

Translation, Cultural Adaption and Validation of Hospital Survey on Patient Safety Culture in Kosovo

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Abstract

Background: An essential condition to improve patient safety is considered to ensure a supportive patient safety culture. Measuring the culture of patient safety in all health care institutions may be a first step to target improvements. Creating a culture of safety requires eliminating the culture of blame. In order to formulate actions for improvement, it is important for hospitals to assess their baseline scores for the existing safety culture and to determine the areas of priority. **Aim:** The aim of this study was first to measure the use, translation in Albanian and adaptation of the Hospital Survey on Patient Safety Culture (HSOPSC) assessment as a tool for improving patient safety in Kosovo Hospitals. The second aim was to measure the level of patient safety culture in Kosovo, in seven hospitals and one University Clinical Center (hospitals with over 50 beds, including psychiatric hospitals). **Method:** The questionnaire (HSOPSC) was translated into Albanian for use in the Kosovo. It was used forward-backward translation: the questions were translated into Albanian by one translator and then translated back into English by an independent translator who was blinded to the original questionnaire. **Results:** In the eight-factor model, the internal consistency of the factors and the construct validity of the HSOPSC questionnaire were mostly satisfactory. The construct validity was sufficient for all subscales, except for the 4 other subscale regarding intention to report incidents which correlated poorly with other subscales. In total, HSOPSC has 12 dimensions. Cronbach's α showed that in Kosovar society, we could use only 8 dimensions model. **Conclusion:** The hypothesis that HSOPSC would be a suitable instrument to provide important indicators for the improvement of patient safety culture was tested and it was confirmed, that HSOPSC could be used as 8 dimension model. HSOPSC is suitable to improve patient safety culture and provide each hospital with a basic profile on patient safety culture and recommendations for an oriented intervention plan.

Keywords

Patient Safety, Culture of Safety, Health Care Providers, Translation, Adaptation, Quality Assurance

1. Introduction

Measuring the culture of patient safety in all health care institutions may be a first step to target improvements in healthcare. Clarifying the concept of safety is relatively simple however; clarifying the concept of culture is somewhat more difficult as it means different things to different people.

Safety culture can be considered a sub-facet of organizational culture and is a relatively new term having been highlighted in a report by the International Nuclear Safety Advisory Group (INSAG) after the Chernobyl disaster [1]. It is defined as being the "...product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization's health and safety management" [2].

Literature defines "culture" as the "totality of socially transmitted behavior patterns, acts, beliefs, institutions, and all other products of human work and thought" [3]. With respect to the workplace, the definition of culture shifts to include the core clues, beliefs, and assumptions that are widely shared by members of an organization [4].

Although reports regarding patient safety in developing countries are lacking, it is widely thought that the situation in developing countries is worse. Patient harm not only requires remedy but may also impact on socio-economic status in developing countries and causes profound negative impact on human health and life [5]. Current conceptual thinking puts the main responsibility, for patient harm, onto health system design flaws, organization or institution where the work takes place or to individual staff mistakes. Efforts to accept the dimension of the problem and of employees on Possible Solutions are addressed by a culture of blame and potentially punitive of the wrong reporting procedures [6].

Interest in the growth of safety culture has been associated with the need for assessment tools focused on cultural aspects, in the effort to improve patient safety [7].

In summary, there are many signs that patient safety issues in developing countries such as Kosovo are gaining more and more importance on all levels of the healthcare system. To date there have been single evidence-based studies indicating a causal or close temporal relationship between patient safety outcomes and the increasing efforts of hospitals, outpatient and long-term care facilities [7].

In 2013 at the University Clinical Centre, Kosovo Dr. Rexhep Gjyliqi implemented a survey of Patient Safety. The results of this study confirmed that respondents failed to provide acceptable levels of care due to irregular supply and insufficient medicines and other medical material, poor cooperation, an ineffective management, insufficient education and training of medical staff [8].

This study highlighted that the health institutions in Kosovo, in a conscious or unconscious way, less importance is given to patient safety, little attention is paid, there is a lack of courage to discuss professional mistakes or take steps to change the current situation [8].

In Kosovo, there was however, no valid and reliable instrument to measure the patient safety culture. There are no official statistics or publications in Albanian or another language for research in this field. In absence of official statistics and publications from the field, responsible persons and institutions were consulted to report statistics and reference possible reports about patient safety culture instruments (see interview with Gjocaj & Beqiri, MoH, Kosovo, 12, September 2013). Beqiri Gjocaj & Beqiri confirmed that in Kosovo there was a significant need to develop such an assessment instrument for patient safety culture. Antidotal evidence, from discussions with colleagues and professional observations incidents of patient safety include medication errors, lack of informed decision making for patients and wrong or unnecessary procedures being carried out.

