ISSN 2256-0394 (online)
ISSN 2256-0386 (print)
April 2017, *30*, 16–26
doi: 10.1515/eb-2017-0002
https://www.degruyter.com/view/j/eb

MEASURING PATIENTS' SATISFACTION IN FOR-PROFIT ORTHOPEDIC HOSPITAL

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Abstract. Patients' satisfaction plays the central role in management of private hospitals, therefore the development of appropriate methodology and its adjustment to specific needs is necessary. The goal of the research is to develop and test methodology for the assessment of patient satisfaction in a private for-profit orthopedic hospital in Latvia that is consistent for results, as it should help to determine potential areas of progress in the coming periods. Moreover, satisfied patients are likely to return, to fulfil medical treatment requirements achieving better clinical results, as well as to recommend the hospital to others thus contributing to better overall performance of the organization. The results of the study show that the developed tool could be a valid instrument for measuring patient's satisfaction, allowing to improve the existing processes inside the organization, as well as benchmark different segments in the hospital as far as possible and develop best-practice approaches.

Keywords*: Patients' satisfaction, private for-profit orthopedic hospital.*

INTRODUCTION

Patients' satisfaction has an important role in management of both private and public hospitals, therefore the development of an appropriate tool for measuring satisfaction and its adjustment to the specific needs, for example of Latvian private orthopedic hospital, could be challenging. The approach should satisfy the needs and wishes of capital providers-shareholders as well as the requirements of medical staff, leading to valid results appropriate for further implementation.

It is worth mentioning that according to the Institute of Medicine "health care should be safe, effective, patient-centered, timely, efficient and reasonable" and the mentioned issues should be included in organization's quality management system. Both politicians and academics are stressing that patients' satisfaction is to be considered as one of the primary goals of every health-care services providing institution. These concerns expressed in theory and practice lead to the conclusion that there is an undoubted necessity to measure the quality of care in order to detect, whether the aims have been met, and whether progress in the quality of provided services can be made.

The introduced question has been discussed globally. The necessity for patient-centered care has been addressed for the first time by the Institute of Medicine in 2001. In the following years, policy makers and representatives of the medical sector have paid attention to recognizing the issue of patient-centered approach and working methods.

Moreover, the research has shown that patient-centered care raises excellence and efficiency of the organization providing services (Arterburn *et al*., 2012); it may also decrease the costs associated with treatment (Walsh *et al*., 2014). Additionally, patient-centered care is related to higher patient satisfaction and greater devotion to the process (Chatterjee, Tsai, & Jha, 2015), enhanced familiarity with patient's illness history and rehabilitation (Doyle, Lennox, & Bell, 2013). Last but not least, as soon as patients are satisfied with their stay at the hospital their interest in obeying doctor`s prescriptions is higher, moreover, they will come again for following check-ups and/or treatments (Chatterjee, Tsai, & Jha, 2015), that is of particular importance for the private hospital egger to satisfy shareholders ambitions.

As one of the elements in the patient-centered approach is patient's satisfaction and the necessity for its measurement, special attention should be paid to this question. Moreover, it should be taken into consideration that the subjective nature of patient's satisfaction causes challenges for both theoretical and practical work – the mentioned personal components are hard to fit into the activities of the hospital which is willing to improve the quality of provided services.

Another challenge of the current research is that according to the available information in the scientific literature, on the one hand, there is no common overall valid and tested methodology for measuring patient's satisfaction; on the other hand, the existing research was provided by Western European or other overseas full-service hospitals financed by government and/or insurance system. The existing tools should be adjusted for the Latvian private hospital specialized in orthopedic problems; this explains the relevance of the study for practical purposes as well as contributes to the country-specific research in the field previously not performed in any of the Baltic States.

For-profit Orthopedic Hospital[*] is one of the most modern centers of traumatology-orthopedics, spinal issues and rheumatology in the Baltic States, and the only private facility of its kind in the mentioned region. The hospital has been working since 2008, annually consulting around 10 000 patients and performing around 2 000 surgeries.

