Original Article

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Patient's Satisfaction of Emergency Department Affiliated Hospital of Babol University of Medical Sciences in 2013 -14

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ABSTRACT

BACKGROUND AND OBJECTIVE: Patient satisfaction in emergency departments is an indicator of healthcare quality, evaluation of which can promote awareness of the relevant authorities regarding its status. This study aimed to evaluate patient satisfaction in emergency departments in hospitals affiliated to Babol University of Medical Sciences.

METHODS: This cross-sectional study was performed in patients admitted to emergency departments in hospitals affiliated to Babol University of Medical Sciences, Babol, Iran, during a period of eight months (2013-2014). The participants were chosen through convenience sampling. Information regarding hospital environment, facilities, and nursing team was collected using a standard questionnaire. Standard questionnaire responses were classified to" don't happen, dissatisfied, low, medium and high satisfaction". Then medium and high responses classified to favorable satisfaction (above average) and low or dissatisfied responses were classified to unfavorable satisfaction. In case the patients were unable to fill-out the questionnaire, their companion completed it for them.

FINDINGS: Overall, 444 (87.9%) patients expressed optimum satisfaction. The highest rate of dissatisfaction (14.8%, n=74) was related to environment and services, while the highest rate of satisfaction (49.3%, n=246) was pertinent to nursing staff. The results indicated that the rate of satisfaction in residents of rural areas was 0.55 times higher than in urban residents (OR: 1.55, 95% CI: 1.12-2.70, p=0.02), 50% lower in patients compared to companions (OR: 0.55, 95% CI: 0.36-0.83, p=0.05),and in the evening shift was 0.65 times higher than in those admitted in the morning (OR: 1.65, 95% CI: 1.06-2.58, p=0.03). Moreover, this rate in patients admitted at night shift was 0.74 times higher than in those admitted in the morning (OR: 1.74, 95% CI: 1.12-2.70, p=0.01).

CONCLUSION: This study demonstrated optimum patient satisfaction in emergency departments in hospitals affiliated to Babol University of Medical Sciences.

KEY WORDS: *Medical Emergency, Satisfaction, Emergency Departments.*

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Introduction

Governments are responsible for providing health services to their community (1). Hospitals, as complex organizations providing health services, are directly associated with life and well-being of individuals. Therefore, improving their service quality is of utmost importance, since it can contribute to increased productivity and competitiveness, reduced costs, high patient satisfaction, and high profitability through affecting choice of care recipients (2). During the recent years, the quality of healthcare services and level of patient satisfaction have increased exponentially (3).

Satisfaction is an important factor in healthcare, and emergency departments play a pivotal role in patient treatment; therefore, they need to gain patients' satisfaction by providing quality services (4). Patient satisfaction is important in the appraisal of the health status of a society (5); in other words, patient satisfaction is a determinant of healthcare quality (6, 7). Patient satisfaction is an essential issue in emergency medicine, which may be influenced by clinical conditions and individuals' perceptions and interpretations of the events (8). In emergency departments, promoting service quality requires proper understanding of the situation and addressing problems of these departments (9). The quality of services in emergency departments is the representative of overall status of care service provision. Emergency medical services, which are provided in emergency situations and in short periods of time, are of particular significance and can save patients from certain death (4). For successful planning, understanding the views, needs, and demands of recipients of the services is mandatory (10). Evaluation of patient satisfaction may raise awareness of the relevant authorities regarding the status of emergency departments.

It would pinpoint the shortcomings of the services provided to patients, assist with overcoming the drawbacks, and improve the quality and quantity of patient care services. Emergency departments and service delivery are important and demographic variables can influence views and expectations of clients (11, 12). However, there is a scarcity of studies conducted in emergency departments in hospitals affiliated to Babol University of Medical Sciences, except for a number of studies performed to evaluate patient satisfaction in few clinics (13). Thus, this study aimed to evaluate patient satisfaction in emergency departments in hospitals affiliated to Babol University of Medical Sciences. Outcomes of this study can promote awareness of authorities regarding the status of emergency departments. It may reveal the shortcomings in providing services, help the authorities to rectify the drawbacks, and improve the quality and quantity of patient care services.

