



Validation of the Persian Version of the Picker Patient Experience Questionnaire

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ABSTRACT

Aims Patient experience, along with clinical performance and safety, is known as a critical criterion for improving healthcare performance. This study aimed to assess the validity of the Persian version of the Picker Patient Experience Questionnaire.

Instruments & Methods This descriptive cross-sectional study was conducted in Nikan Gharb and Nikan Aqdasiyeh hospitals in Tehran from April to May 2022. The Persian version of the Picker Patient Experience Questionnaire was prepared based on the translation-retranslation method. The face and content validity of the questionnaire was evaluated with the opinions of 10 experts. To check the tool validity, all patients discharged from the two hospitals were interviewed by phone from April 21 to May 21, 2022. The main dimensions and constructs of the questionnaire were determined by the exploratory factor analysis method. The questionnaire reliability was evaluated using the test-retest method by participation of 30 subjects.

Findings By checking the validity of the questionnaire, the items were included in 7 aspects which were in accordance with the main sections of the questionnaire (information and education, coordination of care, emotional support, respect for patient preferences, physical comfort, involvement of family and friends, and continuity and transition). The tool reliability for the 7 aspects by Cronbach's alpha was in the range of 0.744 to 0.911, and for the whole questionnaire was 0.804.

Conclusion The Persian version of Picker Patient Experience Questionnaire has the necessary validity to evaluate the experience of hospitalized patients in Iranian hospitals.

Keywords Patient Satisfaction; Healthcare Systems; Validation Study; Questionnaire

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[1] Satisfaction rate of hospitalized patients in military hospitals from presented ... [2] Can hospital accreditation enhance patient ... [3] Examining the role of patient experience surveys in measuring health care ... [4] Evaluation and measurement of patient ... [5] Determinants of satisfaction with health care system: A population-based study ... [6] Quality improvement techniques to improve patient ... [7] Evaluating the performance of the medical records departments of Mashhad medical university teaching ... [8] Assessment of satisfaction rate among the working staff of Mazandaran University of supplemental ... [9] Studying the satisfaction of patients referring to university hospitals with ... [10] Evaluation and measurement of patient ... [11] The Picker Institute Implementation ... [12] The patient experience and patient satisfaction: Measurement of a complex ... [13] The picker patient experience questionnaire: Development and validation using data from inpatient ... [14] Patient experience and satisfaction with inpatient service: Development of short form survey instrument ... [15] A simple approach to fairer hospital benchmarking using patient experience ... [16] Evaluation of patients' satisfaction with medical services in teaching ... [17] Evaluation of methods used for estimating content ... [18] A closer look at how managerial support can help improve patient experience: Insights from the ... [19] Measuring relational aspects of hospital care in England with the 'Patient Evaluation ... [20] Linking perceived management support with employees' readiness for change: The mediating ... [21] Perceived organizational support: A meta-analytic evaluation of organizational ... [22] Patients' experiences and satisfaction with health care: Results of a questionnaire study of specific ... [23] Properties of the picker patient experience questionnaire in a randomized controlled ... [24] Measuring the experiences of health care for patients with musculoskeletal ... [25] A systematic review of evidence on the links between patient experience ... [26] Evaluating patient experiences in decentralised acute care using the Picker ... [27] Spanish and Catalan translation, cultural adaptation and validation ... [28] Evaluating the use of Clavien- Dindo classification and Picker Patient experience questionnaire as quality indicators ...