1. LITERATURE REVIEW

Several authors are trying to propose their tool for determining patient satisfaction connected with their stay in the hospital and the received services. Table 1 provides the overview of recent studies relevant in the context of the current research. Based on the research of recently published studies one can conclude that the most interesting and relevant paper in the context of the current research was published by Waters *et al.* (2016) and Etier *et al*. (2016), while the mentioned results were considered within the development of current satisfaction measurement tool.

[*] Due to the wish of the hospital's management and patients' sensitivity regarding their answers about the treatment and stay at the hospital the organization providing the services will be called "For-profit Orthopedic Hospital".

Table 1. Overview of the Recent Studies Regarding Patient Satisfaction with Medical Services

Authors:	Year of Publication:	Main Ideas:
Rehman & Ali	2015	- determined several factors to measure the level of patient satisfaction; - location of the study: Emerging Departments.
Boquiren et al.	2015	- described several concepts for determining the level of patient satisfaction with medical staff; - countries of study: the UK and Canada.
DeRosis & Barsanti	2016	- investigated whether a patient's decision to use the web also depends on previous experience and satisfaction with healthcare.
Plewnia, Bengelb & Körner	2016	- studied impact of patient-centeredness on the level of patient satisfaction and the result of medical treatment; - location of the study: 9 centres for rehabilitation in Germany.
Korkmaz et al.	2016	- stated that patient satisfaction surveys are important information sources; - investigated the impact of patient's qualifications and the number of accompanying persons on the level of satisfaction; - country of study: Turkey.
Waters et al.	2016	- determined several factors to measure the level of patient satisfaction and grouped them in 7 different topics: "clinic waiting time, clinical contact time, trust, empathy, communication, expectation and relatedness"; - location of study: orthopedic clinic; - country of study: Australia.
Etier et al.	2016	- conducted the study with the purpose to determine which factors impact patient satisfaction in an outpatient orthopedic spine clinic; - authors are claiming that patients with decreased pain score and, more importantly, patients who felt the provider spent adequate time with him or her, reported statistically significant patient satisfaction scores; - country of study: USA.

2. METHODOLOGY

The goal of the paper is to develop and test the tool for the valuation of patient satisfaction – the essence of this topic was addressed in the introductory statement. The methodology should be used in private (without funding from government) For-profit Orthopedic Hospital in Latvia that is consistent for results, as it should help to determine potential areas for progress. Moreover, satisfied patients are likely to return, to fulfil medical treatment requirements achieving better clinical results, as well as to recommend the hospital to others contributing to better overall performance of the organization (Westaway *et al*., 2003).

The tool is based on best-practice approaches in a number of Western European countries and in the United States of America.

As the main aspect was to determine relevant factors for the questionnaires to measure patient satisfaction and willingness to recommend the hospital, the following studies were consulted in the research:

German Inpatient Satisfaction Scale that is used as an essential instrument for German-speaking countries (Germany, Austria, Switzerland). Several authors included this instrument in their studies, e.g. Zinn, Sauer, & Göllner (2016).The goal of their research was "to fill the gap by providing initial validation evidence of the German Inpatient Satisfaction Scale as an instrument for German-speaking countries"; Kleeberg *et al*. (2005) in their work focused on measuring satisfaction of cancer patients in Germany; Squires *et al.* (2012) emphasized "cross-cultural evaluation process that assessed the relevance of the Hospital Consumer Assessment of Healthcare Providers and Systems survey in five European countries";

Questionnaire for valuation of patients' satisfaction in the Netherlands – an instrument used by the Academic Medical Centre in Amsterdam (https://www.amc.nl/web/Research.htm). Kleefstra *et al*. (2010) stated that "COPS is shown to be a feasible and reliable instrument to measure the satisfaction of patients in Dutch academic hospitals";

The National Danish Survey of Patient Experiences – a tool developed and applied by the Unit of Patient-perceived Quality on behalf of the Danish Regions and the Danish Ministry of Interior and Health (https://patientoplevelser.dk/files/dokumenter/artikel/lup_pixi_uk.pdf);

NHS Inpatient Survey was established by the Picker Institute and has continued to be one of the main elements in the CQC National Survey Programme in UK (http://www.nhssurveys.org/surveys). Better understanding of this survey and its implementation could be gained from the papers by Reeves (2002) and West *et al.* (2011);

HCAHPS (Hospital Consumer Assessment of Healthcare Providers and Systems) Survey that exists since 2006 and is used as an instrument for determining patient viewpoints on hospitals and care provided in them in the USA (http://www.hcahpsonline.org/home.aspx). Additional information can be recovered from the papers by Giordano *et al.* (2009) and Zusman (2012).

