

# STUDY ON THE ASSESSMENT OF THE LEVEL OF SATISFACTION IN PATIENTS HOSPITALIZED IN A MEDICAL CENTRE WITH BEDS

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**Keywords:** hospital, health care, competence, accessibility, satisfaction

**Abstract:** This study aims at assessing patient satisfaction and therefore, the increase of the quality of care of the patients admitted to a medical centre with beds. Method: A psychometric instrument was used by means of a questionnaire applied to 130 patients, together with both descriptive and inferential statistical analysis, due to the diverse volume of quantitative and qualitative data collected by means of the questionnaire. Results: The results were represented by the identification of the level of satisfaction in patients admitted to a medical centre with beds, indicating a higher degree of satisfaction in those from rural areas, females and those with lower levels of education, both in terms of hospital conditions, medical staff attitude and information obtained when admitted and during hospitalization. Conclusions: Variables may play a significant role in improving the quality of future medical services, hospital conditions and the degree of patient satisfaction related to health professionals.

**Cuvinte cheie:** spital, îngrijiri, competență, accesibilitate, satisfacție

**Rezumat:** Acest studiu are scopul de evaluare a satisfacției pacienților și în consecință creșterea calității îngrijirilor acordate pacienților internați într-o unitate sanitară cu paturi. Metoda: am folosit un instrument psihometric concretizat într-un chestionar aplicat la 130 pacienți și am folosit atât analiza statistică descriptivă, cât și analiza statistică inferențială datorită diversității datelor culese prin chestionar date cantitative și date calitative. Rezultate: au fost reprezentate de identificarea nivelului de satisfacție al pacienților internați într-o unitate sanitară cu paturi și s-a constatat un grad de satisfacție mult mai crescut al celor proveniți din mediul rural, al persoanelor de sex feminin și a celor cu un nivel mai scăzut de școlarizare atât în ceea ce privește condițiile de cazare, spitalizare, atitudinea personalului medical și informațiile primite la internare și pe parcursul spitalizării. Concluzii: variabile pot juca un rol semnificativ în ceea ce privește îmbunătățirea pe viitor a calității serviciilor medicale, a condițiilor de spitalizare și a satisfacției pacienților față de cadrele medicale.

## INTRODUCTION

The quality of health services is a priority for health care providers, managers, patients, third party payer and government bodies equally. The health system faces losses which lead to higher costs for the entire society, having several causes: less effective or ineffective medical technologies, high variation in medical practice performance and outcomes between hospitals, unequal access to health care, patient dissatisfaction regarding the services received, increase in waiting time for receiving health services.

Suppliers wish to demonstrate their competence in well-equipped hospitals; patients are interested in receiving the necessary health care in the shortest possible time, their rights being respected. Payers want to introduce quality standards, criteria and indicators in hospitals to keep costs under control. The government should regulate the health care system by means of legislation, facilitating the implementation of quality management in hospitals, health care provider work and protecting the patient from system impairments. In essence, the quality of health care lies in the application of medical science and technology so as to increase the benefits of health care without increasing the risks.(1)

Quality attributes regard: professional competence, reflected in technical skills and clinical, diagnostic and therapeutic services, interpersonal communication skills and maintaining relationships with the patient and with the management. Another quality attribute concerns the availability of a certain service, the direct cost of the service, the degree of accessibility and acceptability, all culminating with procedure effectiveness, user satisfaction and resource use efficiency. Patient satisfaction is an important element in the assessment of health care quality and according to expectations theory, satisfaction is the difference between what is expected and what is perceived by the patient.(2)

In Romania, quality nuclei in hospitals are designed to assess patient satisfaction through questionnaires created by CNAS (The National Health Insurance House), but concluded that in some cases, this problem is treated superficially, questionnaires are not filled out by patients but by the medical staff. On the other hand, this questionnaire needs to be improved and adapted to the different types of hospital departments.

