Determinants of Patient Satisfaction in the Surgical ward at a University Hospital in Saudi Arabia

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Abstract: Objectives, to determine the factors that affect patient satisfaction in the surgical ward of a university hospital and provide useful information for the hospital management, wishing to improve patient satisfaction in Saudi Arabia. Methods: A cross-sectional study was conducted from June 2011 till to August 2011 in the surgical ward at King Abdulaziz University Hospital in Jeddah, Saudi Arabia.. A patient satisfaction questionnaire was administered to the first 95 patients ready for discharge from the hospital during the study period, and we obtained data from patients who rated their satisfaction with care provided. We analyzed the data to identify potentially modifiable factors associated with dissatisfaction. Results: The patients included 55 males (58.5%) and 39 females (41.5%). The average age of patients was 45.9 years (range 15-83 years) and the average length of stay was 6.43 days (range 1–50 days). The overall satisfaction rate was 89.6%. The level of satisfaction was high regarding the explanation of the on call doctor about the operation in the emergency department (75.5%), Doctor's reception in the clinic (81.25%), surgical team reception in the ward (79.75%), Response of the team about the patient's questions (71.75%), and Safety level in the hospital (74.75%). The lowest level of satisfaction was for the waiting time in the emergency (40%), the waiting time in the clinic (62%), the response of consulting doctors of the other departments (60.75%), the explanation of the surgical team about the life style after operation (53%), and the quality of food in the hospital (56.75%). There was a strong relation between the patient dissatisfaction and patient's age (P value: 0.003), gender (P value: 0.001, with more female satisfaction), and duration of hospital stay (P value: 0). Conclusion: In a studied area, the factors that influence patient satisfaction are old age (> 50 years old), male gender, waiting time in emergency department and out-patient department (clinic), quality of food, quick response of consulting doctors of other departments, explanation of surgical team about lifestyle after surgery (eating habits, wound management, having shower and exercise), and length of hospital stay. We recommend the hospital management to address these factors to improve patient satisfaction.

[Saleh M. Aldaqal; Hattan Alghamdi; Hassan AlTurki; Basem S. El-deek and Ahmed A. Kensarah. **Determinants of Patient Satisfaction in the Surgical ward at a University Hospital in Saudi Arabia.** Life Science Journal 2012; 9(1):277-280]. (ISSN: 1097-8135). http://www.lifesciencesite.com. 38

Key Words: Patient satisfaction, Questionnaire, Surgical ward, Hospital management

1. Introduction

Patient satisfaction is a critical health care outcome indicator and should be given focus by the hospital administrators. From a management perspective, patient satisfaction with health care is important for several reasons [(1)]. First, satisfied patients are more likely to maintain a consistent relationship with a specific provider. Second, by identifying sources of patient dissatisfaction, an organization can address system weaknesses, thus improving its risk management. Third, satisfied patients are more likely to follow specific medical regimens and treatment plans. Finally, patient satisfaction measurement adds important information on system performance, thus contributing to the organization's total quality management [(2)]. The Department of Surgery at King Abdulaziz university hospital (KAUH) in Jeddah, which is a 750-bed, tertiary care hospital with all types of medical services; has developed and implemented a surgical quality improvement plan in 2009 that aimed to improve the health care provided to the patients. Patient satisfaction was one of the important indicators of this plan in which our study was designed. The objective of the study is to determine the factors which affect patient satisfaction in surgical ward of our hospital and provides important information for hospital management to improve patient satisfaction.

2. Patients and Methods:

After obtaining the ethical approval from the local Ethical Committee, a cross- sectional study was conducted from 14th of June 2011 till 1st of August 2011 in the surgical ward at KAUH. It is a patient-centered on socio-demographic factors and patient expectation. Questionnaires were distributed to the first 125 patients ready for discharge from the

hospital during the study period. However, only 95 patients returned a completely filled form. No individual identifying information was included on the surveys and participants were given no incentive to participate. Patients were excluded if they had hospital stays of less than 1 day to ensure that they had adequate time to interact with the hospital. The questionnaire was designed based on factors came from examination of the literature review on patients satisfaction. It is a patient-centered on socio-demographics factors as age, gender, social status and patient health status and the patient expectations. The questionnaire has 5 indices; Emergency index which has 7 questions; Outpatient and admission office index which has 12 questions; Service before operation with 8 questions; Service after operation with 12 questions and finally, Hospital service in general included 12 questions. Each question has five responses from "strongly agree" to "strongly disagree" in the form of a Likert scale of items. Patient satisfaction was measured by asking participants to rate: overall, how satisfied they were with their care, 1 = very dissatisfied to 5 = very satisfied; whether they would be willing to return to the hospital for future care, 1 = not willing to 5 = very willing; and whether their needs had been met by the services at the hospital, 1 = not at all to 5 = very much so.