Introduction

Healthcare organizations, for their survival and success, need to make decisions in the field of improving the quality of their programs, leading to the improvement of patients' satisfaction. The World Health Organization has introduced patients' satisfaction with health services as one of the five health service quality indicators [1-4]. Customer satisfaction is a suitable indicator to measure the quality of services and how they are provided from the point of view of service recipients. Patient satisfaction can indicate the correct performance of services, and this satisfaction cannot be obtained only by providing high technology, rather, it is mostly obtained due to public services and the effective communication between the doctor and the staff with the patient [5]. Today, healthcare systems seek to provide services that are not only clinically effective, but also acceptable and beneficial to patients [6,7]. One of the basic principles of healthcare service management is system evaluation. On the other hand, one of the system evaluations is the satisfaction level of the patients from the provided services, which is a criterion showing the high system efficiency [8]. The satisfaction level of service recipients not only causes the improvement of service quality but also has a considerable effect on improving the patient's health due to the mental effects on the patient [5].

Planning and providing healthcare and patient-centered medical services based on the comments, needs, and preferences of the patients is the key point in the healthcare systems in developed countries, as well as an essential factor for the improvement of healthcare and medical systems and obtaining public trust. So, more appropriateness and effectiveness of the provided services and ultimately, improvement of health outcomes, quality of life, and patient satisfaction are the satisfactory effects of these treatment systems. In this regard, accepting the patient as a partner in the treatment systems and generalizing the culture of acceptance and flexibility towards the opinions and criticisms of the patients is the growth lever of hospitals and is effective at the national level in formulating and regulating policies, plans and services and macro-health policies [9].

In the past decades, more attention has been paid to the evaluation and improvement of the healthcare experience from the perspective of patients [10]. In 1994, Harvey Picker, the founder of the Picker Institute, challenged the evaluation methods of healthcare services. Then, a system was designed to improve patient care by considering the entire patient experience. According to Harvey, care of the patients should be in a way that considers the feelings, concerns, comfort, values, and personal preferences of patients and the involvement of their family members. The originally designed form for adults had 40 items. Picker survey instruments had a high level of reliability [11, 12]. In 2002, a study was

conducted in five countries of Sweden, Switzerland, England, United States, and Germany, and a short form of the questionnaire was designed for comparison between hospitals and the monitoring process. The validity and reliability of the Picker Patient Experience Questionnaire were confirmed in this study. The questionnaire with 15 items was considered a survey tool and used in national studies in the National Health Service (NHS) in England. The designed form is simple to be completed by patients and is easily scored [13]. This form has been used and approved in other countries. In most of the surveys, each treatment center has designed and used a checklist according to its desire and needs, which ultimately makes it impossible to make general comparisons and generalizations. Therefore, it seems necessary to use a proper and uniform checklist in hospitals and centers providing medical services [14, 15]. The use of appropriate and identical tools in medical service centers provides the possibility to compare and create competition between them and identifies their strengths and weaknesses. In Iran, many studies have considered the patients' satisfaction with healthcare services. In each of these studies, researcher-made or standard tools have been used according to the objectives of the studies, whereas, there was no suitable and uniform tool for evaluating patients' experience during hospitalization [16].

As a center for the transfer of medical knowledge and skills, the hospital is a powerful resource in terms of technological information, which improves the physical, mental and spiritual health of people by using facilities and providing special services, and ultimately ensures the satisfaction of customers. Therefore, this study aimed to investigate the validity of the Persian version of the Picker Patient Experience Questionnaire (PPE-15), a research tool for evaluating the satisfaction level of patients in Nikan Gharb and Nikan Aqdasiyeh hospitals in Tehran.

Instrument and Methods

The Persian version of the Picker Patient Experience Questionnaire (PPE-15) was validated in this qualitative-quantitative study in April-May 2022.

The short form of the Picker questionnaire, provided by Jenkinson *et al.* in 2002, evaluates the experience of patients in an inpatient treatment center by 15 items in 7 areas of information and education (2 items), coordination of care (1 item), emotional support (3 items), respect for the patient's preferences (3 items), physical comfort (1 item), participation of family and friends (2 items), and continuity and transition (3 items). The range of points is between 0 and 15. A score of zero indicates the maximum positive experience, and a score of 15 indicates the maximum negative experience during hospitalization in the treatment center.