Any study that is performed to assess patient satisfaction particularly aims at improving the quality of the

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current medical system, which derives from the general purpose of any health system, namely to improve the quality of life.

Studies conducted in our country and in other European countries have aimed at achieving an overview of the health system, comparisons between health departments (3,5,7), or at assessing patient satisfaction related to health care provided by emergency medical services.(6) Moreover, another study aimed at analyzing existing prejudices in patients and also at assessing the veracity of the supposedly objective information transmitted by the media (e.g. the idea that most patients admitted to state hospitals buy their own sanitary materials.(4)

The study is part of the PhD thesis called "Research on the assurance of health care quality in hospitalized patients".

Assessment of patient satisfaction is a subjective aspect as it differs depending on the level of culture, education, area of origin and self-perception of the disease or health status of each person.

### PURPOSE

*The main objective* of the study is to analyze the level of satisfaction in hospitalized patients so as to ensure and increase the quality of health care services provided to patients in the hospitals with beds.

*Secondary objectives* can be grouped as it follows: elaboration, testing and validation of the original interview questionnaire; developing interview guides, assessing patient satisfaction related to physicians and medical personnel: emergency unit, ward and during hospitalization, and to assess their satisfaction in terms of health care services, using the original questionnaire; assessment of patient satisfaction related to hospital equipment; setting frequencies for the shortcomings noticed by patients in the open question section, part of the assessment tool.

### METHODS

The study is a descriptive and observational sociological investigation, which will be conducted using both quantitative and qualitative methodology. The target is represented by patients admitted to the Regional Institute of Gastroenterology and Hepatology, "Prof. Dr. O. Fodor", Cluj-Napoca.

*Inclusion criteria:* hospitalized patients over 18 years of age, without decompensated mental pathology and who give their consent to participate in the study.

*Exclusion criteria:* the study excluded patients who refused to fill out the questionnaires or those with serious illnesses, with decompensated mental pathology or illiterate.

Recruitment of subjects was done by getting into direct contact with the patients admitted to "Prof. dr. O. Fodor" RIGH, Cluj-Napoca, throughout the study. Sample size is determined as it follows: in a target population of about 1,600 patients hospitalized between 1 March 2014 and 31 April 2014, a confidence level of 95% and a confidence interval (sampling error) of  $\pm 3\%$  were considered, resulting in a total number of 130 patients enrolled in the study, but only 120 questionnaires were filled out correctly.

*Designing the tool:* 82 items were applied in a sample group of 30 patients to formulate a final version of the assessment tool; 39 items were kept at the end of this filtering step and the remaining were transferred to the section of additional questions.

*Method of information collection:* The variables were included in a questionnaire divided into three sections designed to formulate a perspective on patient satisfaction. These three parts are represented by a psychometric tool, a series of

dichotomous questions and a suggestions section for the person filling out the assessment tool.

Besides socio-demographic indicators, aimed at locating participants by age, gender, education, and the department where they received health services when the study was conducted, the following variables were also included in a structured questionnaire consisting of three sections. The first section contains 39 items of the questionnaire for the evaluation of patient satisfaction. Thus, on a Likert scale (1 to 5), the patient is asked to express the level of satisfaction or dissatisfaction. The assessment scale consists of 5 steps: very dissatisfied, dissatisfied, neutral (neither satisfied nor dissatisfied), satisfied, very satisfied. The second section consists of 15 questions with dichotomous response (yes/no). They assess behaviours of patients or medical staff, which are representative behaviours for our study. The last section consists of a section of suggestions formulated by patients. These suggestions offer a subjective perspective on patient opinion, without the use of filter standardized questions, the patient knows the factors causing distress.

This assessment will allow the formation of a view on patient satisfaction regarding the services provided and will help make management decisions based on this feedback.

