

Short Communication

Linguistic Validation of Clinical COPD Questionnaire (CCQ) in an Indian Regional Language (Kannada)

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Received: 02/08/2016

Revised: 26/08/2016

Accepted: 29/08/2016

ABSTRACT

Introduction: Chronic obstructive pulmonary disease (COPD) is characterized by airflow obstruction which is generally progressive and accompanied by airway hyperactivity and may be partially reversible. These persons can become dependent on their relatives, experience anxiety and depression; express low self-concept and poor Quality of Life (QOL). COPD affects the physical functioning as well as emotional, sexual, leisure and professional activities. COPD also affects the emotional and physical QOL of patients in a significant manner. The Clinical COPD Questionnaire (CCQ) is used for routine evaluation of symptom, functional state and mental state concerning patients with COPD. CCQ has already been validated in different languages. The aim of this study, therefore, was to linguistically validate the Kannada translation of CCQ.

Objective: To develop the Kannada version of CCQ and validate it.

Materials and Methods: The validation process of CCQ involved 6 stages including forward and backward translation, pilot testing and revision to produce the final version. Inclusion criteria: Both male and female COPD subjects more than 30 years of age who can read and write English and Kannada. Exclusion Criteria: COPD subjects who have associated comorbidities and bed ridden for long period of time.

Results: Reproducibility of the translated version was good in all the three domains.

Conclusion: The Kannada version of CCQ may be a valuable tool to administer it in the Kannada speaking COPD population.

Keywords: CCQ, Linguistic Validation, COPD, Quality of Life, Kannada Language

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a disorder which is characterized by the presence of airflow obstruction that is generally progressive and can be accompanied by airway hyperactivity and may be partially reversible. [1] According to the World Health Organisation, COPD is the 3rd leading cause of death in world. [2] According to the Global initiative for COPD, the goals of COPD treatment are to reduce symptoms, reduce the frequency and severity of

exacerbations and improve health status, quality of life and exercise tolerance. [3] Health related Quality of Life (HRQOL) is a suitable instrument to measure the impact of the disease for COPD subjects.

There are several questionnaire tools which have been developed to know the quality of life of patients. The disease specific HRQOL questionnaires for COPD patients include St. George's Respiratory Questionnaire (SGRQ), Quality of life for Respiratory Illness Questionnaire (QOL-RIQ), Chronic Respiratory Disease

Questionnaire (CRQ), COPD Assessment Test (CAT), and Clinical COPD Questionnaire (CCQ). [4-8] Most of these questionnaires are having lot of questions. So even though they are self-administered questionnaire, they are time consuming. SGRQ is a standardized questionnaire but it is again a time consuming questionnaire as it has 55 items. CCQ is concise and easy to use and can be completed in 2 minutes. [8]

The CCQ is the first practical clinical instrument to be used for routine evaluation of clinical control i.e. symptom, functional state and mental state concerning patients with COPD. The development and validation study has already been published. [8] The CCQ has been translated into over 60 languages globally for use by clinicians and is used to gain insight into a patient's health status and to measure the HRQOL of patients with COPD.

The purpose of this study was to develop a Kannada version of the CCQ. CCQ has been translated and used successfully in many other national as well as international languages.

MATERIALS AND METHODS

The Clinical COPD Questionnaire

The Questionnaire is a 7 point scale and consists of 3 domains: symptom, functional state and mental state. The questionnaire includes 10 questions divided in each of the domain. Reporting of the questionnaire includes individual domain score as well as the total score. The higher the scores the worst the HRQOL.

Linguistic Validation of the CCQ

The whole process of validation underwent 6 stages.

STAGE 1: Forward translation (English to Kannada) by an informed translator (i.e. a health professional, T1) and uninformed translator (T2).

STAGE 2: Synthesis of T1 and T 2, resolving any discrepancies, leading to version T-12.

STAGE 3: Back - translation (Kannada to English) of the version T-12 by two native

English speaking back - translators (BT 1 and BT 2), and naive to the purpose of the instrument.

STAGE 4: Expert committee review consisting of the all four translators, one methodologist and one language professional to reach a consensus on discrepancies or ambiguities, and to establish a pre- final version (Kannada).

STAGE 5: Pre-testing of the target language version to examine the layout, wording, ease of understanding and ease of completion of the questionnaire to the health professionals.

STAGE 6: This translated final version of Kannada CCQ was implemented on COPD subjects.

Procedure

10 subjects with COPD were identified to complete both English as well as Kannada version of CCQ. The duration between the 2 administered questionnaires was 12 days. While testing the cross culturally adapted versions in Kannada, the subjects were seated comfortably. Kannada and English scales were given to the subjects and they were asked to mark the appropriate point on the seven point scale from 1 to 10 which represented their status of quality of life for each domain.

RESULTS

During the translation phases of English CCQ to Kannada CCQ version, some of the wordings were modified so that it was more easily understood by the target population. There are some wordings like 'Shortness of breath' which has been replaced by 'Difficulty of breathing' for the ease of understanding.

These changes were accepted and were adopted in the final version of the CCQ questionnaire. The overall CCQ scores obtained from the included participants are depicted in table 1.

It was found that mental state was the domain amongst the others which showed changes between the two visits. (Table 1)

Table 1: Overall Scores

Patient No.	English Version of CCQ			Kannada Version of CCQ		
	Symptom	Mental state	Functional State	Symptom	Mental state	Functional State
1	4.25	3.0	3.5	4.0	3.5	3.25
2	3.25	1.5	4.0	3.75	2.0	3.5
3	3.75	2.5	3.0	3.25	3.0	3.5
4	4.0	2.5	2.75	3.5	2.5	2.5
5	3.75	3.0	3.75	4.0	2.5	3.25
6	3.75	2.5	4.5	3.0	2.5	4.25
7	2.75	3.0	4.25	3.0	3.0	4.0
8	4.0	2.5	3.0	3.75	2.5	2.5
9	3.25	1.5	4.0	3.25	1.5	3.25
10	3.25	1.5	3.25	3.0	1.5	3.0

The symptom domain was included in questions 1, 2, 5 and 6.
Mental state in questions 3 and 4 and the functional state in 7, 8, 9 and 10.

DISCUSSION

During pulmonary rehabilitation, there is need to measure the progress of the patient and HRQOL is a validated assessment tool which gives an impression of the patient's previous perception of symptoms and also the subsequent follow ups. CCQ is also a self-assessment tool which is used in clinical practice and also benefits patient with low education level. In this present study linguistic validation was carried out to obtain a Kannada version of the CCQ. The final draft was tested on the group of COPD subjects. CCQ evaluates the patient on three domains which are functional state, mental state and symptom. Thus the linguistic validity was established with not much significant differences between English and Kannada versions of CCQ. The advantage of doing the linguistic validation of the questionnaire in the regional language is that it becomes easier to administer and is less time consuming.

Scope for future studies: The psychometric properties of the Kannada version of the CCQ need to be further evaluated with the larger sample size.

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How to cite this article: Shaswat Verma S, Nambiar VK. Linguistic validation of clinical COPD questionnaire (CCQ) in an Indian regional language (Kannada). *Int J Health Sci Res.* 2016; 6(9):408-410.