To achieve an accurate translation, the short form of the Picker questionnaire was first translated into Persian by a translator with sufficient skills in translation area. Then, the translation was provided to three translators (two professional translators and one expert, apart from the first translator) to translate it separately into English. After matching the translations with the original form of the English questionnaire and matching the three translations with each other, the ambiguous points of the translations were determined, and the Persian version of the questionnaire was prepared based on the opinion of all three translators.

The face validity of the questionnaire, regarding the compatibility of the Persian version with the original version, was assessed concerning the opinion of 10 experts in the subject area. The content validity of the questionnaire was studied by content validity ratio (CVR) and content validity index (CVI) [17]. For this purpose, 12 experts in the subject area were selected and filled out the questionnaire for evaluating the CVR (the items were: "it is necessary", "it is useful, but it is not necessary", and "it is not necessary") and CVI (the items were: "unrelated", "somewhat related", "related", and "fully related") of each item of the questionnaire.

To check the tool validity, all patients discharged from different departments of Nikan Gharb (559 people) and Nikan Aqdasiyeh (456 people) hospitals in Tehran from 21 April to 21 May 2022, who were hospitalized for at least 4 days, with the age of over 18 years and the ability to communicate, were studied by census method. Patients who did not tend to fill out the questionnaire for any reason or died after discharge were excluded from the study. Data were collected using the questionnaire and telephone interview. Thus, within one week to a maximum of one month after the patient's discharge from the hospital, trained interviewers outside the hospital

contacted the patients and filled out the questionnaire. To facilitate the work of the interviewers, the questionnaire was designed using the KoboCollect software, and the interviewers called the patients by linking to the hospital number.

How to communicate with the patient, observe the mental and physical condition of the patient, observe confidentiality, and maintain the patient's information was provided to the interviewers in the form of a guide. The objectives of the study were explained to the subjects, and the patients were assured that their personal information would be kept confidential. In case of any problem in the data collection process, if the form could be corrected, the necessary corrections were made, and otherwise, the form was excluded from the study process. The interviewers who were not careful enough were warned about the first mistake, and if the mistake was repeated, the interviewer was removed from the study process and replaced by a new subject.

Exploratory factor analysis was used to identify and discover the main dimensions and constructs of the questionnaire. Before the implementation of the factor analysis test, the assumptions of this analysis, namely the KMO test and Bartlett's sphericity test, were implemented and confirmed.

To check the tool's reliability, two samples of 15 patients who were interviewed in the first week after discharge and the fourth week after discharge were randomly selected, and Cronbach's alpha was calculated.

Findings

After the preparation of the initial form, the formal validity related to the compatibility of the Persian version with the original version was confirmed by the opinion of 10 experts in the subject area. The CVR and CVI of the items were confirmed by the opinion of the 10 experts (Table 1).

Table 1 Results of examining CVI and CVR of the Picker Patient Experience (PPE-15) Questionnaire

No.	Items	CVR	CVI
1	When you had important questions to ask a doctor, did you get answers that you could understand?	0.82	0.85
2	When you had important questions to ask a nurse, did you get answers that you could understand?	0.76	0.70
3	Sometimes in a hospital, one doctor or nurse will say one thing and another will say something quite different. Did this happen to you?	0.71	0.73
4	If you had any anxieties or fears about your condition or treatment, did a doctor discuss them with you?	0.90	0.89
5	Did doctors talk in front of you as if you weren't there?	0.69	0.76
6	Did you want to be more involved in decisions made about your care and treatment?	0.83	0.85
7	Overall, did you feel you were treated with respect and dignity while you were in hospital?	0.87	0.74
8	If you had any anxieties or fears about your condition or treatment, did a nurse discuss them with you?	0.91	0.79
9	Did you find someone on the hospital staff to talk to about your concerns?	0.66	0.75
10-1	Were you ever in pain?	0.74	0.75
10-2	If yes..., Do you think the hospital staff did everything they could to help control your pain?	0.77	0.81
11	If your family or someone else close to you wanted to talk to a doctor, did they have enough opportunity to do so?	0.86	0.82
12	Did the doctors or nurses give your family or someone close to you all the information they needed to help you recover?	0.79	0.88
13	Did a member of staff explain the purpose of the medicines you were to take at home in a way you could understand?	0.92	0.84
14	Did a member of staff tell you about medication side effects to watch for when you went home?	0.81	0.78
15	Did someone tell you about danger signals regarding your illness or treatment to watch for after you went home?	0.88	0.93