*Statistical methods used:* the research is based on both quantitative and qualitative analysis. Quantitative analysis will be done by means of a psychometric tool and qualitative analysis will be achieved by using open questions related to the medical services received, that patients can answer freely. Given the diversity of data collected through the questionnaire, quantitative and qualitative data, both descriptive statistical analysis and inferential statistical analysis will be used. The main aspects are: criterion validity of the assessment tool, its reliability and not least, aspect validity.

Criterion validity is a measure of the fact that the tool assesses what it aims to assess in relation to an external criterion. The patients were asked to mark their overall level of satisfaction on a scale from 1 to 5. Pearson correlation was used to determine the relationship between the score obtained from the assessment tool and the overall satisfaction statement. The result showed a correlation index with a .05 probability threshold.

Fidelity designates the measure when the scores obtained at a certain time persist. For example, it is very important to know if the tool has different scores between the two measurements. Empirically, if environmental conditions remain constant, the tool should show that satisfaction is also constant. Tool fidelity was estimated using Cronbach's Alpha coefficient. Results indicated a high coefficient of internal consistency, ranging between .81 and .94. These indices show that fidelity is a precise tool, whose results are consistent over time.

Aspect validity requires the tool to be perceived as credible by the person filling it out. Therefore, the items were formulated and rephrased in order to make the assessment tool transparent and easy to deduce.

Relationships between group variables: Variables were grouped according to the area of origin and gender, but the differences obtained were not statistically significant ( $p=0.927$ ).

Moreover, no significant differences were recorded when variable grouping was made between the level of education and gender ( $p=0.743$ ), or when it was made between the level of education and area of origin ( $p=0.743$ ).

*Software used for statistical data analysis and processing:* Data analysis was done using IBM SPSS Statistics 20. Quantitative data were described numerically by number and percentage. The evaluation of the association between

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qualitative variables was tested using X2 or Fisher's exact test. For all tests, the significance threshold value was 0.05, with bilateral p value. Statistical processing employed the Programming Environment for Data Analysis and Graphics with R version 3.0.2. Statistical software reading employed R Development Core reading Team: a language and environment for statistical computing. Vienna: R Foundation for Statistical Computing, 2010. Available at <http://www.R-project.org>.

### RESULTS

Results were represented by the identification of the level of satisfaction in patients admitted to a medical centre with beds, the most significant being those based on the following variables: area of origin, gender and level of education.

The area of origin indicated a significantly higher (significance threshold values  $p < 0.05$ ) level of patient satisfaction in those coming from the rural area compared to patients from the urban area regarding hospitalization conditions (accommodation), cleanliness and linen quality, but also related to the information received when admitted and the services received during hospitalization. Patients coming from the urban area presented themselves to the emergency unit (being transported by an ambulance) are in a significantly higher percentage than those from the rural area. Moreover, there are significant differences in terms of patient satisfaction related to patients being accompanied by the medical staff for various investigations, those from the urban area being more often accompanied for investigations compared to those from the rural area who mostly moved alone.

#### *Urban rural*

**Table no. 1. Table regarding significant item differences depending on the area of origin**

Area of origin	Rural	Urban	P-value
Accommodation in hospital / hospital accommodation conditions	Very satisfied 33 (70.21%); Satisfied 14 (29.79%)	Very satisfied 31 (42.47%); Satisfied 40 (54.79%); neutral 2 (2.74%)	0.006
Cleanliness	Very satisfied 36 (76.6%); Satisfied 11 (23.4%)	Very satisfied 39 (53.42%); Satisfied 31 (42.47%); Neutral 3 (4.11%)	0.021
Linen quality	Very satisfied 30 (63.83%); Satisfied 16 (34.04%); Neutral 1 (2.13%)	Very satisfied 29 (39.73%); Satisfied 30 (41.1%); Neutral 10 (13.7%) Dissatisfied 4 (5.48%)	0.012
Presentation to the emergency unit (transported by the ambulance)	Transported by the ambulance 2 (4.26%);	Transported by the ambulance 13 (17.81%);	0.03
Information received during admission on any complications that might occur during hospitalization	Yes 42 (89.36%); No 4 (8.51%); I don't know 1 (2.13%)	Yes 55 (75.34%); No 18 (24.66%)	0.021