The aim of this present study was therefore to develop or locate a measure that was culturally appropriate, reliable and valid as an measurement for patient safety examining (clustering) the underlying dimensions of patient safety culture in Kosovo.

2. Methods

Key indicators of the quality of a measuring instrument are the reliability and validity of that measure. The

process of developing and validating an instrument is mainly focused on reducing error in the measurement process. Reliability evaluates the stability of the measure, internal consistency of measurement instrument and inter-rater reliability of instrument scores. Validity is the extent to which the interpretations of the results of a test can be guaranteed, which depends on the particular use the test is intended to serve. The responsiveness of the measure to change is of interest in many of the applications in health care where improvement in outcomes as a result of treatment may be the primary goal of research. Several issues may affect the accuracy of data collected, such as those related to self-report and secondary data sources. Self-report of patients or subjects is required for many of the measurements conducted in health care, but self-reports of behaviour are particularly subject to problems with social desirability biases. Data that were originally gathered for a different purpose are often used to answer a research question, which can affect the applicability to the study at hand. As already stated there is no valid and reliable instrument to measure the patient safety culture so the researcher reviewed other standardised assessments already available albeit not in the Albanian language. The construction of a new instrument into a new language is difficult and time consuming and not recommended if adequate instruments already exist [9]. It was therefore decided to use The Hospital Survey on Patient Safety Culture (HSOPSC), even though it meant that the tool had to be translated into Albanian. The HSOPSC measures safety culture on 12 dimensions, including 10 safety dimensions and 2 outcomes dimensions and is designed to measure staff perceptions on patient safety issues, medical errors and event reporting [10]. The Hospital Survey on Patient Safety Culture Hospital questionnaire (HSOPSC) was therefore chosen to obtain the data about patient safety culture in hospitals of Kosovo. Although this instrument is of US origin, it has been translated and used within European countries, including Norway, England, Netherlands, Belgium and Switzerland [10].

The Hospital Survey on Patient Safety Culture Hospital questionnaire (HSOPSC) was also selected as it is known to:

- Raise staff awareness about patient safety.
- Diagnose and assess the current status of patient safety culture.
- Identify strengths and areas for patient safety culture improvement.
- Examine trends in patient safety culture change over time.
- Evaluate the cultural impact of patient safety initiatives and interventions.
- Conduct internal and external comparison [11].

Despite the obvious advantages of translating existing measures, the complexity involved in this process in terms of the test equivalence between the different languages is indeed challenging. Pena identified four conceptual and methodological issues that should be considered in this process [12]. They include equivalences that focus on language, function, culture, and metrics. First, the linguistic equivalence of the instruments and instructions must be demonstrated by translating them by using methods such as “blind-back translation” or expert review. In the blind-back translation process, a translator provides a word-for-word translation from the source language to the target language and a second translator, who has not seen the measure in its source language, translates the measure back to the source language. This back-translated version is then compared with the original version for discrepancies and all three versions (source, translated and back-translated) are then discussed in order to arrive at a consensus version between the two translators [13]. Expert review is when an expert panel identifies and discusses translation discrepancies and cultural barriers with the source language of the measurement in order to evaluate the appropriateness and comprehensiveness of the translated measurements. The composition of the expert panel depends on the aim and content of the measurement instrument, but typically it includes methodologists, subject specialists including education professionals, healthcare professionals and the translators involved in the process [14].

Second, if translation from one language to another focuses only on the language translation, it may result in incongruity in meaning which can threaten the measure’s content validity. In order to demonstrate the functional equivalence of the instruments, a “dual focus” approach that draws from not only the language but also the cultural groups under study is suggested. This approach is often overlooked in favour of achieving uniformity in instrumentation and procedures.

Third, the way members of different cultural or linguistic groups view or interpret the meaning of an item may vary. Cultural equivalence aims to ensure that respondents in different countries and cultures have the same understanding of the questions, regardless of whether the terms (functional equivalence) were the same.

The fourth and final consideration proposed is metric equivalence in item or question difficulty and is particularly important when adapting instruments from one language to another [12]. Due to all these considera-

tions, effective use of an existing assessment measure must go beyond mere linguistic translation and include a range of additional concepts, such as a latent construct structure and equivalent scale usage. The purpose of this study was to examine the utility and functionality of translations of instruments from English to Albanian language and culture.

The process of establish reliability and validity HSOPC questionnaire in Albanian used the forward-backward translation method: the questions were translated into Albanian by one translator and then translated back into English by an independent translator who was blinded to the original questionnaire. The draft translation was then pre-tested by several hospital physicians and nurses as well as by non-clinical staff for comprehension. The pre-test findings were appropriately incorporated into the final version of the questionnaire. Adaptations were made only in demographic items concerning departmental structure of the participating hospitals and difference in professional groups.