The result of KMO test for sample adequacy was calculated to be 0.787, and Bartlett's test ($\chi^2=3947.28$) with 105 degrees of freedom was significant at the 0.0001 level, so there was a high correlation between the items within each aspect, and there was no correlation between the items of the aspects.

By checking the validity of the questionnaire by factor analysis method, the items were included in 7 aspects, which were in accordance with the main sections of the questionnaire (information and education, coordination of care, emotional support, respect for patient preferences, physical comfort, involvement of family and friends, and continuity and transition). In total, 77.32% of the variance of the items was explained by the 7 aspects (Table 2). The tool reliability was confirmed for 7 aspects in the Cronbach's alpha range of 0.744 to 0.911. The overall reliability of the questionnaire was calculated to be

0.804 (Table 2).

Table 2) Results of the factor analysis on the data obtained from the picker questionnaire

Aspects	Item number	Total	Variance	Cronbach alpha
Emotional support	4, 8, 9	2.424	16.17	0.840
Continuity and transition	13, 14, 15	2.006	13.37	0.855
Respect for patient preferences	5, 6, 7	1.942	12.95	0.744
Involvement of family and friends	11, 12	1.627	10.84	0.861
Physical comfort	10-1, 10-2	1.590	10.6	0.911
Information and education	1, 2	1.373	9.15	0.793
Coordination of care	3	0.637	4.25	0.817

The matrix obtained by rotating the items of each aspect is shown in Table 3. Only the highest factor loading of each item is shown in the table, which indicates the belonging of that item to its aspect.

Table 3) Matrix of rotating factors (exploratory factor analysis)

Items	Information and education	Coordination of care	Emotional support	Respect for patient preferences	Physical comfort	Involvement of family and friends	Continuity and transition
1	0.691						
2	0.682						
3		0.637					
4			0.791				
5				0.705			
6				0.444			
7				0.793			
8			0.847				
9			0.786				
10-1					0.795		
10-2					0.795		
11						0.882	
12						0.745	
13							0.471
14							0.704
15							0.831

Discussion

This study aimed to assess the validity of the Persian version of The Picker Patient Experience Questionnaire. In many countries, hospitals are now required to organize patient surveys at regular intervals. Patient experience, along with clinical performance and safety, is known as a critical criterion for improving healthcare performance [18, 19].

On the other hand, the evidence shows that the perception of nurses, managers or supervisors makes them perform better, and this can be investigated by examining the experiences of patients. Because the existence of this perception of caregivers as those who act based on their needs and to create their well-being and comfort increases the sense of support in caregivers [20, 21].

Several survey questionnaires have been used for such purposes, but these questionnaires have primarily obtained information about satisfaction with the service. Questionnaires asking patients to rate their satisfaction with their care typically receive

very positive ratings that are insensitive to specific process-related problems that affect the quality of care provided [22]. While in the Picker questionnaire, by asking specific questions about whether certain processes and events occurred during a certain period of care, detailed reports are prepared about the patient's experiences, and the results are very practical. Based on the results of this study, all the items raised in the Picker questionnaire were well explained by 7 main aspects and the validity of the Persian Picker questionnaire (PPE-15) was confirmed. PPE-15 provided a different range of scores. In the first stage, it can be used to examine certain aspects of the patient's experience. For example, if patients report communicating with staff, programs can be considered to monitor and improve the situation.

