
Factors Related to Patient Satisfaction with Hospital Health Care

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Abstract:

Background: Patients' perception about health care has been predominantly accepted as the important indicator for measuring quality of health care and as a component of performance improvement and clinical effectiveness. A more satisfied patient is more likely to develop deeper and longer lasting relationship with their medical providers.

Objective: To identify factors associated with satisfaction among inpatients receiving medical care.

Study design: A cross sectional survey of patient discharged from Ibn – Sena teaching hospital in Mosul city. A total of 265 randomly selected medical patients, aged 18 years and older, discharged from December 2007 to January 2008 responded to survey (response rate = 90%).

Results: Results showed that nearly two thirds of the study sample (73.6%) was satisfied with all aspects of hospital care. Satisfaction level was significantly related to age ($P= 0.000$), gender ($P= 0.004$), marital status ($P= 0.000$), educational level ($P= 0.000$), history of previous ($P= 0.001$) and duration of hospitalization ($P= 0.000$). In addition, patients with better health status at discharge were significantly ($P= 0.000$) satisfied with hospital care.

Conclusion: Factors associated with inpatient satisfaction elucidated in this study may be helpful in interpreting patients' satisfaction scores when comparing hospitals, services or time periods, in targeting patient groups at risk of worse experience and in focusing care quality programs.

Key words: patient satisfaction; quality of health care; health status; age.

Introduction

Quality of health services was traditionally based on professional practice standards, but over last decade patients' perceptions about health care has been predominantly accepted as the important indicator for measuring quality of health care and as a component of performance improvement and clinical effectiveness. A more satisfied patient is more likely to develop deeper and longer lasting relationship with their medical providers leading to improved compliance, continuity of care and ultimately better health outcome^[1].

Several approaches have been developed to survey patient perception of health care, such as suggestion boxes, formal complaints, qualitative methods or audits. However, satisfaction questionnaires are undoubtedly the most commonly used method. One common target group has been patients admitted to hospitals, because admission can be a stressful and dissatisfying experience for many people and because of the high health care costs that an admission to health care systems entails^[2].

Patient satisfaction is often described as the subjective experience of the patient during provision of care and increasingly being used to evaluate the performance of individual physicians, nurses, hospitals and health plans^[3]. It has been proposed that multiple sets of background factors are associated with patient scores on questions about health care^[2]. Prior studies have often yielded conflicting results with respect to magnitude and direction of association between patient's satisfaction and individual variables. Age and gender are consistently related to patient satisfaction, with women and older individuals reporting higher satisfaction^[4, 5]. In addition,

patient health status has been shown to influence satisfaction rating, as higher levels were seen in patients who reported better health^[6]. Patient satisfaction is also associated with an individual's satisfaction with life in general^[1].

Understanding how patients' baseline characteristics affect patient satisfaction is critical to interpreting patient satisfaction data and making correct inferences about the effectiveness of specific interventions and the performance of individual providers. As can be seen, level of satisfaction is associated with a number of factors, which may differ in different societies^[7]. This plays an important role in determining principles for planning and management.

The aim of this study was to identify factors associated with satisfaction among inpatients receiving medical care.

Patient and Methods

Questionnaire:

The questionnaires were generated from information derived from different sources, including a literature review^[8, 9, 10, 11], focus groups with patients and health professionals and experts opinion. It included 3 parts: socio-demographic characteristics (age, sex, marital status, educational level), health characteristics (health status at discharge, previous admission, frequency of previous admission, length of stay) and 25 questions which follow in chronological order the steps from the time the patient is admitted to hospital until discharged. These included questions regarding physician care, nursing care, information given, discharge instruction, coordination of work and overall quality of care. Responses were scaled using a 5- point Likert rating scale from poor to excellent, which has been previously demonstrated

to produce good variability on pilot test. The higher number indicated higher satisfaction. The questionnaire was revised with patients and professionals to improve it and to assess its face validity from both perspectives, which was 89%.