Methods

This cross-sectional study was performed using interviews with patients admitted to emergency departments in the hospital affiliated to Babol University of Medical Sciences, Babol, Iran, during an eight-month period (2013-2014). In general, 505 consecutive patients admitted to Ayatollah Rohani, Shahid Beheshti, and Shahid Yahya-Nejad Hospitals completed the questionnaire during working days. The inclusion criteria were being hospitalized for at least six hours, being the age of 15 years or more, not sustaining any cognitive dysfunctions (e.g., impaired attention or short-term memory and question comprehension problems), being able to complete the questionnaire (on their own or with their companion's assistance), and being willing to participate in the study. The participants were assured of the confidentiality of the data and that their comments would not affect the course of treatment.

If the patients were not able to fill-out the questionnaire due to lack of consciousness or frailty, it would be completed by their companions (who accompanied them since presenting to the hospital through hospitalization and was aware of the procedures from admission through receiving medical and diagnostic services). We employed standard questionnaire reliability and validity of which was established in different studies (4). In the current study, content validity of the questionnaire was confirmed by professors and experts in the field after seeking and applying their opinions. Cronbach's alpha was employed to determine the reliability of the questionnaire. In so doing, the questionnaire was filled-out by 20 patients, and then its reliability was calculated to be α=0.92. The questionnaire consists of the demographic information and items on satisfaction with various emergency divisions. The following variables were considered in the medical record contains the following demographic information: admission time (morning, evening, and night), history of hospitalization, place of residence (urban, rural), marital status, educational level (under diploma,

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diploma and higher), and type of admission (in person or 115 admission). Afterwards, admission reason and early diagnosis were recorded from patient charts. The emergency department satisfaction part included the following sub-scales: security (one item), admission (three items), treating physician (five items), nursing team (five items), diagnostic services (four items), environment and facilities (nine items), and hospital management (five items). The response scale was 0-undecided, 1-dissatisfied, 2-minimally satisfied, 3-moderately satisfied, and 4-highly satisfied. Each subscale was classified based on the number of items and scores. Finally, the average score was recorded as the overall satisfaction score. 'Highly satisfied' and 'moderately satisfied' responses were categorized as optimum satisfaction, while 'dissatisfied' and 'minimally satisfied' responses were classified as inadmissible level of satisfaction. An evaluative phrase (individuals' general view regarding the emergency department) was determined as overall satisfaction. To analyze the data, Chi-square test was applied to analyze the qualitative variables, t-test was employed to investigate quantitative variables, and logistic regression model was used for the analysis of factors affecting satisfaction. A p-value less than 0.05 was considered statistically significant.

Results

In general, 505 patients participated in this study; the highest and lowest number of patients were admitted to Ayatollah Rohani (n=250, 49.5%) and Shahid Yahyanejad (n=104, 20.6%) hospitals, respectively.

In addition, 372 (73.7%) respondents were the patient's companions. Most admissions were registered in the morning (n=194, 38.4%), whereas the lowest number of admissions were at night shift (n=149, 29.5%). Overall, 458 (92.2%) patients were admitted due to non-traumatic injuries, while 39 (7.8%) cases were trauma admissions. Most patients with non-traumatic injuries (n=127, 27.9%) had cardiopulmonary problems and 127 (27.9%) patients sustained internal injuries.

A total of 444 (87.9%) patients expressed optimum satisfaction. Most complaints (n=74, 14.8%) were pertinent to environment and facilities, while nursing team obtained the highest rate of satisfaction (n=246, 49.3%; table 1). None of the trauma patients was entirely satisfied with the services. Shahid Yahya Nejad Hospital gained the highest rate of satisfaction among hospitals affiliated to Babol University of Medical Sciences (fig 1).

Furthermore, there was a significant correlation between patient satisfaction and place of residence, the respondent (patient or companion), and admission time (table 2). The logistic regression model also indicated that, among all the analyzed variables, only these three variables were associated with patient satisfaction (table 3). Moreover, 306 (60.6%) patients were willing, 133 (26.3%) cases were undecided, and 62 were not willing to be readmitted to the same hospital.