2.1. Sample

In total, 400 health professionals were contacted and 346 (response rate 86%) returned the questionnaire between August 2014 and February 2015. Of the 346 respondents 315 (91%) completed the questionnaire. Thirty-one did not fill out at least 50% of the questionnaire and were all excluded from further analyses.

The mean age of the participants was 42 years old. Among them, the majority were nurses 58.1% of participants and 15.7% of them were management staff.

2.2. Selection Criteria

Subjects who met the following criteria were selected to participate in the study:

- 1) Willingness to participate,
- 2) Ability to speak and read Albanian, and
- 3) Nurses and nursing assistants, physicians, physiotherapists, laboratory and radiology assistants, social workers, pharmacists and pharmacy assistants working in the public health institutions.

Therefore, a set of indicators and clues were chosen to characterize the safety culture development on the micro-, meso- and macro-level of the healthcare system in four areas.

The subjects were approached by the researcher and were given detailed explanations of the purpose and aim of the study. An informed consent was obtained from those who agreed to participate, and they were asked to complete the questionnaire.

2.3. Ethical Issues

The study protocol was reviewed from The National Ethics Committee in the Ministry of Health of Kosovo and then the request for permission for research within Kosovo hospitals was taken by the ethical committees of the respective hospitals. Health workers were informed about the purpose of research and given time to be able to decide whether to participate in research or not, they had access at any time to be part of the research, they were ensured that the data will remain anonymous and the data given would be taken with caution. A clarifying letter with additional information and with the scope of the study was attached to the questionnaire. We took into consideration the five recommendations APA's Science Directorate gives to help researchers steer clear of ethical quandaries:

1. Discuss intellectual property frankly.
2. Be conscious of multiple roles.
3. Follow informed-consent rules.
4. Respect confidentiality and privacy [14].

2.4. Data Analysing

The data collection took place from August 2013 until February 2014. All Items were encrypted and were scaled and the entire questionnaire was included in the database for analysis. The SPSS 21 was used for data analysis.

In order to explore the findings of the study, the data analyses involved a combination of descriptive and analytic statistical methods, particularly ANOVA and Post-Hoc tests.

Also, the internal consistency of the patient safety culture dimension for the questionnaire were measured and

reported, showing in the discussion section the comparison of implementing of HSOPSC in Kosovo and other countries in Europe and USA.

3. Results

Dimension Reliabilities and Internal Consistency

To determine the reliability and the internal consistency of the patient safety culture questionnaire dimensions, internal consistency for the questionnaire needed to be established. Internal consistency is typically measured using Cronbach's Alpha (α). Cronbach's Alpha ranges from 0 to 1, with higher values indicating greater internal consistency (and ultimately reliability). Common guidelines for evaluating Cronbach's Alpha are:

- to 0.69 = Poor.
- 0.70 to 0.79 = Fair.
- 0.80 to 0.89 = Good.
- 0.90 to 0.99 = Excellent/Strong.

A value of 1.0 then you indicates "complete agreement" (*i.e.* redundancy) in your it the tool *i.e.* questionnaire. Items that are in perfect agreement with each other do not each uniquely contribute to the measurement in the construct they are intended to measure, so they should not both be included in the scale. Occasionally, there may also be a negative Cronbach's Alpha value, but this is usually indicative of a coding error, having too few people in the sample (relative to the number of items in your scale), or REALLY poor internal consistency.

The agency for Healthcare Research and Quality in its 2014 User Comparative Database Report of the *Hospital Survey on Patient Safety Culture* recommends a Cronbach's alpha above 0.6 to consider it acceptable. The dimension of Frequency of Events Reporting which has 3 items in it had a Cronbach's alpha value of 0.78. The dimension of Feedback and Communication, also with 3 items, had a Cronbach's alpha value of 0.53, which even though does not reach the recommended value of 0.6, it is above 0.5, and therefore it can be used, even though it has a poor consistency. The dimension of Teamwork across Hospital Units, which consists of 4 items, has a Cronbach's alpha value of 0.51, which also passes the reliability test. The dimension of Supervisor/manager expectations and actions promoting safety has 4 items, and reaches the desired Cronbach's alpha value of 0.6. The dimension of Teamwork within Hospital Units has a Cronbach's alpha of 0.71, which is again acceptable. The dimension of Communication Openness, with 3 items in it, has a Cronbach's alpha value of 0.53, which means that this dimension can be used, due to a Cronbach's alpha value higher than 0.5. The dimension of Hospital Handoffs and Transitions has a Cronbach's alpha of 0.62 which, with 4 items in it.

So most of the dimensions used for this study have a Cronbach's alpha value of above 0.6, which is recommended, while a few of them have acceptable levels above 0.5, which means that all the dimensions pass the internal consistency test, and can be considered as reliable, to be used for further study.

In total, HSOPSC has 12 dimensions. Cronbach's α showed that in the Kosovoian society, only 8 dimensions of the Model can be used.