Information received during admission on the services received within the unit / hospital	Yes 43 (91.49%); No 1 (2.13%); I don't know 3 (6.38%)	Yes 53 (72.6%); No 12 (16.44%); I don't know 11 (11%)	0.026
Declared patient satisfaction with hospital services, such as the social ones / whether there is someone to deal with the situation of the patient after discharge	Yes 30 (63.83%); No 4 (8.51%); I don't know 13 (27.66%)	Yes 31 (42.47%); No 2 (2.74%); I don't know 40 (54.79%)	0.009
Accompanying patients for investigations / investigations in other departments or other health centres (caregivers)	Caregivers 4 (8.51%); Alone: 9 (19.15%); Medical staff: 34 (72.34%)	Caregivers 5 (6.85); Alone: 3 (4.11%); Medical staff: 65 (89.04%)	0.021

In terms of gender, the following were obtained for different variables: it was found that women tend to be more satisfied than men regarding the following variables: doctor talks on possible effects arising when disregarding medical instructions, health care provided by nurses, their availability and attitude towards patients. It seems that men prefer disease and treatment information to be given directly, avoiding the involvement of caregivers, while women prefer that their health information to be shared with the family.

#### *Gender*

**Table no. 2. Table on the significant gender-related item differences obtained**

Gender	Women	Men	P-value
Care provided by nurses	Very satisfied 50 (74.63%); Satisfied 13 (19.4%); Neutral 3 (4.48%); Dissatisfied 1 (1.49%)	Very satisfied 29 (54.72%); Satisfied 24 (45.28%)	0.003
Care provided by the attendants	Very satisfied 50 (74.63%); Satisfied 13 (19.4%); Neutral 3 (4.48%); Dissatisfied 1 (1.49%)	Very satisfied 29 (54.72%); Satisfied 21 (39.62%); Neutral 3 (5.66%)	0.045
Attitude/behaviour, availability of nurses	Very satisfied 51 (76.12%); Satisfied 13 (19.4%); Neutral 2 (2.99%); Dissatisfied 1 (1.49%)	Very satisfied 30 (56.6%); Satisfied 23 (43.4%)	0.007
Discussions with	Very satisfied 45	Very	0.017

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the doctor on the risks of disregarding medical indications	(67.16%); Satisfied 21 (31.34%); Dissatisfied 1 (1.49%)	satisfied 34 (64.15%); Satisfied 13 (24.53%); Neutral 6 (11.32%)	
Linen quality	Very satisfied 37 (55.22%); Satisfied 21 (31.34%); Neutral 9 (13.43%);	Very satisfied 22 (41.51%); Satisfied 25 (47.17%); Neutral 2 (3.77%); Dissatisfied 4 (7.55%)	0.009
When admitted, the patient was asked if he/she wants to convey information on health status to caregivers or other people	Yes 38 (56.72%); No 17 (25.37%); I don't know 12 (17.91%)	Yes 30 (56.6%); No 22 (41.51%); I don't know 1 (1.89%)	0.009

Depending on the level of education, the following results were obtained for different variables: it appears that those with primary education are more satisfied with hospital facilities, with the information received at admission and throughout hospitalization compared to those with secondary and higher education. The higher the level of education, the lower the level of satisfaction, as these people take into account a lot more variables when it comes to providing comfortable and satisfying services. The table below has omitted uneducated subjects, as they represented a very small percentage.