Table 1. Patient satisfaction in emergency department in hospitals affiliated to Babol University of Medical Sciences during 2013-2014

Different divisions of emergency departments	Dissatisfied N(%)	Minimally satisfied N(%)	Moderately satisfied N(%)	Highly satisfied N(%)
Hospital management	48(12.8)	17(4.5)	35(47.1)	134(35.6)
Medical team	49(10.0)	15(3.0)	260(52.8)	168(34.1)
Nursing team	41(8.2)	10(2.0)	202(40.5)	246(49.3)
Diagnostic services	21(4.8)	5(1.1)	179(40.9)	233(53.2)
Admission type	44(9.0)	11(2.2)	205(41.8)	230(46.9)
Security	22(5.4)	9(2.2)	170(41.5)	209(51)
Environment and facilities	74(14.8)	6(1.2)	264(52.7)	157(31.3)

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Table 2. The relationship of satisfaction with demographic and medical record variables in patients who referred to the hospitals affiliated to Babol University of Medical Sciences during 2013-2014

Variable \ Satisfaction	Subgroup	N(%)	Optimum N(%)	Inadmissible N(%)	P-value
Gender	Male	238(47.1)	210(88.2)	28(11.8)	0.89
	Female	267(52.9)	234(87.6)	33(12.4)	
Marital status	Single	99(19.6)	86(86.9)	13(13.1)	0.73
	Married	406(80.4)	358(88.2)	48(11.8)	
Patient's age (year)	0-20	20(3.9)	19(95.0)	1(5.0)	0.57
	21-40	97(19.2)	84(86.6)	13(13.4)	
	41-60	145(28.7)	129(89.0)	16(11.0)	
	61-80	177(35)	151(85.3)	26(14.7)	
	81-100	63(12.4)	58(92.1)	5(7.9)	
Place of residence	Urban	237(46.9)	198(83.5)	39(16.5)	0.006
	Rural	268(53.1)	246(91.1)	22(8.2)	
Educational level	Illiterate	247(48.9)	220(89.1)	27(10.9)	0.71
	Under diploma	155(30.7)	134(86.5)	21(13.5)	
	More than diploma	103(20.4)	90(87.4)	132(12.6)	
Respondent	Patient companion	373(73.7)	12(93.2)	9(6.8)	0.03
	Patient	132(26.1)	320(86.0)	52(14.0)	
History of admission to the same hospital	Yes	243(48.1)	218(89.7)	25(10.3)	0.27
	No	262(51.9)	226(86.3)	36(13.7)	
Insurance coverage	Yes	470(93.1)	11(87.4)	59(12.6)	0.29
	No	35(6.9)	33(94.3)	2(5.7)	
Admission time	Morning	194(38.4)	80(41.7)	112(58.3)	0.016
	Evening	149(29.5)	79(53)	70(47)	
	Night	162(32.1)	91(56.2)	71(43.8)	
Admission type	In person	402(80)	370(92)	32(8)	0.9
	115 admission	74(14.7)	4(5.4)	70(94.6)	
	Others	27(5.3)	25(92.6)	2(7.4)	

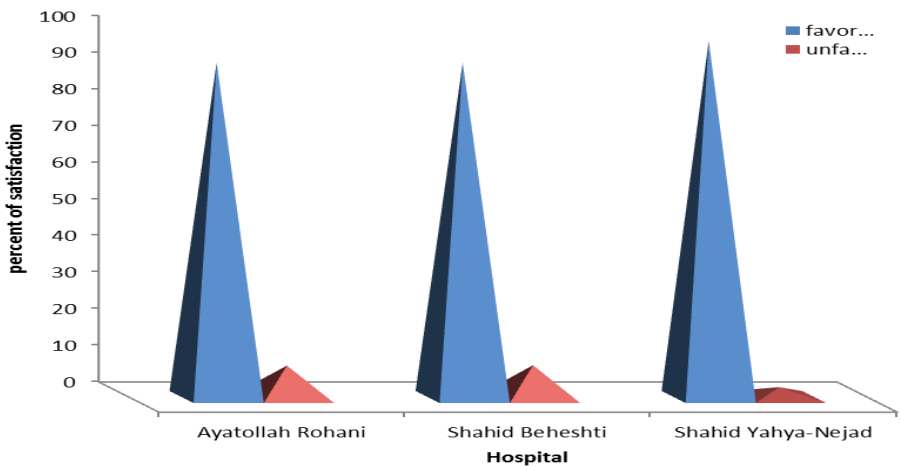

Figure 1. Rate of patient satisfaction according to hospital

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Table 3. Variables affecting patient satisfaction in emergency departments in hospitals affiliated to Babol University of Medical Sciences during 2013-2014

