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Determinants of Patient Satisfaction at Tertiary Care Centers in Lebanon

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Abstract

Objective: To assess patient satisfaction with services provided in inpatient health care settings in Lebanon. Methods: Our cross-sectional study enrolled patients who spent a minimum of one night in any ward at accredited hospitals in various regions of Lebanon. A structured questionnaire covering multiple domains was utilized to assess patient satisfaction as well as capture demographic data and visit characteristics. Results: From the pool of 1300 patients given questionnaires, a high response rate (92.8%; 1206) was achieved. Most (60.4%) respondents had the second class medical insurance coverage; only 99 (8.2%) had a first class coverage. Patient satisfaction was influenced by age, educational level, and medical insurance coverage class. Most respondents were pleased with overall nursing care (96.6%), and physician consultations (95.4%), P = 0.001. Conclusions: Patient satisfaction with hospital care is significantly influenced by patient's provider interactions during the episodes of care. Furthermore, the surrounding physical environment also has an influence on patient satisfaction. Also, our results showed the acceptable level of satisfaction about the healthcare system delivered in Lebanon. This could be enhanced if appropriate management decisions will be implemented to overcome weakness and barriers.

Keywords

Patient Satisfaction, Indicator, Healthcare Delivery, Quality, Inpatient

1. Introduction

Patient satisfaction is essential in assessing the quality of health care delivered [1]. Briefly, patient satisfaction describes how patients value and regard their care; it is a process as much as an attitude, so it must be, monitored continually, and frequently measured.

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Previous studies focused on patient satisfaction as a precondition to achieve desirable clinical outcomes [2]. It has been observed that satisfied patients are more compliant and more likely to participate in their treatment [3]. Gradually, patients' satisfaction became an essential component of health care services quality monitoring and improvement processes [4]. In today's competitive health care environment, measuring quality has become a necessity; consequently, health care bodies should focus on patient satisfaction as a way to gain and maintain market share.

The results of these studies are increasingly being used by health care providers and regulators to locate and solve problems that can improve the quality of care [5]. Some experts have suggested that waiting time is critical in determining overall patient satisfaction [6]-[8]. While others have shown that interpersonal skills, humanitarian qualities of the staff, the amount of information given to a patient about his or her condition are paramount [9]-[11] and behaviors of physician and nursing staff are most influential in determining patient satisfaction [9] [10].

Many studies indicate that customers in different countries evaluate good service in different ways. Therefore, measures applicable in one culture may be incompatible with others cultures [12]-[15] as patient expectations and priorities vary worldwide [16]. Although assessment of inpatient satisfaction has become common in Lebanon, a validated questionnaire adapted to the Lebanese health care system has not yet been developed. The rationale of this survey on patient satisfaction is multifactorial. Data gathered through measuring patient satisfaction reflect care delivered by staff and can serve as a tool in decision making. In addition, patient satisfaction surveys can be tools for learning by highlighting areas of weakness in order to overcome these obstacles via appropriate management decisions. Data can also serve as means of holding physicians and nurses accountable; and it can show that they have acceptable level of patient's satisfaction. Moreover, these data are becoming obligatory to be used in health care quality documentation by accrediting organizations and consumer [17]. We sought to explore determinants of patient satisfaction in Lebanese Tertiary Care Centers that could impact the patient's perception of the care provided throughout an inpatient care.

2. Materials and Methods

2.1. Design

A cross-sectional study was conducted at tertiary care centers in Lebanon during February 2012.

2.2. Study Population

The inclusion criteria for the study were patients or legal representative of patients ≥18 years old with full or partial unconsciousness of both genders and different age groups who spent at least one night in any medical, surgical, intensive care, pediatric, or oncology department at nine randomly selected accredited Lebanese hospitals located in various Lebanese districts (Greater Beirut, Mount Lebanon, South Lebanon, Nabatiyeh, North Lebanon, Beqaa) Sampling proportionate (30%) to the number of hospitals in each district.

2.3. Recruitment

For each hospital, written permission was sought and granted to distribute and collect questionnaires. The letter included a brief description of the study. Sampling proportionate (60%) to the number of inpatient beds for each hospital was randomly drawn. A structured questionnaire was distributed randomly among a representative sample of 1300 inpatients.

