



The validity and reliability study of the Turkish version of the evidence based practice evaluation competence questionnaire



Esra Yildiz ^a, Zeynep Güngörmüş ^{b,*}

^a Department of Public Health Nursing, Faculty of Health Science, Ataturk University, Erzurum, Turkey

^b Department of Public Health Nursing, Gaziantep University, Faculty of Health Science, Gaziantep, Turkey

ARTICLE INFO

Article history:

Received 8 June 2015

Received in revised form 17 May 2016

Accepted 28 May 2016

Available online xxxx

Keywords:

Evidence-based practice

Nursing students

Validity

Reliability

ABSTRACT

Introduction: Identifying the competence of nursing students in evidence-based practice in nursing is important in planning education to train nurses to know, apply and improve evidence-based practice.

Purpose: To perform a validity and reliability study for the Turkish version of the “Evidence-based Practice Competence of Nursing Students” questionnaire.

Design: This methodological study was conducted with 199 undergraduate nursing students in a university located in eastern Turkey, between April 1 2014 and February 4 2016. Written permission of the authors, relevant institutions and the students' verbal consent were obtained before administering the questionnaire. The Evidence-based Practice Evaluation Competence Questionnaire (EBP-COQ), developed by Ruzafa-Martinez in Spain, was used for data collection. The 5-point Likert-type scale includes 25 items and three subscales.

Results: The opinions of eight experts were consulted to test content validity, and the content validity index was found to be 0.93. In the factor analysis of the scale, the KMO index was 0.856, and Barlett's sphericity test yielded the results, $\chi^2 = 2174.93$, $df = 300$ and $p = 0.000$. Cronbach's alpha coefficient was found to be 0.826. The scale's goodness of fit index (AGFI) is 0.755, and its ratio of chi-square statistic to degrees-of-freedom was (χ^2/df) 2.416 ($\chi^2 = 657.364$ $df = 272$). Its root mean square error of approximation (RMSEA) was 0.076, its Tucker-Lewwas index (TLI) 0.902, and its comparative fit index (CFI) value was 0.926.

Conclusion: It was determined that the Turkish version of the scale is a valid and reliable tool for determining the competence of students in evidence-based practice.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Evidence-based nursing practice (EBP) is the development, implementation and evaluation of effective interventions in nursing through the application of the scientific principles of nursing (Burns and Grove, 2010). The development of evidence-based practice is being accelerated by increasing professional and public demand for accountable safety and quality improvements in health care (Stevens, 2013).

The strategic position of nursing students is influential in the adoption of EBP. It is necessary to understand students' knowledge, attitudes and usage patterns of evidence-based practice to be able to develop effective strategies for evidence-based practice curricula. Furthermore, understanding the underlying factors is useful in developing teaching strategies for effective evidence-based practice (Brown et al., 2010). The rising expectations for evidence-based quality improvement require that nurses possess clearly defined EBP competence to function with confidence in their healthcare roles (Laibhen-Parkes, 2014).

Scales have been developed to measure the competence of nurses in evidence-based practice. Studies of the opinions and attitudes of nurses and nursing students towards evidence-based practice have gained momentum worldwide (Majid et al., 2011; Melnyk et al., 2008; Ruzafa-Martinez et al., 2013; Upton and Upton, 2006). Determining how nursing students' evidence-based practice competence develops will determine the direction of course content and programs. Statistics, research and evidence-based courses at every education level are expected to increase the competence of nursing students. There is a need for a scale to assess the extent to which this expectation is realized. A scale was developed in Spain in 2013 to determine the competence of nursing students in evidence-based practice by an extensive analysis of their attitudes about the relevant concepts. It includes knowledge, skill and attitude dimensions for evidence-based practice (Ruzafa-Martinez et al., 2013).

This study was carried out with undergraduate nursing students in Turkey to assess the reliability and validity of the evidence-based practice competence questionnaire developed by Ruzafa-Martinez et al. (2013). No tool for assessing this competency has been developed in Turkey. The development of this scale will contribute to the assessment and improvement of evidence-based practice in nursing

* Corresponding author.

E-mail addresses: esrazengin82@gmail.com (E. Yildiz), gungormusz@yahoo.co.uk (Z. Güngörmüş).

education in Turkey. The hypotheses tested in this study were: “The Turkish form of the scale is a valid measurement tool,” and “The Turkish form of the scale is a reliable measurement tool.”

2. Method

2.1. Design and Setting

This methodological study was conducted with the undergraduate nursing students in a university located in eastern Turkey, between April 1 2014 and February 4 2016.

2.2. Sample of the Study

A convenience sample of students in a nursing program who attended a research course and who consented to participate in the study were included in the research. All students including undergraduate students in third and fourth years who took the course of research and evidence in nursing were invited to participate in the study. Of them, 22 undergraduate students were not included in the study because they did not want to participate. Hence, 199 students (90%) were included in the study.