Further, the factors were adjusted to the requirements of Latvian realities and necessities of For-profit Orthopedic Hospital, and the obtained results were tested using statistical approach: in the first stage, regression analysis was done that allowed determining the most relevant criteria for further analysis of satisfaction level; in the second stage, the reliability of satisfaction scale was tested.

Detailed description of the methodological approach used in the current research is presented in Fig. 1.

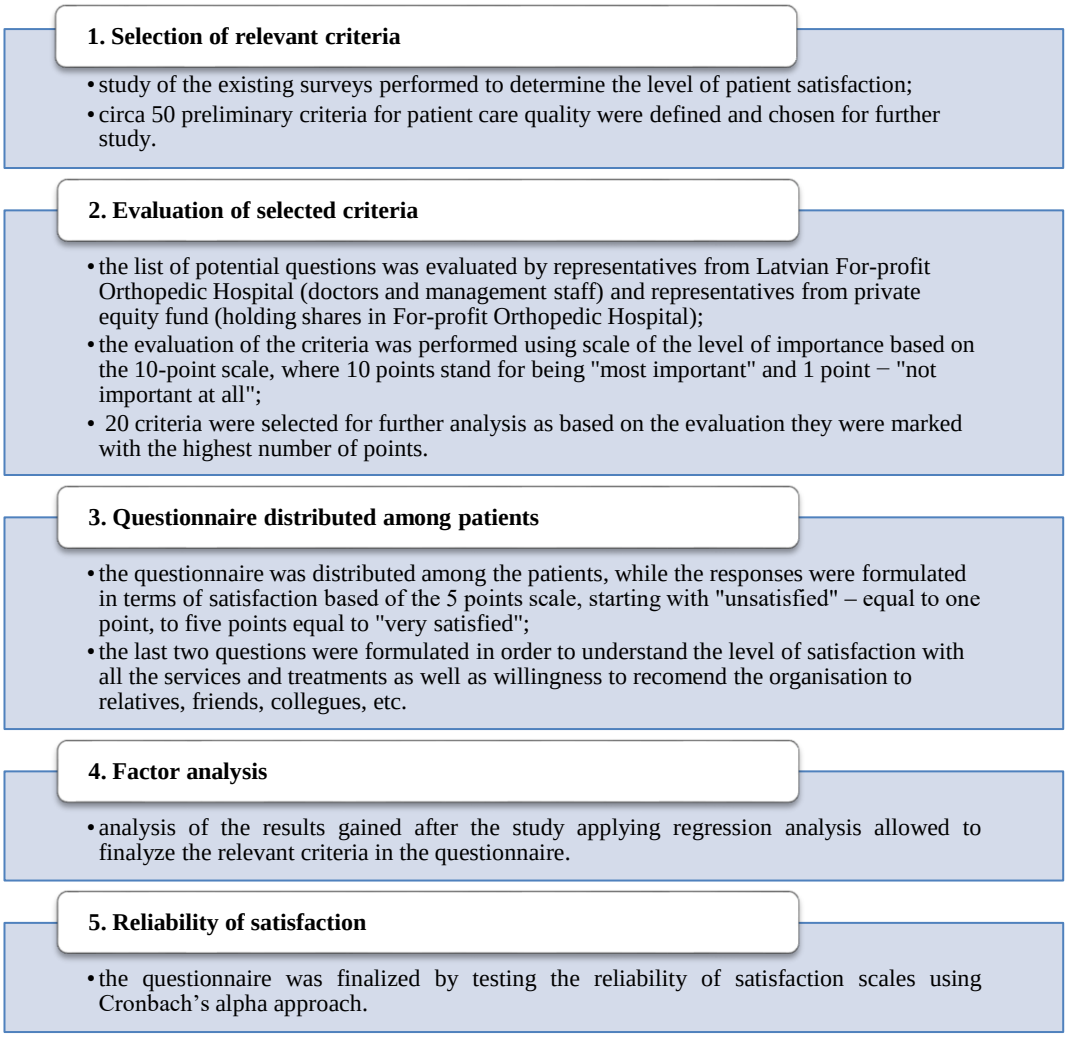

Fig. 1. Methodological Approach (created by author and based on the studies mentioned above).