To assess reliability over time (test – retest), a sample of 30 patients was interviewed second time after 1 week period. Kappa value calculated was equal to 0.7.

Survey Description:

The target population was patients who were hospitalized in Ibn-Sena teaching hospital in medical wards (internal medicine, rheumatology, cardiology, and gastroenterology) which is located on the right side of Mosul city from December 2007 to January 2008.

A cross sectional study design was carried out. Patients were eligible if they were 18 years and older and were had been hospitalized for longer than 24 hours. Patients with severe physical or mental illness such as terminal diseases and psychosis, which could make the comprehension and answering of the questions difficult, were excluded.

The sampled patients were selected by systematic randomization as every second discharged patient was selected. The participants were interviewed in the hospitals when they were being discharged, during which the purpose of the

study was explained and informed consent obtained. In addition, the patient was told that his/her responses would be kept confidential. The questionnaire was completed by the researcher, who was neither in charge of the participant's care nor in the same work place. Interviews were carried out on 3 days / week. The response rate was 90%, representing 265 respondents.

Statistical analysis

Descriptive statistics, including frequencies, percentages, mean and standard deviation, were calculated for patient characteristics.

For scoring purposes, the total score and component scores were calculated by scoring the questions from 0 – 4, summing these scores and expressing them as a numbers from 0 – 100. To produce binary variables related to satisfaction, the mean of the scores was calculated to each patient; score 1 and 2 were classed as unsatisfied and 4 and 5 as satisfied. For scores between 2 and 4, first the median was calculated; scores less than the median were classed as unsatisfied and the rest as satisfied.

Chi squared test was performed to test the association between basic sample characteristics and their satisfaction scores. All analysis was performed using Minitab (13.20) program. $P < 0.05$ was considered significant.

Table (1) Sociodemographic and other characteristics of the study sample.

Characteristics	No. (%)
Age (years)	44.09±14.87*
Gender	
• Male	120 (45.3)
• female	145 (54.7)
Educational level	
• No formal education	81 (30.6)
• Primary study	58 (21.9)
• Secondary study	62 (23.4)
• University	64 (24.1)
Marital status	
• Married	161 (60.8)
• Single	38 (14.3)
• Widows	44 (16.6)
• Divorced	22 (8.3)
Health status at discharge	
• Worse	32 (12.1)
• Stable	100 (37.7)
• Better	133 (50.2)
History of hospitalization (same hospital)	
• Yes	205 (77.4)
• No	60 (22.6)
Duration of hospitalization (days)	
• < 4	95 (35.8)
• ≤ 4	170 (64.2)
Total	265 (100.0)

* Mean ± standard deviation

Results

Table (1) displays socio – demographic and other related characteristics of the study population. The mean age of the participants was (44.09±14.87) with a range of 18 – 78 years. Just more than half (54.72%) of the total study sample were females the rest were males. Male to female ratio was 0.83:1. Almost one third (30.6%) the respondents were either illiterate (11.7%) or just read and write (18.9%). The rest have either primary educational certificate (21.9%) or secondary (23.4%) or they are university graduates (24.1%) and less than two thirds (60.8%) were married. Half of the participants (50.2%) have better health status at discharge from the hospital while (12.1%) their health status became worse.

More than two thirds (77.4%) had history of hospitalization. The mean duration of hospital stay was (4.14 ± 2.05) days and 64.2% were hospitalized for ≥ 4 days during their current admission. Regarding satisfaction measures, table (2) reveals that nearly 2/3rd of the participants were satisfied (73.6%) and only (16.4%) were unsatisfied. Majority of patients show higher satisfaction levels with physician care (89.1%) and discharge

Instruction (90.6%); whereas 34.3% of patients were unsatisfied with nursing care delivered to them during their hospital stay.

Looking at the significant association between satisfied and unsatisfied categories. Table (3) reveals that nearly 2/3rd of the participants were satisfied (73.6%) and only (26.4%) were unsatisfied. Older age groups (60+ years), married and those with lower educational level were significantly (P = 0.000) more satisfied than others. In addition, females were significantly (P = 0.004) more satisfied than males.