The data were entered and analyzed using the statistical package for social sciences (SPSS Inc, Chicago, IL, USA), version 17. Statistical significance was determined when the *p* value was < 0.005, by using paired T-test for comparison.

3. Results:

Patients included 55 males (58.5%) and 39 females (41.5%). The average age of patients was 45.9 years (SD = 2, range = 15-83 years). Nineteen percent of patients had completed primary school, 24% had completed high school, 39% had completed undergraduate studies, and 13% had completed postgraduate degrees. Five percent did not provide their education level. The average length of stay was 6.43 days (SD = 2.88, range = 1–50 days). Fifty patients (53.2%) were admitted from emergency department while 44 patients (46.8%) were admitted from out-patient department (table 1).

Table 1 socio-demographic factors of the patients

Variable	Number	%
Total No. of patients	94	100
• **Gender**		
○ **Male**	55	58.5
○ **Female**	39	41.5
• **Age Group**		
○ **<30 yr**	23	24.5
○ **30-40 yr**	16	17
○ **40-50 yr**	12	12.8
○ **50-60 yr**	17	18.1
○ **>60 yr**	17	18.1
• **Type of Surgery**		
○ **General Surgery**	78	83
○ **Other Subspecialities**	10	11.3
• **Level of Education**		
○ **High**	31	33
○ **Low**	37	39.4
• **Admission**		
○ **Emergency Admission**	50	53.2
○ **Elective Admission**	44	46.8
• **Duration of the Hospital Stay**		
○ **1-5 days**	31	33
○ **6-15 days**	35	37.2
○ **16-30 days**	18	19.1
○ **31-50 days**	5	5.3

The overall satisfaction rate was 89.6%, male satisfaction rate was 83.4% while female satisfaction rate was 88.7%. The overall level of satisfaction in emergency service was high for explanation of on-call doctor to the surgical intervention (75.5%), while the lowest was for waiting time in Emergency for more than 3 hours (40%). On Outpatient department and admission office service, the highest value was for doctor's reception in the clinic (81.25%), while the lowest index was for waiting time in the clinic for more than one hour (62%). On the service before the operation, the highest value was for surgical team reception in the ward (79.75%), while the lowest value was for the Response of consulting doctors of other departments (60.75%). On the Service after the operation, the highest value was for the Response of

the Team about the Patient's questions (71.75%), while the lowest value was for the explanation of the surgical team about lifestyle after surgery (eating habits, wound management, having shower and exercise, 53%). On the Service of the hospital in general, the highest value was for the safety level in the hospital (74.75%), while the lowest index was for the quality of the food in the hospital (56.75%) (table 2) . All other entities in all services were above 60%. After adjustment for patient and surgical factors, there was a strong relation between patient dissatisfaction and patient's age (P value: 0.003) (table 3), gender (P value: 0.001) with more female satisfaction, and duration of hospital stay (P value; 0), (table 4).