2.4. Data Collection

A validated questionnaire was used to capture from recruited inpatients. It focused on 7 key indicators evaluating satisfaction across several hospital settings: nursing care, physician care, hospital services/facilities, gateman, technical, dietetic services, and discharge instructions. These indicators were adopted from pre-tested patient satisfaction questionnaires used in various accredited Lebanese hospitals. Our questionnaire was validated by benchmarking against similar ones in the literature targeting diverse populations and using different approaches [18]. Initially, the questionnaire was tested on 20 inpatients from Makassed General Hospital to determine whether the questions were clear, understandable, and in a logical order (face validity). Besides, 4 health professionals who had experience in health care managment were asked to criticize the content of the questionnaire

(content validity).

The nursing care indicator used 6 items to assess patient satisfaction with nursing care and the quality of nursing care provided. Physician care, gateman services, and technical services indicators consist of 3 items each. The physician care indicator assessed satisfaction with the competency of physicians while gateman services were assessed on the basis of behavior and guidance. For technical services indicators, we considered transportation, waiting time for services, and conduct of staff and technicians. Hospital services/facilities and dietetic services indicators had 5 items each whereas patient discharge had 2 items; the latter assessed discharge simplicity and waiting time to perform discharge formalities. Each item was rated by patients on a five-point Likert-type scale: 1—very poor; 2—poor; 3—average; 4—good; 5—excellent. Internal consistency was tested using Cronbach's alpha coefficient. Scales 1, 2 and 3 were interpreted as being dissatisfied and 4 and 5 satisfied. Additionally, visit characteristics (actual length of stay, admission floor/unit, and frequency of visit) and demographic variables (age, gender, education level, and medical insurance status) were assessed. Cronbach's alpha coefficient for the survey was 0.94, which indicates the scale was internally consistent.

There are various types of health plans available, some of which provide only general health care, while others provide specific types of health care that can cover up to vision problems and even dental problems. The class of medical insurance determines the coverage. First class insurance cover 100% of hospitalization and medical expenses for the member, 75% for spouse and children and 50% for dependent parents, second class includes sickness and maternity allowances amounting to 90% of hospitalization costs and 80% of medical consultations while third class covers 90% of hospitalization costs and 75% of consultations.

2.5. Data Entry and Analysis

Data captured in the survey tool was entered into the Statistical Package for the Social Sciences version 18 (SPSS Inc., Chicago, IL, USA) and reviewed. It was then analyzed and presented as the mean (±standard deviation) of continuous variables and numbers (%) for discrete variables (**Table 1**). For **Table 2** and **Table 3**, data

Table 1. Demographic variables and visit characteristics of respondents (N = 1206).

Demographic variables	No. (%) of participants
Mean age years (±SD)	39.9 (±22.5)
Median age years [min - max]	37 [18 - 97]
Gender	
Female	704 (58.4)
Male	502 (41.6)
Education level	
Elementary	245 (21.6)
Intermediate	273 (24.1)
Secondary	279 (24.6)
University	241 (21.3)
Postgraduate	94 (8.3)
Grade of medical insurance coverage	
Class I	99 (8.2)
Class II	728 (60.4)
Class III	379 (31.4)
Visit characteristics	
Admission floor/unit	291 (24.1)
Medical	256 (21.2)
Surgical	247 (20.5)
Obstetrics/gynecology	226 (18.7)
Pediatrics	116 (9.6)
Hematology/oncology	70 (5.8)
Intensive care	
Visit frequency	
First time	462 (38.9)
Frequent	725 (61.1)
Mean length of stay at hospital days (±SD)	5.627 (±7.02)
Median length of stay at hospital days [min - max]	4 [1 - 120]

Data presented as number (%), median [min - max], and mean (±SD).

Table 2. Evaluation of respondent's assessment of nursing and physician care satisfaction by indicators (N = 1206).