According to the results of this study, the validity of the Picker questionnaire has been examined and confirmed in other languages through other studies. This survey tool can be used to monitor the fundamental aspects of services over time [23]. In a

study in 2002, the Picker Institute used the Picker questionnaire (PPE-15) to assess the quality of care for hospitalized patients in 5 countries, including England (5 hospitals), Germany (6 hospitals), Sweden (9 hospitals), Switzerland (9 hospitals), and the United States (272 hospitals). Based on the results of the Picker Institute, the Picker questionnaire has achieved face validity, construct validity, and high reliability. Picker Patient Experience Questionnaire provides a step forward in evaluating patient experience because it presents a main set of items that may be added around more modules. Scores are easy to interpret. Based on this, the set of items can be included in the surveys of hospitalized patients in different areas and enable the comparison of the performance of hospitals and the creation of national or international standards [16-22].

In another study in 2002 in Sweden, the experience of patients with musculoskeletal problems was investigated using the Picker questionnaire. The questionnaire was evaluated using interviews with 11 respondents. Statistical analyses showed the validity and reliability of the questionnaire [24].

Another study was conducted in England in 2003. This study aimed to evaluate the performance of the 15-item Picker Patient Experience Questionnaire (PPE-15) as a shortened instrument compared to the longer form. A total of 1445 questionnaires were mailed to the patients of two hospitals. Patients randomly received the short form (4 pages) or the main form (12 pages). A total of 949 (65.67%) questionnaires were received. There was no difference in the response rate between the two versions of the questionnaire. The obtained results showed that the length of the questionnaire does not lead to a decrease in the response and also has no effect on the quality of the data. PPE-15 had internal consistency and necessary correlations between the items and the original form. As a result, the length of the questionnaire does not have a negative effect on its results [23].

In 2013, a systematic study was conducted to examine the evidence of the relationship between patient experience, safety, and clinical effectiveness. The findings of this study briefly showed a positive relationship between patient experience, patient safety, and clinical effectiveness. This study suggested the patient experience as one of the main pillars of quality in healthcare [25].

In Norway, a regular and annual assessment of patients is implemented as part of national quality indicators in specialized healthcare services. Although patient experience surveys are used in all hospitals, according to the Norwegian National Health and Care Services Act, municipalities are also required to collect patients' experiences to plan and organize health services. For this purpose, a study was conducted in 2017 to evaluate the experience of hospitalized patients in 5 municipal districts of

Ostfold City using the PPE-15 tool. The results of this study confirmed the validity of the PPE-15 questionnaire in Norway [26].

A study was conducted to evaluate the Spanish and Catalan versions of the Picker questionnaire according to the patient's culture to measure the patients' experience in 2018. The acceptability, validity, and reliability of the questionnaire were evaluated through a cross-sectional validation study. The results of the study led to the compilation of questionnaires in Spanish and Catalan with sufficient conceptual and linguistic equivalence. Four factors were extracted by parallel analysis, explaining 43% of the total variance. The four aspects were information and communications received during hospitalization, low sensitivity attitude of professionals, evaluation of medical and nursing staff communication, and global items [27].

Findeklee *et al.* evaluated the care of women undergoing endoscopic surgery using the Picker questionnaire. According to their results, the questionnaire was a suitable tool to know the treatment quality of complications in patients undergoing endoscopic surgery [28].

Based on the results of comparing the findings of this study with other studies, the translated forms of the Picker Patient Experience Questionnaire (PPE-15) into other languages, like the results of this research, have been confirmed as a useful tool for examining the experiences of hospitalized patients and providing a solution to improve service provision in healthcare centers.

Conclusion

The Persian version of Picker Patient Experience (PPE-15) Questionnaire has the necessary validity to evaluate the experience of hospitalized patients in Iranian hospitals and explains 77.32% of the variance of the components.

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