2.3. Data Collection Instruments

An introductory information form, which had 4 items, was used to determine the demographic characteristics of participants (age, gender, educational status and marital status). The Evidence-based Practice Evaluation Competence Questionnaire (EBP-COQ), developed by Ruzafa-Martinez in Spain, was used for data collection (Ruzafa-Martinez et al., 2013). The scale was developed and administered in Spanish. We assessed the validity of the English form of the scale published by Ruzafa-Martinez and adapted it into Turkish. The 5-point Likert-type scale (1 = Strongly Disagree, 2 = Somewhat Disagree, 3 = Neither Disagree nor Agree, 4 = Somewhat Agree, 5 = Strongly Agree) includes 25 items and three subscales (Factor 1: Knowledge, Factor 2: Skill, Factor 3: Attitudes). The lowest and highest possible scores on the scale are 25 and 125, respectively. Its negative items are reverse scored. The internal consistency reliability coefficient is 0.92 for the original scale and between 0.52 and 0.80 for the subscale (Ruzafa-Martinez et al., 2013).

2.4. Data Collection

The author administered the questionnaires to each participant between April 2014 and February 2016. The data were collected in the classroom. An introductory information form and the Turkish version of the Evidence-based Practice Evaluation Competence Questionnaire (EBP-COQ-T) took 10 to 15 min to complete.

2.5. Evaluation of Data

The data obtained from both sample populations in the study were evaluated using the SPSS 16.0 and Amos 21.0 software packages. The demographic characteristics of participants were analyzed by using descriptive statistical analyses. Cronbach's alpha coefficients were determined to test the internal consistency of the scale, and exploratory factor analyses, followed by confirmatory factor analysis, were used to test its structural validity.

2.5.1. Research Ethics

Ruzafa-Martinez's permission to use the scale was obtained by email (e-mail date: March 14, 2014). Written approval of the Ethics Committee and written permission from the faculty dean, institute directorate and university rector were obtained. The research's objectives and benefits were explained to the students, and their verbal consent to

participate in the study on a voluntary basis was obtained. The students completed the questionnaires without giving their names.

2.6. The Linguistic Validity of the Scale

The scale was initially developed and administered in Spanish. We assessed the validity of the English form of the scale published by Ruzafa-Martinez and adapted it into Turkish. For the linguistic validity, the scale was first translated from English to Turkish by a linguist, and then back-translated by a different linguist, and after corrections based on expert opinions, a linguist compared the final translation of the Turkish version with the original scale. To determine the linguistic equivalency and content validity of the scale, the author consulted expert team members' opinion. The scale's translations were checked by bilingual expert team members involving eight nurse scholars. The scale then was back-translated independently from Turkish to English by another bilingual linguist.

Two researchers created a combined Turkish text by evaluating the most appropriate translation for each of the items. Some of the words and sentences were modified to achieve appropriate, equivalent language and meanings in the Turkish version. The scale was back-translated to English by a linguist and Ruzafa-Martinez, fluent in English, and compared with its original form. Inappropriate expressions were reviewed to ensure linguistic validity.

3. Results

3.1. The Demographic Characteristics of the Participants

The average age of the participants was 22.07 ± 2.14 years. Most of participants (77.9%) were women and (93.5%) single.

3.2. Validity

3.2.1. Content Validity Index

The extent of agreement between the expert team members was assessed using a content validity index. The members evaluated the feasibility and relevance of each item in the scale by rating them from 1 (not relevant) to 4 (very relevant) as follows: 1 = not relevant, 2 = unable to assess relevance without item revision or the item is in need of so much revision that it would no longer be relevant, 3 = relevant but needs minor alteration and 4 = very relevant. Eight team members evaluated the scale items, and the content validity indices (CVI) of the items were found to be between 0.87 and 1.00. The CVI for all items in the scale was found to be 0.93.

3.2.2. Construct Validity

Explanatory factor analysis was used for testing the construct validity of the scale. Bartlett's sphericity test and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy were performed to ensure that the characteristics of the data were suitable for factor analysis. In testing the sample adequacy, KMO value was found to 0.856, and the Bartlett's test result was $X^2 = 2174.93$, $df = 300$ $p = 0.000$. The scale has three subscales. (Fig. 1).

3.3. Reliability

The scales' item means, standard deviations and Cronbach coefficients were determined. The 25-item scale's Cronbach's alpha coefficient was found to be 0.826 (Table 1).

3.4. Internal Consistency Analysis and Item Analysis

The exploratory factor analysis implied a three-factor structure, explaining 50.93% of the variance in the data. Factor 1 (13 items), attitudes towards EBP, consisted of items 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,

Download English Version:

<https://daneshyari.com/en/article/367799>

Download Persian Version:

<https://daneshyari.com/article/367799>

[Daneshyari.com](https://daneshyari.com)