Table (4) shows that patients who perceived their health status at discharge as worse were significantly (P = 0.000) unsatisfied, in contrary those with better health were significantly (P = 0.000) more satisfied with care delivered to them. In addition, those who have a history of hospitalization to the current hospital with longer duration of stay were significantly (P = 0.001 & P = 0.000 respectively) more satisfied with hospital care.

Although patients with frequent hospitalization seemed to be more satisfied, yet this evident difference was of no significant value.

Table (2) Distribution of the study sample according to their satisfaction levels for satisfaction measures.

Satisfaction measures	Unsatisfied		Satisfied	
	No.	(%)	No.	(%)
• Physician care	29	(10.9)	235	(89.1)
• Nursing care	91	(34.3)	74	(65.7)
• Coordination of work	61	(23.)	204	(77.0)
• Information given	59	(22.3)	206	(77.7)
• Discharge instructions	25	(9.40)	240	(90.6)
Overall satisfaction	70	(26.4)	195	(73.6)

Table (3) Association of sociodemographic variables and patients satisfaction levels

Characteristics	Unsatisfied (%) N = 70	Satisfied (%) N= 195	P value*
Age groups (years)			0.000
18 – 29	24(34.3)	29(14.9)	
30 – 39	20 (28.6)	32(16.4)	
40 – 49	14(20.0)	39(20.0)	
50 – 59	7(10.0)	46(23.6)	
60+	5(7.1)	49(25.1)	
Gender			0.004
Male	42 (60.0)	78 (40.0)	
Females	28 (40.0)	117 (60.0)	
Marital status			0.000
Married	24 (34.3)	137(70.3)	
Not married	46 (65.7)	58(29.7)	
Educational level			0.000
Illiterate / Primary	8(11.4)	131 (67.2)	
Secondary / University	62 (88.6)	64 (32.8)	

*using χ^2 test

Table (4) Association of patient's satisfaction and health related variables.

Characteristics	Unsatisfied (%) N = 70	Satisfied (%) N = 195	P value
Health status at discharge			
• Worse	29 (41.4)	3 (1.5)	0.000
• Stable	25 (35.7)	75 (38.5)	NS
• Better	16 (22.9)	117 (60.0)	0.000
Previous hospitalization			
• Yes	44 (62.9)	161 (82.6)	0.001
• No	26 (37.1)	34 (17.4)	
Frequency of hospitalization (times)			
≤ 2	24 (34.3)	79 (40.5)	NS
>2	20 (28.6)	82 (42.1)	
Duration of hospitalization (days)			
< 4	59 (84.3)	36 (18.5)	0.000
≥ 4	11 (15.7)	159 (81.5)	

* using χ^2 test

Discussion

The concept of tailoring of medical care towards patient's expectation and the idea of patient – centeredness is new in developing countries ^[8]. The present study is the first study done in this field in Mosul city, which is the center of Nineveh governorate in the north of Iraq and it is considered the second largest city in this country. .

Over the last 30 years, numerous questionnaires have been developed to measure patient satisfaction with hospital care ^[7, 9, 10]. However, each of these questionnaires has been developed in different countries, which differ in underlying lifestyle structure, cultural beliefs, social, economical and even religions characteristics, in addition to differences in health care systems. These characteristics seem to suggest that satisfaction and factors contribute to it may be totally different from patients in one country than others, all over the world ^[11].

It's worth pointing out that while most satisfaction studies ^[5, 12] rely on response to mailed questionnaires, in the present study, the questionnaire filled by direct face to face interview method. A method which generate higher responses than other methods (differences reach up to 30%) as stated by Crow *et al* ^[2]. But, as pointed out by Labarere *et al* ^[13], global satisfaction is higher in mailed survey groups compared to face to face interview method. In other words, mail survey often tends to overestimates patients' satisfaction.