Indicators	Satisfied N (%)	P-value (for testing % satisfied versus 50%)
Nursing care		
Waiting time to provided care	668 (55.4)	0.36
Nurses behavior	616 (51.1)	0.72
Responding to patients' calls and requests	1124 (93.2)	<0.001
Nurses' round on patients and carrying the doctors' order	1150 (95.4)	<0.001
Accuracy in administering medication	1150 (96.6)	<0.001
Quality of nursing care	1137 (94.3)	<0.001
Physician care		
Doctors' behavior	627 (52.0)	0.52
Time spent by doctor with patient	1144 (94.9)	<0.001
Instructions and directives given by doctor	1150 (95.4)	<0.001

Data presented as number (%).

Table 3. Evaluation of respondent's assessment of different hospital services and facilities satisfaction by indicators (N = 1206).

Indicators	Satisfied	P-value (for testing % satisfied versus 50%)
Hospital services/facilities		
Room service and facilities	1028 (85.2)	<0.001
Room cleanliness/general atmosphere of the floor	1043 (86.5)	<0.001
Reception of staff/visiting hours	1027 (85.2)	<0.001
Phone operator	929 (77.0)	<0.001
Waiting time for admission formalities	999 (82.8)	<0.001
Gateman services		
Behavior	1076 (89.2)	<0.001
Guiding directives by information desk	1094 (90.7)	<0.001
Visitors' parking	917 (76.0)	<0.001
Technical services		
Transportation to and from technical units (labs, radiology, …)	1067 (88.5)	<0.001
Waiting time for getting served	1022 (84.7)	<0.001
Conduct of staff and technicians	1051 (87.1)	<0.001
Dietetic services		
Time of serving meals	1038 (86.1)	<0.001
Food quantity and variety	968 (80.3)	<0.001
Food quality, taste and temperature	934 (74.4)	<0.001
Service for special diet	943 (78.2)	<0.001
Giving brochure for patient with special diet upon discharge	903 (74.9)	<0.001
Patient discharge		
Simplicity of discharge formalities	1042 (86.4)	<0.001
Waiting time to perform discharge formalities	980 (81.3)	<0.001

Data presented as number (%).

analysis testing per cent of satisfaction vs. a 50% response was pursued using a binomial test. P-value < 0.05 was considered significant. Binary regression was used to determine any possible relationship between independent variables and dependent variable (patient satisfaction).

Evaluation of the face and content validity was performed by asking 20 patients and 4 health professionals, to evaluate the clarity representativeness of the questions regarding the assessment of patient's satisfaction.

2.6. Ethical Considerations

We obtained Institutional Review Board approval at the Al-Makassed General Hospital in Beirut, Lebanon. Patients were voluntarily recruited with confidentiality and anonymity fully maintained.

3. Results

From the pool of 1300 patients from different hospitals located in various Lebanese districts that received the questionnaire, 1206 (92.8%) completed it; demographic and visit characteristics are presented in **Table 1**. Most (60.4%) respondent had a second class medical insurance coverage; only 99 (8.2%) patients had a first class. Less than half (46%) of the patients had an intermediate level of education. Notably, 462 (38.9%) of respondents were first time inpatients.

When asked about their satisfaction with nursing and physician care, majority of respondents indicated they were satisfied with the accuracy in administering medication by nurses (96.6%) and physician consultations (95.4%), P = 0.001 (**Table 2**).

Table 3 summarizes patients' satisfaction with different hospital services and facilities. Almost 91% of patients were satisfied with the services provided by the information desk (P = 0.001). On the contrary, 289 (24.0%) patients were highly unsatisfied with visitors' parking (P = 0.001). Moreover, patients were mostly unsatisfied about dietetic services indicator, specifically taste and temperature (25.1%, 22.6%, P = 0.001 respectively).

To further explore the association between patient' demographic variables, visit characteristics and their satisfaction, a regression model was used (**Table 4**). On multivariate analysis, our study showed that neither patient' demographic variables nor visit characteristics significantly associated with patient satisfaction.

4. Discussion

Customer satisfaction lies at the very core of modern marketing theory and practice: it is premised on the idea that organizations survive and prosper by meeting the needs of their customers. In the managed health care industry, the drive behind the increase in the use of patient satisfaction surveys appears multifaceted; it may partly be due to growth and competitiveness [19].