Variables	OR[a] (95% CI)	P-value	OR[b] (95% CI)	P-value
Gender (Female)	1.31(0.89-1.94)	0.17	-	-
Marital status (married)	1.01(0.62-1.65)	0.95	-	-
Age group (year)				
0-20	1		1	
21-40	0.34(0.04-2.76)	0.31	-	-
41-60	0.42(0.05-3.38)	0.41	-	-
61-80	0.3(0.03-2.38)	0.25	-	-
81-100	0.61(0.06-5.55)	0.66	-	-
Place of residence	1.61(1.09-2.39)	0.02	1.55(1.07-2.24)	0.02
Educational level				
Illiterate	1		1	
Under diploma	1.01(0.61-1.65)	0.99	-	-
Higher than diploma	0.97(0.52-1.83)	0.94	-	-
Respondent	0.55(0.36-0.85)	0.007	0.55(0.36-0.83)	0.005
History of admission to the same hospital	0.72(0.41-1.23)	0.23	-	-
Insurance coverage	1.35(0.64-2.86)	0.43	-	-
Admission time				
Morning	1		1	
Evening	1.69(1.08-2.66)	0.02	1.65(1.06-2.58)	0.03
Night	1.69(1.09-2.64)	0.02	1.74(1.12-2.70)	0.01

OR: Odds ratio; 95% CI: 95% Confidence interval

a: Crude odds ratio, b: Adjusted odds ratio

Discussion

In the current study, 88% of the patients expressed optimum satisfaction with the emergency departments. The highest and lowest rates of satisfaction pertained to nursing team as well as environment and facilities, respectively. Additionally, there was a significant relationship between rate of satisfaction and place of residence, respondent (patient and companion), and admission time. In a study by Ansari et al., the overall rate of satisfaction was 7.80% (14). In a study by Omidvari et al., 6.85% of patients had above average rate of satisfaction (15). The level of satisfaction varies across different studies, which can be attributed to client expectations and demands as well as overcrowded emergency departments. In the present study, the rate of satisfaction in admission departments was 7.88%, while in a study by Sheikhi et al., this rate was 94.4% (4). The lowest rate of satisfaction was associated with environment and facilities that included sanitation and emergency equipment. Since the rate of satisfaction varies depending on environment and emergency equipment, in some studies, these variables were examined separately.A study by Ayatollahi et al. indicated that 76% of patients were satisfied with the physical environment and 68% were satisfied with sanitation (16). Rural residents expressed willingness to readmission to the same hospital more than the urban ones, indicating that the quality of provided services met the expectations of rural residents, or expectations of urban residents were probably higher than the provided services. Those patients with 115 admission were less willing to readmission to the same hospital, which might be due to adverse experiences. Boudreaux et al. accentuated the role of reduced wait time in increased rate of satisfaction (17). Additionally, in a study conducted in Turkey by Yildirim et al., the most frequent reason for

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dissatisfaction was prolonged wait time for visiting the treating physician, and appropriate quality of health care services was the most frequent reason for patient satisfaction. As a result, it can be concluded that patient satisfaction is an indicator of quality of services (18). In line with the results of Sheikhi, in the present study, there were no significant relationships between rate of satisfaction and demographic variables, type of insurance, and admission type (4); however, there was a significant relationship between admission time and patient satisfaction. In this study, rate of satisfaction was higher in the evening and night shifts, which could be due to presence of a large number of interns in the morning shift. Hall et al. performed a study in the USA, which demonstrated that variables such as age and gender might slightly affect rate of satisfaction, while attitude of nursing staff, physicians, and wait time play a major role in the rate of satisfaction with emergency departments (19). In the study of Omidvari et al., no significant relationships were observed between overall satisfaction and marital status, occupation, gender, and working shift; patients who waited longer in emergency department expressed dissatisfaction more than others (15). It should be noted that patients expect to be provided with the best care services (20, 21). Outcomes of the current study indicated optimum level of satisfaction in patients and their companions. The respondents had lower satisfaction with environment and facilities; as a result, paying more attention to these factors to meet patients expectations seems to be mandatory. A continuous evaluation of patient satisfaction upon emergency department discharge is suggested to promote overall satisfaction based on patient views.

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