The results of the current study showed that 195 (73.6%) of the sample were satisfied with all aspects of hospital care which was similar to that reported in other studies carried out in Jordan ^[14] and United Arab Emirates ^[15]. This good level of satisfaction usually seen in studies conducted in

developing countries in spite of poor services. This was hypothesized to be due to the low level of expectation of health care services in the developing countries. This might be due to that nearly half of the populations in these countries have lower educational level ⁽¹⁶⁾. So their needs and expectation will be low.

Satisfaction is a crude index for determining the quality of services and the way in which they are presented by medical staff. It's associated with a number of individual and clinical factors ⁽¹⁷⁾. The present study found that the older age groups were significantly more satisfied than younger and middle age groups. This was also approved by a study conducted in Jordan by Mawajdeh *et al* ^[14] and another study carried out in United State by Jaipaul and Rosenthal ^[12]. It's possible that lower satisfaction of young patients reflect relatively high expectation that can't be easily met. As patients become more familiar with health care delivery overtime their expectation may be decreased with a resultant increase in their satisfaction ^[14]. In contrast to other studies ^[5, 18], this study showed that men were less satisfied than women with hospital care. This might be that in developing countries, male are given greater priority than females, their expectation will be high and can't be met ^[8]. Regarding educational level, similar to other studies ^[3, 5] the current study revealed that patients with lower educational levels (illiterate / primary) were more satisfied than those with higher levels (secondary/ university). This may be due to that highly educated people have more critical thinking and so have high level of expectation in all aspects of life ^[19]. Marital status has been included in this study and found that those married tended to have higher levels of satisfaction, similar to that reported

by Hall and Dornan ^[4]. Married individuals are more satisfied with general life than not married individuals ^[8].

Hall *et al* ^[19] studied the causal relationship between health and patient satisfaction with hospital care in United State, and found that health status is a causal determinant of satisfaction. Depending on this, the present study indicated that patients who perceived their health status at discharge is worse were less satisfied with hospital care. This was also reported by other studies ^[19, 20]. It is possible that non- health – related factors may influence satisfaction; for example, individuals who have a negative outlook on life in general may be more likely to both view their health as poor and be dissatisfied with their health care. The present study demonstrated that the level of satisfaction was significantly related to history and duration of hospitalization, and increased with both. This is also reported by Bahramour and Zolala ^[17] study carried out in Iran. It is possible that, patients may have become familiar with health system and medical staff and so felt less scared than if they were in a new and strange place ^[17].

When interpreting the results of the present study, several limitations must be considered.

First, it was only a cross sectional analysis and the causality can't be determined.

Second, as this study was restricted to only one hospital, therefore, it would be difficult to generalize its conclusions to the whole city. Given that the study only assessed patient over two month's period, the finding may not be reflective of the satisfaction of all patients admitted to the hospital.

Third, the questionnaire was filled when the patients were discharged so patient who died in hospitals or discharged against medical advice were not included in the sample.

Finally, in spite of many procedures to preserve anonymity and confidentiality, patients may have overrating or under rating some questions. This probably overestimated or underestimated the satisfaction scores.

Although the above limitations should be considered, the current study provides valuable information about factors affecting satisfaction with hospital care. As the instrument (questionnaire) showed excellent psychometric properties, it can be incorporated into a hospital quality monitoring system to monitor patient satisfaction over time. It could be also used as an outcome variable to evaluate the impact of unit or organizational change on patient satisfaction. In addition, factors associated with inpatient satisfaction elucidated in this study may be helpful in interpreting patients' satisfaction scores when comparing hospitals, services or time periods, in targeting patient groups at risk of worse experience and in focusing care quality programs.