3. RESULTS OF THE STUDY

Following the methodology described above, circa 20 questions were included in the finalized questionnaire – criteria considered being "most important" and "the most important", which equals 9 and 10 points, from the point of view of medical and managerial staff. These criteria were divided in seven groups during the treatment process of the patient, and were related to such aspects as information and communication, organization, professional skills of the staff and patients' autonomy.

At this point it should be noted that similar results regarding greater part of the aspects were mentioned in previous studies, so that the relevance of the inclusion in the approach should be defended. For example, Hush, Cameron & Mackey (2011) and Braddock, & Snyder (2005) are underlying the communication aspect;

Pollak *et al.* (2011) claimed the importance of clinician empathy that is related to patients' autonomy supporting the higher levels of satisfaction; expectations regarding the clinical assessment were highlighted in the paper by Noble *et.al.* (2006).

The group of criteria/factors regarding accommodation and individual expectations regarding the time factor (both waiting time and time spent on consultation) were considered being less important and not included in the final document. It is important mentioning that some authors arrived to different results concerning time criteria – e.g. clinical contact time was stated as being both important issue for patient satisfaction (Waters *et al.*, 2016) as well as to much individual and possibly prejudiced by interpretation and knowledge made previously (Klitzman, 2007); moreover, it was stated that possible negative effect in perception of time could be debilitated by excellence of medical treatment (Anderson, Camacho, & Baltkrishnan, 2007).

In order to prove the statistical significance of the criteria included in the tool the questionnaires were distributed among the patients of the For-profit Orthopedic Hospital. Patients were randomly sampled for the study from the appointment scheduling system. The response rate of the sampled patients was 23 %. The search was limited to the patients who visited the hospital for orthopedic surgery during August and September 2016.

The obtained results are described in Table 2 and Table 3 showing sufficient level of importance and underlying the preliminary assumption of inclusion of the selected criteria in the following study to measure patient satisfaction. As mentioned above the criteria for the final questionnaire were selected based on the highest R^2 and β – coefficient referring to main questions – satisfaction with the received services and treatment as well as willingness to recommend the hospital to friends, family members, etc. The results were presented and discussed both with clinicians and managing staff of the hospital.

Table 2. Criteria which Received the Highest Score of Patients' Satisfaction and Willingness to Recommend the Hospital

Criteria to determine the level of patient satisfaction	**Patients' satisfaction with received care and services during the stay**	**Patients' willingness to recommend the hospital to other potential patients**
	R^2 (β)	R^2 (β)
Evaluation of Pre-Admission Procedure		
Evaluation of doctor's expertise before admission to the hospital (consultation before surgery)	0.83 (0.34)	0.78 (0.25)
Information provided by nursing/administrative staff regarding the planned stay at the hospital	0.76 (0.29)	0.50 (0.20)

