

Research Article

Evaluation of Patient Satisfaction in the Cardiology, Pulmonology and Neurosurgery Departments of the Ibn Sina University Hospital Center in Rabat (Morocco)

Martial Coly Bop^{1,*} , Boubacar Gueye¹ , Fatou Ndiaye Oumar Sy¹ ,
Coumba Ka^{1,2} , Oussama Bouchti^{3,4,5}, Ndeye Fatou Ngom Gueye¹,
Abdoul Aziz Ndiaye¹, Ousseynou Ka¹

¹UFR/SDD, Alioune DIOP University, Bambey, Senegal

²Mother and Child Health Department, Ministry of Health and Social Action (MSAS), Dakar, Senegal

³Faculty of Medicine, Cheikh Anta DIOP University, Dakar, Senegal

⁴Aristide le Dantec Hospital, Ministry of Health and Social Action (MSAS), Dakar, Senegal

⁵Ibn Sina University Hospital, Rabat, Morocco

Abstract

Introduction. The objective was to evaluate the satisfaction of patients hospitalized in the cardiology, pulmonology, and neurosurgery departments of the Ibn Sina University Hospital Center in Rabat, Morocco. **Methodology.** It was a descriptive cross-sectional study conducted from March 1 to June 30, 2021, involving patients hospitalized in the cardiology, pulmonology, and neurosurgery departments as the target population. The sample was constituted as patients were discharged. The inclusion criteria were hospitalization for 48 hours and agreement to participate in the study. Data collection was done using the EQS-H version 2007 questionnaire adapted to the patient's discharge, then transcribed into an Excel spreadsheet to determine percentage trends. **Results.** We found that there were more women (52%) in the sample, and 65.8% of patients have social coverage. The majority of patients (83%) were hospitalized in shared rooms. In addition, 51.1% of patients were satisfied with the explanations they received about their symptoms, and 56.6% were satisfied with the information they received about paraclinical tests. The doctor's recognition and attitude were considered satisfactory by 86.4% of patients. The organization of the service was satisfactory for 55% of patients. **Conclusion.** The improvement of patient satisfaction must be based on several measures, including the reorganization of services, the continuous improvement of the hospital's physical environment and its surroundings, the creation of specific uniforms for each category, and the continuous training of medical and paramedical staff.

Keywords

Satisfaction, Hospitalization, Healthcare Services, Ibn Sina University Hospital Center, Morocco

*Correspondence: Martial Coly Bop (martialcoly.bop@uadb.edu.sn)

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1. Introduction

The quality of care provided to patients is a concern for all medical teams. According to the WHO, the quality of care depends on various factors such as resources (human, financial, etc.), procedures, human contact within the healthcare system, and so on [1].

Hospitalized patients require special attention. This is explained by the fact that hospitalization causes a disruption on the physical, psychological, and social levels [2]. Thus, the evaluation of patient satisfaction is a necessity to ensure an optimal experience for patients. According to Larousse, satisfaction is a concept derived from the Latin “satis,” meaning “enough”; to satisfy someone means to please them, to fulfill them, to meet their expectations, needs, and desires. Furthermore, it can be expressed by an individual; its assessment depends on their expectations, needs, and desires, which are clearly relative [3]. According to Pascoe [4], it is the patient's reaction to their personal experience of services according on two approaches (cognitive: notion of knowledge, and emotional: affective domain) to the structures, processes, and outcomes of services. It is also an assessment of the response to the patient's implicit and explicit expectations [5]. Thus, by measuring satisfaction, patients evaluate the service or caregiver by comparing their personal standards to their perception of the service received. It allows for the evaluation of the organization of care, the process of management, the skills of the staff, and the identification of system malfunctions to address them. Different approaches (questionnaires, qualitative methods, etc.) can be used to evaluate satisfaction.

In addition, patients today actively participate in the care they receive. The quality of this new relationship and the satisfaction the patient derives from it must be evaluated [3, 6]. This evaluation allows for the recognition and understanding of the patient's expectations in order to better meet them.

It is in this context that the evaluation of the satisfaction of hospitalized patients was conducted in the cardiology, pulmonology, and neurosurgery departments of the Ibn Sina University Hospital in Rabat, Morocco.

