substantive when they stem from semantic inconsistencies. Several translation and evaluation methods are introduced for cross-cultural use. The first is the technique of back translation where the original translation is translated back into the source language by a blinded, independent translator [5]. The two-source language versions are then compared and revised either by individual translators or by a committee of specialists. The second method uses bilingual subjects [6]. The instrument is given to bilingual persons in alternating language order and assessed accordingly. The third evaluation technique is to compare the results of the newly translated instrument with the results of a previously used and recognized scale tested in the same language, on the same topic, and on the same people [7].

In our work, we used translation/back-translation method which has been considered a standard of translation and attempted to harmonize the three different kind of Korean version which was developed at different sites and verified the appropriateness and reliability of the questionnaire in order to be officially used for Korean patients. We believe that this translated questionnaire can be used as a useful scale in clinical practice and academic research. Further studies are needed to investigate the reliability and validity on measurement instrument for symptoms and quality of life in women with pelvic floor disorders and these studies are ongoing.

Conflict of interest

No potential conflict of interest relevant to this article was reported.

Supplementary materials

Suppl. 1. Establishment of new translated version of pelvic floor distress inventory-20, pelvic floor impact questionnaire-7.

Suppl. 2. Final Korean version of short form of pelvic floor distress inventory-20, pelvic floor impact questionnaire-7.

Supplementary material can be found via <http://ogscience.org/src/sm/ogs-56-330-s001.pdf>.

Supplementary material can be found via <http://ogscience.org/src/sm/ogs-56-330-s002.pdf>.

References

1. Barber MD, Kuchibhatla MN, Pieper CF, Bump RC. Psychometric evaluation of 2 comprehensive condition-specific quality of life instruments for women with pelvic floor disorders. *Am J Obstet Gynecol* 2001;185:1388-95.
2. Barber MD, Walters MD, Bump RC. Short forms of two condition-specific quality-of-life questionnaires for women with pelvic floor disorders (PFDI-20 and PFIQ-7). *Am J Obstet Gynecol* 2005;193:103-13.
3. Barber MD, Chen Z, Lukacz E, Markland A, Wai C, Brubaker L, et al. Further validation of the short form versions of the Pelvic Floor Distress Inventory (PFDI) and Pelvic Floor Impact Questionnaire (PFIQ). *Neurourol Urodyn* 2011;30:541-6.
4. Barber MD, Walters MD, Cundiff GW; PESSRI Trial Group. Responsiveness of the Pelvic Floor Distress Inventory (PFDI) and Pelvic Floor Impact Questionnaire (PFIQ) in women undergoing vaginal surgery and pessary treatment for pelvic organ prolapse. *Am J Obstet Gynecol* 2006;194:1492-8.
5. Brislin RW. Translation and content analysis of oral and written material. In: Triandis HC, Brislin RW, editors. *Handbook of cross-cultural psychology*. Boston: Allyn and Bacon; 1980. p.389-444.
6. Hulin CL. A psychometric theory of evaluations of items and scale translations-fidelity and across languages. *J Cross Cult Psychol* 1987;18:115-42.
7. King MB, Bhugra D. Eating disorders: lessons from a cross-cultural study. *Psychol Med* 1989;19:955-8.