

Psychometric testing of the World Organization Quality of Life –Bref (WHOQoL-BREF) questionnaire - Farsi version with oncology patients

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Abstract: The aim of the study was to provide some evidences for reliability and validity of the WHOQoL-BREF questionnaire - Farsi version in Iranian cancer patients. This descriptive correlational study was conducted in 2013 in which 198 cancer patients were conveniently recruited. The Cronbach's alpha values for patients' responses were 0.84, 0.75, 0.69, and 0.77, for physical, psychological, social relationship and environmental domains, respectively. Cronbach alpha values of patients QoL domain scores were above the acceptable level of 0.70. Most questions (21/24 or 88 percent) showed the highest correlations with domains to which they generally assigned supporting the for domain structure of the questionnaire. Findings of psychometric testing were generally promising indicating that the WHOQoL-BREF questionnaire was an appropriate tool to use in the clinical area of cancer patients.

Key words: WHOQoL-BREF questionnaire,

Psychometric testing, oncology patients, Quality of Life,

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Introduction

The review on the literature shows that quite a number of Quality of Life (QoL) tools exist[1]. This number of QoL tools might indicate that generally there is no need to develop new QoL tools any more. Having a large number of QoL tools can also bring with it the difficulty of making a choice [2]. However, there are several reasons why the World Organization Quality of Life –Bref (WHOQoL-BREF) questionnaire Farsi version has initially been chosen for this research study from generic QoL tools. Firstly, it provides a broad assessment of QoL. Secondly does not overbore patients and health care professionals who may be asked to complete the questionnaire; and thirdly, is culturally adapted for use in different countries including Iran [3]. However, the most important reason for selecting this questionnaire is having good psychometric properties.

As the WHO group [4] stated, the internal consistency of the WHOQoL-BREF ranges from 0.66 in the social relationship domain to 0.84 in the physical domain and test–retest reliability of the tool

is 0.75 for all domains. All above correlations fall within intervals 0.61-0.80 and 0.81-1.00 which indicate almost substantial and perfect associations, respectively. A population based study in Iran also provided some preliminary evidences of psychometric properties of the Iranian version of the WHOQoL-BREF questionnaire [5]. While it has been concluded that the questionnaire would be useful to measure QoL, the reliability of the social relationship domain and the structure of domains of the questionnaire challenged and recommended to investigated further [5]. Contrary, in another study with the WHOQoL-BREF questionnaire in Iran, findings supported the four domain structure of the questionnaire and its appropriate reliability [6]. However, findings of this study also indicated that some items of the questionnaire loaded on different domains as what originally was proposed for the questionnaire[6]. Due to these controversies, it was the aim of the study to provide some evidences for reliability and validity of this questionnaire in cancer patients using the internal consistency test and exploratory factor analysis.

Material and methods

This descriptive correlational study was a part of a bigger QoL research which was conducted during a six month period in 2013 in Syeed-Al –Shohada hospital affiliated to Isfahan University of Medical

Sciences, Isfahan, Iran. Other part of the results published somewhere else [7]. In order to measure psychometric properties of the WHOQoL-BREF questionnaire – Farsi version, 198 cancer patients were conveniently recruited. The WHOQoL-BREF questionnaire - Farsi version was used for this research. This test uses 26 items which assess the QoL for four domains or dimensions, including physical (7 items), psychological (6 items), social relationship (3 items), and environmental (8 items) domains, and 2 items measuring overall quality of life and general health [4].

Patients were eligible for inclusion in the study if they had confirmed diagnosis of any kind of cancer; reached the age of 18 years or older; and had the ability to read and write in Farsi (Persian) to be able to respond to the questionnaire appropriately; and agreed to participate in the study. Patients were selected from all inpatient and outpatient oncology centers and differed in their health status, disease severity and treatment modalities.

Results

The Cronbach's alpha values for patients' responses were 0.84, 0.75, 0.69, and 0.77, for physical, psychological, social relationship and environmental domains, respectively. To explore the structure of the WHOQoL-BREF questionnaire completed by patients, Principal Components Analysis (PCA) was

conducted by SPSS version 12 software using the method as suggested by Pallant[8]. Kaiser-Meyer-Olkin measure of sampling adequacy was 0.87, exceeding the recommended value of 0.60. The Bartlett's test of Sphericity reached statistical significance, supporting the factorability of the correlation matrix for patients. Varimax rotation was conducted to see how items of the questionnaire will be loaded on a four domain structure.

Discussion

Results of the reliability test using internal consistency identified that the Cronbach alpha values of patients QoL domain scores were above the acceptable level of 0.70. However, results of construct validity using an exploratory factor analysis need to be taken also into the consideration. Similar to other research findings [5] most questions (21/24 or 88 percent) showed the highest correlations with domains to which they generally assigned. However, three items including “conditions of your living place”, “healthy physical environment” and “safe in your daily life” from the environmental domain, strongly loaded on the social relationship domain. As stated in another study in Iran [6] such findings might indicate that these items were considered by cancer patients more as social concerns rather than environmental issues for several reasons. For example, patients might personally accept

deficiencies in resources and facilities. However, how such incomes and services equally distributed might be a concern for patients.

Altogether, findings of psychometric testing were promising indicating that the WHOQoL-BREF questionnaire was an appropriate tool to use in the clinical area of cancer patients. However, still some small modifications might be necessary to conduct in social and/ or environmental items to improve this tool to a more acceptable level for a QoL assessment in an Iranian context.

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