- * Frequency of event = 0.78.
- * Overall Perceptions of Safety = 0.12.
- * C & D. Patient Safety Grade = 0.63.
- 1) Safety Culture Dimensions (Unit level)
 - A. Supervisor/manager expectations & actions promoting safety = 0.60.
 - B. Organizational Learning-Continuous improvement = 0.36.
 - C. Teamwork within hospital units = 0.71.
 - D. Communication Openness = 0.53.
- 2) Safety Culture Dimensions (Unit level)
 - E. Feedback and communication about error = 0.53.
 - F. Non punitive response to Error = 0.53.
 - G. Staffing = 0.16.
 - H. Hospital Management Support for Patient Safety 0.44.
- 3) Safety Culture Dimensions (Unit level)
 - I. Teamwork across Hospital Units = 0.51.
 - J. Hospital Handoffs & Transitions = 0.62.

4. Discussion

The internal consistency of the patient safety culture dimensions for the questionnaire has been measured and reported, showing that most of the dimensions are sufficiently consistent and can be used for the study. In general, the HSOPSC is a psychometrically sound instrument for assessing 12 safety-related culture domains. The Cronbach's α was 0.78 and is considered good. In the relevant literature, the overall Cronbach's α ranged from 0.81 to 0.90, whereas the Cronbach's α 's for eight domain deemed to be acceptable [15].

In the eight-factor model, the internal consistency of the factors and the construct validity of the HSOPSC questionnaire were mostly satisfactory. The construct validity was sufficient for all subscales, except for the 4 other subscale regarding intention to report incidents which correlated poorly with other subscales. The hypothesis that the patient safety culture topic is an important challenge to all interested health care providers who wish to improve patient safety grade that respondents gave for their practice correlate positively with their scores on all factors, was confirmed. The hypothesis that HSOPSC would be a suitable instrument to provide important indicators for the improvement of patient safety culture was tested and it was confirmed, that HSOPSC could be used as 8 dimension model.

As part of its international use, the HSPSC has also been administered in countries such as England and Scotland where English is the native language. Even in those countries adaptations were not only necessary with regard to American versus British English but also with regard to differences in the healthcare systems and the uses of terminology. For example, in England the terms "area" and "unit" had to be changed to "ward" and "department" respectively. On the other hand, in Scotland the term "event" was changed to "incident" [16] [17].

Out of the 14 published papers on psychometric properties; only a few provided information on the translation and adaptation processes. Among those who did, most described a forward-backward-translation process of the HSPSC from the original American English version into their native language [18] [19]. It also seems that the majority of changes or revisions in items were due to different interpretations of terminology [18] [19], the addition of further items or measures of new dimensions [16] [19] [20], or the removal of items from the measure [17].

5. Limitations

There are some limitations that need to be considered while interpreting these results.

1) The first limitation is the methodology used. The self reported questionnaires are well known for the bias that they reflect in the study, mainly due to the social desirability. Although the last research from Hammer et al. shows that from a measurement perspective, "... safety climate can be conceived of as a 'snapshot', or manifestation of culture" [21] that can be assessed using quantitative measures, while safety culture may rather be assessed qualitatively. Nevertheless, a huge number of studies on safety culture actually measure safety climate using questionnaires [23]. In doing so, safety climate serves as a quantifiable surrogate parameter of safety culture [2] [22].

2) Knowing the sensitivity of topic, where the health care providers declare that there is very present the culture of blame. The sensitivity of the topic and the fact that blaming culture is prevalent, makes us believe that the results were affected and do not fully represent the reality in the field.

3) Another limitation of the study was that the survey was conducted only taking into account only the public sector; however, fully health care workers in the private sector are very few.

4) There was also a lack of qualitative data. Safety climate serves as a quantifiable surrogate parameter of safety culture [2], we have done just the first step of measurement on patient safety culture in Kosovo.

5) While it might have been useful to include a patient perspective in this study the instrument used was only validated for use by staff.

6. Conclusions

The hypothesis that HSOPSC would be a suitable instrument to provide important indicators for the improvement of patient safety culture was tested and it was confirmed, that HSOPSC could be used as 8 dimensions model. HSOPSC is suitable to improve patient safety culture and provide each hospital with a basic profile on patient safety culture and recommendations for an oriented intervention plan.

This study indicates evaluation of national culture for patient safety, confirms the need for a national long-term initiative to improve patient safety culture and provide each hospital a basic profile on patient safety culture

and makes recommendation for an oriented plan in intervention.

Again, the HSOPSC as a tool by itself, lacks a measurement for implementation of actions needed to correct safety culture and does not completely cover the policies and procedures that need to be improved; however, our findings could be used for further research and could be a point of origin to acquire a patient safety measurement tool for Kosovo.

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Conflict

No conflict of interest has been declared by the author(s).

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