

Voiding Dysfunction

Homogeneity Among the Korean International Prostate Symptom Score Questionnaires Used in Real Practice

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Purpose: We analyzed whether any problems existed in terms of the homogeneity of the Korean International Prostate Symptom Score (IPSS) questionnaire used in real practice.

Materials and Methods: Between July 2012 and August 2012, 48 Korean IPSS questionnaires used in real practice were collected. All the items on the questionnaire, including the quality of life (QoL) questions, were compared and we then determined the homogeneity of each question in comparison with the originally validated Korean version of the IPSS from 1996.

Results: Only 5 of 48 sources (10.4%) of the Korean IPSS totally corresponded with the original Korean version of the IPSS questionnaire. The consistency rate with the originally validated version was generally low for the answer choice items for each question, ranging from 16.6% for "less than half the time" to 35.4% for "almost always," with the exception of the item "not at all" (100.0%). The consistency rate was 60.4% for question 3 (intermittency) and 18.8% for question 6 (straining). No homogeneity was found in any of the QoL-related questions. The average consistency rate with the originally validated version was 42.2% and ranged from 22.9% for "unhappy" to the highest rate of 95.8% for "mostly satisfied."

Conclusions: Compared with the originally validated Korean version of the IPSS, various Korean IPSS questionnaires used in real practice had significant problems in terms of homogeneity for both the questions and the answer choice items. Efforts are needed to ensure the uniform use of the validated Korean version of the IPSS questionnaire.

Keywords: Questionnaires; Reproducibility of results

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INTRODUCTION

Questionnaires are one of the most commonly used techniques for collecting health-related information in clinical studies because of their ease and simplicity of use. The International Prostate Symptom Score (IPSS) questionnaire is used worldwide to measure lower urinary tract symptoms (LUTS), and a Korean version of the IPSS was validated in 1996 [1,2].

The most important and challenging aspect of questionnaire methodology lies in maintaining the questionnaire's validity and reliability [3]. The same aspect

should be applied in the Korean version of the IPSS questionnaire. However, various forms of the Korean IPSS questionnaire have emerged and have since lost their homogeneity. Considering the fact that the homogeneity of the questionnaire is a key factor in maintaining validity and reliability, it is important to uncover the differences among the questionnaires and to create a uniform version from the originally validated form.

In the present study, we reviewed the diverse Korean IPSS questionnaires used in real practice and determined the homogeneity of each question compared with the originally validated Korean version of the IPSS questionnaire

from 1996.

MATERIALS AND METHODS

Between July 2012 and August 2012, 48 Korean IPSS questionnaires were collected from the 4 textbooks related to the Korean Urological Association [4-7] and from 44 training hospitals of urology (Suppl. 1). We compared all the items of the IPSS questionnaires including the quality of life (QoL)-related questions with the originally validated Korean version of the questionnaire from 1996 to assess homogeneity. For measure outcomes, the consistency rate was evaluated.

RESULTS

Only 5 of 48 different sources (10.4%) of the Korean IPSS totally corresponded with the original Korean version of the IPSS questionnaire.

1. Homogeneity in the answer choices of the IPSS questionnaire

There was a significant problem in terms of the homogeneity of the answer choices. The consistency rate with the originally validated version was generally low, ranging from 16.6% for "less than half the time" to 35.4% for "almost always," with the exception of the item "not at all" (100.0%) (Suppl. 2).

2. Homogeneity in question items

Homogeneity was lost for question 3 (Q3, intermittency) and question 6 (Q6, straining) of the IPSS questionnaire. For Q3, the terminology for intermittency was inconsistent. The various inconsistencies in the questionnaire from the different Korean versions are described in Suppl. 3. A similar problem was noted for Q6. Only 18.8% of the questionnaires were consistent with the original Korean version for Q6 (Suppl. 3). In question 1 (incomplete emptying), the validated Korean version contains the modified translation and 39.6% of the questionnaires contained that modified translation.