2. Methodology

2.1. Study Setting

The study was conducted at the Ibn Sina University Hospital Center in Rabat. It was served by various means of transportation (bus, tram, taxi, trains, etc.). It had ten medical departments and medical specialties (cardiology, pulmonology, etc.), thirteen surgical departments and surgical specialties (neurosurgery, etc.), an emergency and intensive care unit, medical-technical departments, and administrative departments. The targeted departments were cardiology, pulmonology, and neurosurgery. They had double rooms (10), single rooms (5), and shared rooms (11). The bed capacity of the three departments was sixty-four. All rooms had toilets. The

staff consisted of nine professors, five specialist doctors, five interns, and eighteen nurses. Night duty was provided by nurses, resident doctors or interns, and students. The services were open to families from 2 PM to 4 PM and from 6 PM to 8 PM. meals were distributed from 7 AM to 8:30 AM (breakfast), from 12 PM to 1:30 PM (lunch), and from 6 PM to 8:30 PM (dinner). A nurse in each department was responsible for taking samples to the laboratory for analysis or accompanying patients to the laboratory.

2.2. Type of Study

This was a descriptive cross-sectional study conducted from March 1 to June 30, 2021.

2.3. Study Population

The study population consisted of patients in the cardiology, pulmonology, and neurosurgery departments at Ibn Sina University Hospital.

2.4. Sampling and Sample Size

The sample was constituted as patients were discharged. The sample consisted of 184 patients. Patients hospitalized for 48 hours in the targeted departments were included in the study. The criteria for non-inclusion of patients were inability to answer questions (psychiatric illness, etc.), refusal to participate, and contradictory answers to the questions asked.

2.5. Data Collection Tools and Techniques

The data was collected using an adapted version of the 2007 EQS-H questionnaire. There was training for the surveyors (doctors and nurses), followed by a pre-test with ten patients in non-targeted departments, which allowed for the reformulation of poorly understood questions, the removal of unsuitable ones, and the assessment of the time needed to complete the test.

Data collection was carried out on the day of the patients' discharge by a healthcare professional (doctor or nurse). For patients who had returned home after hospitalization, data collection was carried out by telephone. The questionnaire was administered in French and translated into Arabic for those who did not understand French.

2.6. Analysis Plan

The data was transcribed into an Excel spreadsheet to determine percentage trends. The analysis was based on the assessment of satisfaction levels according to informational, relational, and personal opinion dimensions.

2.7. Ethical Considerations

The heads of departments had given their consent for the survey to be conducted. Patients were informed about the study and their responses had no impact on their care; the same applied in the event of refusal. The confidentiality and anonymity of the data were ensured.

3. Results

3.1. Description of the Study Population

The majority of patients (63.1%) resided in the city of Rabat. The study population consisted of 184 patients distributed among the cardiology (31%), pulmonology (52.2%), and neurosurgery (7.8%) departments. The average age of the patients was 55 years, with a minimum of 18 years and a maximum of 92 years. The female gender (52%) was more represented in the study population. More than half of the study population (67.4%) consisted mainly of married patients. We noted that 51.2% had no schooling. The majority of patients (65.8%) had social coverage. Forty-nine (49%) of the patients surveyed had no income.

3.2. Hospitalization Assessment

Forty-nine-point five percent (49.5%) had no prior hospitalization. The majority of patients (83%) were hospitalized in shared rooms. Twenty-seven-point seven percent (27.7%) of the patients had an average length of stay of 2 to 4 days, while nineteen-point five percent (19.5%) were hospitalized for more than 10 days. The majority of patients (52.2%, $n=96$) felt that their health condition had significantly improved during hospitalization.

3.3. Assessment of Communication

The explanations about the symptoms were deemed satisfactory by 51.1% ($n=94$) of the patients. For paraclinical examinations, the information received was deemed satisfactory by 56.6% ($n=102$) of the patients. The information on the tests was deemed satisfactory by 54% ($n=99$) of patients. Regarding the purpose of treatment, 49.8% ($n=91$) of patients considered the information received to be satisfactory. However, only 29.8% ($n=55$) of patients considered the explanations of the side effects of treatment to be satisfactory.

Upon discharge from the hospital, the information provided was considered satisfactory for symptoms to monitor after hospitalization (38.5%, $n=70$), for activities (sports, work, etc.) to resume after discharge from the hospital (38.8%, $n=71$), and for medical care (80.2%, $n=147$).

3.4. Assessment of the Doctor-patient Relationship

Most patients (86.4%, $n=159$) rated the doctor's recognition

and attitude as satisfactory. Respect for privacy and confidentiality was satisfactory for 60.2% ($n=110$) of patients. Non-medical services were considered satisfactory by 45.9% ($n=84$) of patients. When called, the assistance provided by nurses was satisfactory for 47.4% ($n=87$) of patients. The opinions of patients regarding their state of health were taken into account in decision-making for 50.1% ($n=92$) of patients.