Table 2 Comparison between Male and Female Satisfaction

Index Question	Male Mean	Female Mean	Significance Value
• **Emergency**			
○ Are you satisfied about how quick is the response of the surgical on call team?	**2.71 ***	**2.66**	**0.033**
• **OPD and Admission Office**			
○ Are you satisfied about the explanation of the doctor about the nature of your operation?	**2.7**	**3.16**	**0.028**
• **Service Before the operation**			
○ Are you satisfied about the explanation of the surgical team about the nature of your operation?	**2.61**	**3.17**	**.02**
○ Are you satisfied about the explanation of the surgical team about the dangers and the complications of the operation?	**2.54**	**3.05**	**.044**
○ Are you satisfied about the radiological investigations' appointment?	**2.85**	**2.74**	**.033**
• **Service After the operation**			
○ Are you satisfied about the explanation of the surgical team about the medications that should be used after the operation?	**2.25**	**2.89**	**.009**
○ Are you satisfied about the response of the team for your questions?	**2.74**	**3.05**	**.029**
○ Are you satisfied about how quick is the response of the team for your demands?	**2.58**	**2.87**	**.046**
• **Service in General**			
○ Are you satisfied about the nursing team?	**3**	**2.89**	**.035**
○ Are you satisfied about the nursing team performance?	**3.05**	**2.87**	**.032**
○ Are you satisfied about the cleaning of the inpatient room?	**2.96**	**2.61**	**.001**
○ Are you satisfied about your bathroom cleaning?	**2.89**	**2.28**	**.002**
○ Are you satisfied about the food in the hospital?	**2.27**	**2.28**	**.031**

*Mean satisfaction rate

Table 3 Correlation between the Age of the patients and the Satisfaction

Index *Question*	Significance Value
• ***Emergency***	
○ Are you satisfied about how quick is the response of the surgical on call team?	**.003**
• ***OPD/Admission Office***	
○ Are you satisfied about admission office employer?	**.022**
• ***Service Before the Operation***	**No Significance**
• ***Service After the Operation***	**No Significance**
• ***Service in General***	
○ Does the inpatient room satisfy your needs?	**.02**

Table 4 Correlation between Hospital Stay and Patient Satisfaction

Index *Question*	*Significance Value*
Emergency	***No Significance***
OPD/Admission Office	***No Significance***
Service Before the Operation	***No Significance***
• ***Service After the Operation***	
○ Are you satisfied about the explanation of the surgical team about the daily habits after the operation?	***.036***
• ***Service in General***	
○ Are you satisfied about the nursing team performance?	***0***
○ Are you satisfied about the inpatients room?	***.005***

4. Discussion:

The health service quality has three dimensions: client quality, professional quality and management quality. Client quality is the dimension that receives most attention in discussions of quality of health care-based on how satisfied clients are with their care [3,4]. In Saudi Arabia, the health care infrastructure is reasonable in terms of facilities and personnel. The real challenge is to improve staff performance and patient satisfaction, in order to minimize rework, wastage, delay and costs. Today, we recognize that quality as perceived by the health care recipient is vitally important. As a result of this new focus, measurement of customer satisfaction has become equally important [5,6].

In the Surgery Department at our hospital (KAUH), we developed a surgical quality improvement plan (KAUH-SQIP) in 2009. The objectives of this plan are to increase patient satisfaction, reduce postoperative morbidity and mortality, reduce the median length of stay and participate in national and international audits and research. In this plan, we collect data on a variety of variables as patient satisfaction, morbidity and mortality then we analyze, review and act on the finding. As part of this plan we conducted our study, and it has provided an important first step in our understanding of patient satisfaction.

In our study, the overall satisfaction rate was 89.6%, while **Myles *et al.,*** in 1999 reported 96.8% [7,8]. A significant relation was found between old age (more than 50 years) and male gender and the patient dissatisfaction, which can give information about the group of patient that the hospital has to take more care of them during their management. Another important factor for patient dissatisfaction is the length of the hospital stay. Many studies showed that using laparoscopic surgery, single port surgery, robotic surgery and out-patient and day care surgery associated with early recovery of the patient and less hospital stay which will result in more patient satisfaction [9-11]. For that reason we recommend the surgeons and the hospital to use these surgical techniques when indicated and to be as part of the surgical residency training program.

Other factors which influence patient dissatisfaction are waiting time in the Emergency Department (more than 3 hours) and the out-patient department (more than 1 hour), quality of food, quick response of consulting doctors of other departments, explanation of surgical team about lifestyle after surgery (eating habits, wound management, having shower and exercise), and length of the hospital stay. We recommend hospital management to address these factors to improve patient satisfaction.

We recommend other health care organizations in our country to measure patient satisfaction as we have limited studies about this in Saudi Arabia. This will give us a better understanding of the factors that influence patient satisfaction and to elaborate the mechanisms through which the organizational environment impacts on client satisfaction.

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1/2/2012