Continuing of Table 2

Criteria to determine the level of patient satisfaction	**Patients' satisfaction with received care and services during the stay**	**Patients' willingness to recommend the hospital to other potential patients**
	R^2 (β)	R^2 (β)
Evaluation of Admission Procedure		
Overall evaluation of reception on the arrival at the hospital	0.57 (0.34)	0.59 (0.27)
Information provided by nursing staff upon admission	0.52 (0.31)	0.53 (0.19)
Criteria to determine the level of patient satisfaction	**Patients' satisfaction with received care and services during the stay**	**Patients' willingness to recommend the hospital to other potential patients**
	R^2 (β)	R^2 (β)
Evaluation of Nursing Care		
Nursing expertise when performing duties	0.56 (0.30)	0.56 (0.26)
Providing help on patient's request	0.62 (0.17)	0.50 (0.20)
Patient's treatment	0.64 (0.15)	0.53 (0.15)
Evaluation of Medical Care		
Doctor's expertise during the stay at the hospital	0.68 (0.28)	0.50 (0.18)
Communication between doctors and nursing staff	0.63 (0.25)	0.56 (0.26)
Information Flow		
Approachability of staff in case of questions	0.56 (0.20)	0.49 (0.16)
Amount of information for the patient and its clarity	0.67 (0.23)	0.58 (0.18)
Autonomy of Patient		
Possibility to take part in the decision making process regarding the treatment	0.54 (0.34)	0.47 (0.25)
Patient is asked to use his/her autonomy	0.41 (0.30)	0.40 (0.23)
Release from hospital and aftercare		
Way of communicating the information	0.63 (0.34)	0.42 (0.26)
Information provided regarding further treatment and rehabilitation	0.64 (0.28)	0.55 (0.28)
Timing of release from the hospital	0.57 (0.34)	0.39 (0.19)

Based on the results presented in Table 2 one can conclude that the information aspect at different levels between medical staff and between medical staff and patient is of high importance and results in higher or lower level of patients` satisfaction. High level of coefficient of determination in such criteria as information received by the patient in pre-admission period, information and its clarity during the stay at the hospital as well as during the release and in the period

of after-care made the author to include the mentioned criteria in the questionnaire – the tool for measuring patients` satisfaction.

The new element of the study included in evaluation interpersonal communication (between medical staff), which was not mentioned in previous studies, but according to the analysis is important – the criteria of communication between doctoral and nursing staff – shows considerable level of statistical significant β proven by its *t*-value.

The other novelty was having the organizational approach under three headings: pre-admission, admission and release from the hospital. Previous research mainly concentrated on the period of stay at the hospital, while current study indicates that criteria in the pre-admission, release and aftercare period are showing considerable coefficient of determination regarding two main questions – patient satisfaction and willingness to provide recommendation.

The other criteria are similar to those in previous studies in the field performed in Western European countries and in the USA, and are important for the Latvian private hospital.

Table 3 shows satisfactory results on criteria reliability, indicating its high level α = from 0.76 to 0.85, with the exception at the level of patient autonomy, where additional study will be performed in the coming research, before using the tool to full extent in managerial practice of the Latvian For-profit Orthopedic Hospital.

Table 3. Criteria Receiving the Highest Score for Determination of Patient Satisfaction and Willingness to Recommend the Hospital

	Number of criteria in each category	**Cronbach's alpha**
Evaluation of pre-admission procedure	2	0.79
Evaluation of admission procedure	2	0.80
Evaluation of nursing care	3	0.76
Evaluation of medical care	2	0.80
Information flow	2	0.85
Autonomy of patient	2	0.62
Release from hospital and aftercare	3	0.79

The results of the study showed that the developed tool could be a valid instrument for measuring patients' satisfaction level, allowing improvement of the existing processes inside the organization, as well as benchmarking different segments in the hospital as far as possible and developing approaches of best-practice.

CONCLUSION

The aim of the current paper was to develop the tool for the assessment of patient satisfaction regarding orthopedic services. Around 20 criteria were selected for the questionnaire, where some of the criteria were comparable with those used

in the existing studies, the others, e.g. communication between medical staff, were new. Moreover, the questionnaire was adjusted to the unique needs of the For-profit Orthopedic Hospital in search for concise, reliable and valid instrument to monitor patient satisfaction. Based on the current research the following conclusions were driven, which could contribute to further improvements:

- the criteria regarding the level of patients' autonomy should be discussed and developed further;
- the existing questionnaire was accepted by both medical and managerial staff of the hospital, however it did not allow to find the reason for non-responses, therefore it was assumed that it is the most satisfied or dissatisfied patients who most likely express their opinion, which could lead to biased results;
- currently some of the hospitals are providing day-care treatment and increasing the amount of provided services which means that the changes should be analyzed further and included in the valuation of patient satisfaction.

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