3.5. Assessment of the Organization and Atmosphere of the Department

The organization of the department was also satisfactory for 55% ($n=101$) of patients. The atmosphere of the department was satisfactory for 67.2% ($n=123$) of patients. The time spent on care by nurses was considered satisfactory by 39.8% ($n=73$) of patients.

4. Discussion

4.1. Limitations

We have judgment biases related to assessing satisfaction. It is a multidimensional concept. Patients are more sensitive to information and the behavior of healthcare providers. They are more interested in human aspects [7-9, 12]. Then there is the quality of non-medical services, the social climate, etc. [13]. Thus, when assessing information and behavior, patients may exaggerate or underestimate them. As for assessing the quality of care, they often lack the skills to do so. They simply give their perception, and this constitutes a bias in the information provided.

To this is added the fact that we are dealing with a case study. The results cannot be generalized because the data is not representative.

4.2. Study Population Characteristics

In our study, the average age was 55 years. This result was similar to the study by Neeman et al [14] and the study conducted in China by Zhang et al [15], where the average age was 52.7 years and 60.9 years, respectively. In contrast to the studies conducted in Abidjan by NGuessan A [16] and Wawa J A [17], the results were 32 years and 33 years, respectively. We noted that patients aged 50 years and older were more tolerant and received more respect and care from medical and paramedical staff.

We noted a female predominance (55%) in the study. A similar result was observed in the study by Zhang et al [15] with a female proportion of 56.1%. Demographic data from the Moroccan High Commission for Planning (HCP) [18] confirm this female predominance within the Moroccan population.

The majority of patients (65.8%) had social coverage, unlike in the study by Nguyen Thi et al [19] conducted in Vietnam, where 7.1% of patients had a health insurance card.

The study by Bourdeaux et al [20] showed that patients without social security coverage appeared to be less satisfied. Social security coverage significantly reduces fixed healthcare costs and contributes to patient satisfaction with their medical experiences [18].

Forty-nine percent (49%) of the patients surveyed had no income. In Vietnam, Nguyen Thi et al [19] noted that 36.4% of patients had no income. Some studies [21, 22] have noted that patients with high incomes were more satisfied than those with modest incomes [23]. The lack of income, often a sign of unavailable or insufficient financial resources, can be a barrier to accessing care.

Fifty-one-point one percent (51.1%) of patients had no schooling. An assessment of patient satisfaction at the Aristide le Dantec Hospital [24] showed that 45.4% of patients had no schooling. This contrasts with China, where 24% of patients were uneducated [15]. It was found that poverty decreased significantly with increasing levels of education [25]. On the other hand, less educated patients were more satisfied [18, 21, 26-28] because their expectations were lower. However, in the study by Kane et al [29], the most educated were the most satisfied.

4.3. Characteristics Related to Hospitalization

Half of the patients had not been hospitalized in the hospital facility before (49.5%). This result was verified in Vietnam [19], where 65% of patients were hospitalized for the first time. Quintana et al [30] showed that those who were hospitalized multiple times were less satisfied.

The majority of patients (83%) were hospitalized in shared rooms. An almost identical result was found in the study by Aristide et al [31], where 88.1% of patients were in shared rooms.

Twenty-seven point seven (27.7%) of patients had an average length of stay of 2 to 4 days. In Belgium, healthcare policies were geared towards reducing the length of stay for economic reasons, but also for the sake of efficiency and appropriate use of hospital infrastructure without compromising the quality of care and taking into account the specific situation of patients. Nguyen Thi et al [19] and Quintana et al [30] noted that satisfaction rates were high when the length of stay was short.

During hospitalization, 52.2% of patients considered their health to have improved. Other studies [32-34] showed similar results. Several quality-of-life instruments have been validated, allowing for objective measurement of patients' health status [3] in order to assess the real impact of this health status on patient satisfaction. The study by Nguyen Thi et al [19] is one example.

4.4. Assessment of Communication

During hospitalization, 51.1% of patients were satisfied with the information provided about their symptoms. The

study conducted by Aldama K. J. et al [34] in Bangladesh found a satisfaction level of 48% regarding the information received.

Regarding the objective of treatment, 49.8% (n=91) of patients considered the information received to be satisfactory. N'Guessan A. [16] and Aristide et al [31] found different results, 34% and 35.3% respectively.

The explanations about the side effects of the treatments were deemed satisfactory by 29.8% (n=55) of the patients. In France, 34% of patients report not knowing the side effects of the treatments received or the symptoms that require notifying their doctor [35].