3. Homogeneity in the answer choices of the QoL questionnaire

Homogeneity was nonexistent for the answer choices for the QoL items. The average consistency rate with the original validated version was 42.2% and ranged from 22.9% for "unhappy" to the highest rate of 95.8% for "mostly satisfied." Detailed descriptions are shown in Suppl. 4.

DISCUSSION

A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. Questionnaires have advantages over other types of surveys in that they are inexpensive, do not require as much effort from the

questioner as do verbal or telephone surveys, and often have standardized answers that make it simple to compile data [8]. A basic rule for constructing questionnaire items is to use statements that are interpreted in the same way by members of different subpopulations of the population of interest [8].

The IPSS questionnaire is a method used worldwide to measure LUTS. It has been a basic approach in the evaluation of patients with LUTS in Korea as well. It was previously validated in 1996 [2], but the versions of the Korean IPSS questionnaire that are currently in use differ. The concept of *homogeneity* refers to having identical meaning. Loss of homogeneity leads to loss of reliability, which can also be described as consistency. In turn, the validity of an instrument is affected by its reliability. The most important consideration in the administration of a questionnaire is to measure something accurately [9]. Accuracy in questionnaire-based measurement in clinical studies is achieved by paying attention to the relevant issues of reliability and validity [9]. Homogeneity is related to content validity, which is concerned with how well the questionnaire items correspond to the concept of what is being measured [9].

After analysis of the Korean version of the IPSS questionnaires currently being used, serious loss of homogeneity was revealed in both the question items and the list of answer items. Only 5 of the 48 sources (10.4%) of the Korean IPSS totally corresponded to the original Korean version. In the answer choice items, there was also a significant problem in terms of homogeneity except for the item "not at all." The consistency rate was 60.4% for Q3 and 18.8% for Q6. In the QoL items, homogeneity was nonexistent for any of the answer choices. The average consistency rate with the original validated version was 42.2%. Considering the fact that the IPSS questionnaire is a close-ended questionnaire, the loss of homogeneity is a significant problem. A close-ended question is a question format that limits the respondents to a list of answer choices from which they must choose to answer the question. Commonly, these are multiple-choice type questions, either with one answer or with "check all that apply," but these types of questions can also be in scale format, for which respondents rate the situation along a scale continuum [10].

Besides the problems discussed above, we cannot help but indicate the arbitrary and erroneous translation of the originally validated version of the Korean IPSS. The symptoms of "straining" and "hesitancy" were classified in the same voiding (or obstructive) symptom group although they are different symptoms. Q6 dealt with "straining" alone in the original English version; however, this "straining" was erroneously translated as "hesitancy" in the originally validated Korean version in 1996. As a result, most of the Korean questionnaires used in real practice showed a tendency to simultaneously include both "straining" and "hesitancy" in Q6 (81.2%). No version contained "straining" alone; moreover, 18.8% contained only "hesitancy" like the

original Korean version. A considerable number of presently used Korean questionnaires translated “terrible” in the QoL choice items.

It has been many years since the first Korean version of the IPSS was introduced. Most urologists do not doubt the validity of the Korean IPSS questionnaire, because it has already been established as a basic approach. Considering that the current practice of using diverse Korean versions of the IPSS can affect its reliability, a uniform version should be made with emphasis on comparability of questions and answer choices and similarity of interpretability.

CONCLUSIONS

Only 5 of 48 different sources (10.4%) of the Korean IPSS totally corresponded to the original Korean version of the IPSS questionnaire. The standardization of questionnaires will enable us to collect quality data, which is essential for clinical research. Vigorous effort should be made to ensure the use of a validated, uniform Korean version of the IPSS questionnaire.

CONFLICT OF INTEREST

The authors have nothing to disclose.

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SUPPLEMENTARY MATERIALS



Scan this QR code to see the supplementary materials, or visit <http://kjuurology.org/src/sm/kju-54-249-s001.pdf>.

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