There are many aspects of patient satisfaction that have been measured, including satisfaction with support staff, nursing care, hospital environment, parking, convenience services [20] [21] and physicians [22]-[24]. A study conducted by Zineldine reported that patient satisfaction is a cumulative construct embracing satisfaction with various hospital facets [25]. Remarkably, in our study, indicators such as nursing and physician services, hospital services/facilities, gateman, technical, and dietetic services, and discharge process emerged as critical factors in achieving patient satisfaction. Consequently, all stakeholders in the health care industry (including managers and health care workers) must be made aware of how these indicators are valued by patients and

Table 4. Bivariate associations of demographic characteristics of patients and their satisfaction.

Risk factors	OR	95% C.I	P-value
Age	0.79	0.44 - 1.4	0.427
Gender	0.70	0.41 - 1.2	0.199
Education level	1.98	0.98 - 3.99	0.052
Admission floor/unit	1.39	0.52 - 3.75	0.504
Visit frequency	1.71	0.93 - 3.11	0.084
Length of stay at hospital	0.84	0.38 - 1.81	0.657

appropriate training designed to overcome shortcomings. A patient's experience within a hospital environment is based on numerous encounters with a wide variety of individuals and locations. The first encounter is with the facilities parking lot, followed by the admissions process, encounters with physicians, nurses, and other service providers and their respective physical locations including patient rooms and the care they receive while in their rooms, the discharge process and finally the billing process [26]. Ware *et al*. argued that the patient characteristics are the determinants of satisfaction, whereas interpersonal manner, technical quality, accessibility, physical environment and availability of resources are the components of satisfaction [27]. With regard to the demographic characteristics of patients and their satisfaction with different indicators, our study showed that only age, education level, and grade of medical insurance coverage were the influenced patient satisfaction. Our results showed that patients with elementary education level significantly more satisfied than patients with postgraduate education level. In Nordbyhagen, Norway, a cross-sectional survey conducted on patients' experiences with hospital care found that less educated patients tended to rate the hospital service more positively than the others [28]. Similarly, in Boston, USA Hall *et al*. concluded after meta-analysis that greater patient satisfaction is associated with less education [29].

Different studies on satisfaction have found that older patients report a higher level of satisfaction than younger patients [30]. Likewise, the present survey showed that younger patients were significantly less satisfied with a reception of the staff, food quality, taste and temperature, giving brochure for patient with a special diet upon discharge, time of serving meals, and guiding directives by information desk compared to older patients.

Studies of the impact of gender on patient satisfaction are contradictory: some showed that men tended to have higher satisfaction scores than women [31] while others did not show that effect [32], as in our study.

Furthermore, an important result in terms of managerial implication is the significant relationship between satisfaction and visit characteristics which may be considered as a proxy indicator of patient satisfaction with hospital service. As both the actual length of stay, and admission floor/ unit significantly influence the patient satisfaction, the observed result permits health care management to resolve potential problems before they become grave through continuous redesigning process and understanding the factors that are highly associated with patient satisfaction.

An outstanding quality of our study was that we achieved a large representative sample from different hospitals located in various Lebanese districts thus facilitating nationwide extrapolation. Stakeholders in the Lebanese health care industry, especially managers and public officers, need to monitor patient experience and consider the results obtained in the planning of services and performance evaluation. Our study provides relevant data to support such quality improvement activities. It also provides data on health care quality for accrediting organizations and consumer groups. Lastly, it can be a leveraging tool in negotiating contracts.

Our survey has few limitations. Firstly, data was obtained from self reporting patients evaluating the care they received. Some of these patients may have lacked the requisite knowledge to fully appreciate the various aspects of the care they received or should have received. Secondly, fear of identification and subsequent victimization may have affected the veracity of self-reported data given by patients recruited from small hospitals.

5. Conclusion

Patient satisfaction with hospital care is significantly influenced by patient's provider interactions during the episodes of care. Furthermore, the surrounding physical environment also has an influence on patient satisfaction. Also, our results showed the acceptable level of satisfaction about the healthcare system delivered in Lebanon. This could be enhanced if appropriate management decisions will be implemented to overcome weakness and barriers.

Conflict of Interest

None.

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