### *Level of education*

**Table no. 3. Table on the significant education-related item differences obtained**

Level of education	Primary	Secondary	Higher education	P-value
Institute / hospital facilities	Very satisfied 17 (70.83%); Satisfied 7 (29.17%)	Very satisfied 38 (63.33%); Satisfied 22 (36.67%);	Very satisfied 15 (50%); Satisfied 10 (33.33%); Neutral 5 (16.67%);	0.048
When admitted, the patient was asked if he/she wants to convey information on health status to caregivers or other people	Yes 16 (66.67%); No 3 (12.5%); I don't know 5 (20.83%)	Yes 34 (56.67%); No 23 (38.33%); I don't know 3 (5%)	Yes 15 (50%); No 12 (40%); I don't know 3 (10%)	0.043
Information received on admission on patient rights	Yes 19 (79.17%); No 1 (4.17%); I don't know 1	yes 47 (78.33%); No 10 (16.67%); I don't	Yes 20 (66.67%); No 10 (33.33%)	0.028

	4 (16.67%)	know 3 (5%)		
Information received on admission on any complications that might occur during hospitalization	Yes 23 (95.83%); No 1 (4.17%)	Yes 49 (81.67%); No 11 (18.33%)	Yes 20 (66.67%); No 10 (33.33%)	0.012

### DISCUSSIONS

In terms of area of origin, there is a significantly higher level of patient satisfaction (significance threshold values  $p < 0.05$ ) in those coming from the rural area compared to those from urban areas regarding: accommodation in hospital / hospital accommodation conditions (70.21% rural area vs. 42.47% urban area), cleanliness (76.6% rural area vs. 53.42% urban area), and linen quality (63.83% rural area vs. 41.1% urban area). In terms of satisfaction with the information received on admission on the complications that may arise during hospitalization, the values recorded were 89.36% for those coming from rural areas and 75.34% for urban areas, and the level of satisfaction on the services they received during hospitalization was of 63.83% for the rural area and 42.47% for the urban. Urban patients presented themselves to the emergency unit (being transported by ambulance) to a significantly greater extent (17.81%) than those from rural areas (4.26%). There are significant differences in patient satisfaction on the fact that they were accompanied by the medical staff for various investigations, those from the urban area being more often accompanied (89.04%) than those from the rural areas (72.34%), who do it alone in a higher percentage (19.15%) than patients from the urban area (4.11%). (Table 1)

Compared to other studies on the accommodation conditions in other hospitals, with a 3.8% positive appreciation, or 2.8% for cleanliness, there is a greater satisfaction in the patients evaluated in our study.

In terms of gender, the following were obtained for different variables: it is found that women tend to be more satisfied than men regarding: doctor talks on possible effects arising in case of disregarding medical indications: 67.16% women and 64.15% men, care provided by nurses: 74.63% women and 54.72% men, nurse availability and attitude towards patients: 76.12% women and 56.6% men. It seems that men prefer disease and treatment information to be transmitted to caregivers or others in a percentage of 56.6%, while women prefer it to be shared with the family in a percentage of 56.72%, which could be explained by the higher need for emotional support in women.

Compared to other studies aimed at patient satisfaction with doctors, this was opposite to our findings, namely men showed a higher level of satisfaction than women.

Depending on the level of education, the following results were obtained for various variables: patients with primary education are more satisfied with hospital facilities (70.83%) than those with secondary education (63.33%) and higher education (50%). Regarding the information received on admission on patient rights, patients with primary education (79.17%) are more satisfied than those with secondary (78.33%) and higher education (66.67%). Regarding the information received on admission on possible complications that might arise during hospitalization, patients with primary education are more satisfied (95.83%) than those with secondary (81.67%) or higher education (66.67%). The higher the level of education, the lower the level of satisfaction, as these people consider more variables when ensuring comfortable and satisfying conditions.

### CONCLUSIONS

The data obtained indicates a higher degree of satisfaction in patients from rural areas, in women and in those with lower levels of education, both in terms of accommodation conditions, hospitalization, health staff attitude and information received on admission and during hospitalization. Although other variables taken into account did not indicate significant differences, these variables should still not be neglected, as together with other variables, they may play a significant role in improving the future quality of health care, hospitalization conditions and patient satisfaction with the medical staff.

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