Upon leaving the hospital, 38.5% of patients were satisfied with the information received regarding the symptoms to monitor. The result found (35.5%) in the cardiology department of the Yalgado Ouedraogo University Hospital by Aristide et al [31] was similar. For the resumption of activities (sports, work...) after leaving the hospital, 38.8% of patients found the information received satisfactory. This result is comparable to that of the study by Aristide et al [31] where a satisfaction rate of 40.9% was found.

The information provided upon discharge regarding medical care was deemed satisfactory by 80.2% of patients. A study conducted in the cardiology department at Yalgado Ouedraogo University Hospital [31] found a rate of 86%. The satisfaction rate is related to the technical competence but especially to the communication skills of healthcare professionals [36]. According to Doering, communication is the aspect of care for which patients express the least satisfaction; the lack of adequate information is the most well-known source of dissatisfaction, often leading to non-adherence to treatment [9, 10, 37].

4.5. Assessment of the Doctor-patient Relationship

The recognition and attitude of the doctor were deemed satisfactory by 86.4% of the patients. The study conducted in the cardiology department of Aristide Le Dantec Hospital [24] found that only 16% of patients were able to identify staff roles. In a context where healthcare workers (doctors, paramedics, orderlies, etc.) all wore white coats, it was difficult to identify staff roles. This led to the introduction of color-coded uniforms for each healthcare category at Douala Hospital [38]. Identifying the different staff categories has become both a necessity and a right for patients. A uniform or a simple printed badge could then suffice [39].

The respect for privacy and confidentiality was satisfactory for 60.2% of the patients. The rate found (45.1%) in Bangladesh, in rural areas, was lower than that of our study. On the other hand, in other studies [24, 31, 40, 41], we found satisfaction proportions higher than those in our study, respectively (92%, 93.2%, 93%, and 93.4%). Respect for privacy is related to several factors such as the doctor's behavior during exami-

nations, care, hygiene; respect for confidentiality; preservation of medical secrecy; respect for private life.

Non-medical services (meals, bedding, sanitation, comfort, room) were considered satisfactory by 45.9% of patients. The study conducted by Aristide et al. [31] showed that 81.75% of patients were satisfied, in contrast to the study carried out by Hachedde F. [42] in the endocrinology, pulmonology, oncology, and cardiology departments of the university hospital in Sousse, where 50% of patients rarely used hospital meals. Their main nutritional needs were met by family members for 33% of their needs [42]. Professionals must address the challenges arising from epidemiological, demographic, and social changes in populations to develop new skills and adapt their action strategies.

4.6. Assessment of the Service's Organization and Atmosphere

The organization (reception, visit, waiting time...) of the service was deemed satisfactory by 55%. In the studies conducted by Aristide et al [31] and Zhang et al [15], the satisfaction rate found was respectively 77% and 69.7%. The implementation of "facilitation tools" and "actionable roadmaps" has been proposed in the literature to empower both patients and staff by improving their ability to understand each other and communicate better [16].

The patients (39.8%) were satisfied with the time spent by nurses. In contrast, Aristide et al. [31] found a satisfaction rate of 80.9% among patients in the cardiology department of the Yalgado Ouedraogo University Hospital. However, the result found at Ibn Sina Hospital remains higher than the patient satisfaction rate (21.4%) in the study by Diouf et al. [41] in the dentistry department in Dakar. Patient satisfaction with the time nurses spend providing care is crucial for perceived quality, although it is often impacted by a heavy workload and organizational constraints that limit the time available for direct patient care. Effective communication and personalized attention are key determinants of satisfaction. Healthcare professionals must have a strong sense of professional responsibility, particularly nurses who are often the first point of contact for patients. Indeed, if a patient feels neglected, this will have a negative impact on the progression of their illness.

5. Conclusion

In the study, we noticed that most patients complained about a fairly significant waiting time and stated that they were not often informed by the staff about the reasons for the waiting delays, the costs of tests, and hospitalizations. Also, it was noted that the overall level of patient satisfaction was generally low. That is why we recommend strengthening services in quality human resources, promoting population enrolment in health coverage (health insurance, free policies...), reorganizing services by reducing the number of common rooms in favor of individual or double rooms, continuously improving

the physical environment of the hospital and its surroundings (green spaces, rooms, toilets, signage, bedding...), creating specific uniforms for each category, and providing continuous training for medical and paramedical staff focused on the medical aspects of patients and communication with them.

Abbreviations

UFR/SDD	Training and Research Unit for Health and Sustainable Development
MSAS	Ministry of Health and Social Action
EQS-H	Quality of Care Scale in Hospitalization

Conflicts of Interest

We declare that we have no financial, commercial, or other ties that could be perceived as a potential conflicts of interest by the academic community.

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