References

- 1-Brook RH, Mc Glynn EA, Shekelle PG. Defining and measuring quality of care: a perspective from US researcher. *Int J Qual Health Care* 2000; 12(4): 281 – 295.
- 2-Crow R, Gage H, Hampson S, Hart J, Klimber A, Starey L, Thomas H. the measurement of satisfaction with health care: implication for practice from a systematic review of the literature. *Health Technol Assess* 2002; 6(32): 1 – 245.
- 3-Sahin B, Yilmaz F, Lee KH. Factors affecting inpatient satisfaction: structure equation modeling. *Med syst* 2007; 31(1):9 – 16.
- 4-Hall JA, Dornan MC. Patient sociodemographic characteristics as predictors of satisfaction with medical care. A meta-analysis. *Soc Sci Med* 1990; 30(7): 811 – 818.
- 5-Quintan JM, Gonzalez N, Bilbao A, Aizpura F, Escobar C, San-Sebastian A, Sierra E, Thompson A. predictors of patient satisfaction with hospital health care. *BMC Health Services Research* 2006; 6: 102 – 112.
- 6-Finkelstein BS, Singh J, Silvers JB, Neuhauser D, Rosenthal G. patient and hospital characteristics associated with patient assessments of hospitals obstetrical care. *Med Care* 1998; 36: 8 – 14.
- 7-Gonzalez N, Quintana JM, Bilbao A, Escobar A, Aizpuru F, Thompson A, Esteban C, Sebastian JAS, Sierra EDL. Development and validation of an inpatient questionnaire. *Int J Qual Health Care* 2005; 17(6): 465 – 472.
- 8-Imam SZ, Syed KS, Syed AA, Syed UA, Fatima K, Gill M, Hassan MO, Hashmi SH, Sidiqqi MT, Khan HM, Jameel OF. Patients' satisfaction and opinions of their experiences during admission in a tertiary care hospital in Pakistan- a cross sectional study. *BMC Health Ser Res* 2007; 7:161.
- 9-Labarere J, Francois P, Auquier P, Robert C, Fourny M. Development of French inpatient satisfaction questionnaire. *Int J Qual Health Care* 2001; 13: 99 – 108.
- 10-Salmon L, Gasquet I, Mesbah M, Ravaud P. Construction of a scale measuring inpatients' opinion on quality of care. *Int J Qual Health Care* 1999; 11(6): 507 – 516.
- 11-Sitzia J. How valid and reliable are patient satisfaction data?. An analysis of 195 studies. *Int J Qual Health Care* 1999; 11(4): 319 – 328.
- 12-Jaipaul CK, Rosenthal GE. Are older patients more satisfied with hospital care than younger patients?. *J of Gen Intern Med* 2003; 18:23 – 30.
- 13-Labarere J, Francois P, Bertrand D, Fourny M, Oliver F, Pegrin JC. Evaluation of inpatient satisfaction, comparison of different surveys. *Press Med* 2000; 29:1112 – 4.
- 14-Mawajdeh SM, Daadseh KA, Nasir MJ, Qutob RJ. Patient expectation and satisfaction in

- different hospitals in Irbid, Jordan. Saudi Med J 2001; 22(7): 625 – 631.
- 15-Morgolis ST, Al-Marzouqi S, Revel T, Reed RL. Patient satisfaction with primary health care services in United Arab Emirates. Int J Qual Health Care 2003; 15(3): 241 – 249.
- 16-Mawajdeh SM, Al- Qutoub R, Raad F. assessment of the quality of prenatal care services: women perspective. IDRC 1995; 1: 1-17.
- 17-Bahrampour A, Zolala F. Patient satisfaction and related factors in Kerman hospitals. East Mediter Health J 2005; 11(5&6):
- 18-Thi PLN, Brianon S, Empereur F, Guillemin F. Factors determining inpatient satisfaction with care. Soc Sci Med 2002; 54(4): 493 – 504.
- 19- Hall JA, Milburn MA, Epstein AM. A causal model of health status and satisfaction with medical care. Med Care 1993; 31:84 – 94.
- 20-Rahmqvist M. Patient satisfaction in relation to age, health status and other background factors: a model for comparisons of care unit. Int J Qual Health Care 2001; 13(5): 385 – 390.
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