Patient Satisfaction With Medical Services Provided at Unani Medicine Hospital, Bengaluru: A Cross-Sectional Study

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Abstract

In medical care, patient satisfaction is a key indicator of the quality of care. Many studies have agreed on the fact that measuring patient satisfaction is a useful tool for determining the effectiveness of health care delivery and the quality of medical care provided. Hence, present study was aimed to determine the level of patient's satisfaction with the quality of medical care services rendered in a teaching hospital of Unani medicine. A hospital-based cross-sectional study was conducted at the National Institute of Unani Medicine Hospital, Bengaluru, from April 2019 to October 2019 on 500 patients sampled from various service delivery points of the health facility. Data were gathered through exit interviews of patients after obtaining their written informed consent. A predesigned and pretested questionnaire on patient satisfaction patient satisfaction questionnaire (PSQ-18) was used as a study tool. The overall mean patient satisfaction score was 4.82 ± 0.23. Mean satisfaction was highest in the interpersonal manner (4.94) and communication (4.94), followed by time spent with the doctor (4.91), technical quality (4.87), financial aspect (4.87), accessibility and convenience (4.65), and least in general satisfaction (4.54). No sociodemographic variables were found to correlate significantly with satisfaction score ($P > .05$). In clinical variables, treatment effectiveness was found to be significantly associated with the satisfaction score ($P = .002$). The study found that overall patients were highly satisfied with the medical services provided by the health facility. Furthermore, the study finds that treatment effectiveness has a more significant effect on patients' satisfaction compared with other factors.

Keywords

patient satisfaction, Unani medicine, medical care quality, cross-sectional study

Introduction

The aim of any health care organization is to create satisfaction among users through its service quality (1,2). As patients are the main stakeholders within the health care system, therefore patient satisfaction is as an important measure for assessing health care quality (3,4). Patient satisfaction can be defined as the patients' feelings and their perception of delivered health care services (5). It has been observed that satisfied patients are more likely to follow medical advice and comply with treatment recommendation, thereby improve the outcome of care (6). Studies have shown that there is a direct association between quality of care and patient satisfaction levels (7). Patient satisfaction is not only a significant, effective, and widely used indicator for quality measurement in health care but also measures the performance of physicians and hospitals (8).

The Unani system of medicine is an important field of medical care in India. This system provides effective treatment for various gastrointestinal, respiratory, genitorurinary, musculoskeletal, neurological, cardiovascular, and metabolic disorders (9). At present, there are 262 hospitals and 1019 Unani dispensaries functioning in 21 states/union territories of the country (10). Improving the standards of care across these health facilities is a key requirement for increasing the use of this system. Therefore, patient satisfaction surveys can be a significant method for evaluating the quality of services offered in such health care facilities.

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However, patient satisfaction with the quality of medical care services in Unani hospitals has not been closely monitored and, to our knowledge, there is currently no study available on this issue. Therefore, the present study was planned to determine the level of satisfaction of patient with the quality of medical services delivered at the Unani Medicine health care facility.

Materials and Methods

Study Setting and Duration

The study was conducted at the National Institute of Unani Medicine (NIUM) Hospital, Bengaluru, from April to October 2019. The hospital receives patients from all walks of life, including the local population, from adjoining cities, and also from neighboring states. The hospital provides outpatient consultations and inpatient services to patients presenting to the hospital from other levels of care or on self-referral.

Study Design

This is a descriptive cross-sectional type of study.

Study Population

The study population included patients aged older than 18 years attending the outpatient department (OPD) of the NIUM Hospital and who consented to participate in the study. Patients who were too ill to participate in the interview or who refused to participate in the study were excluded.

Sample Size

The sample size was calculated using the formula (11),

$$N = \frac{[Z^2 P(1 - P)]}{d^2}$$

where $Z = 1.96$ at 95% CI, P = prevalence of patient satisfaction, and d = absolute allowable error. For this study, we presumed maximum variability; hence, $P = 0.5$ and $d = 5\%$. Thus, the sample size obtained was 385. The minimum sample size was inflated by 20% to take care of nonresponse. The total number came out was 482, but we interviewed 500 patients.

Sampling Technique

Patients were selected from all the OPDs (Medicine, Surgery, Obstetrics and Gynecology, Regimenal therapy, Community Medicine, Skin and Special OPDs) of the hospital to obtain a representative sample. Convenient sampling was done to select patients from these OPDs.

Study Tool

A pretested structured questionnaire was used to record information regarding patient satisfaction, based on PSQ-18 developed by Marshall and Hays (12). The questionnaire comprehensively measures patient satisfaction with the 18 items, which yields 7 domains of patient satisfaction that are general satisfaction, interpersonal manner, technical quality, financial aspects, time spent with doctor, accessibility, and convenience. These items are asked such that they are statements of opinion since each is accompanied by 5 response categories: strongly agree, agree, uncertain, disagree, and strongly disagree. A scoring system was developed for each response that ranged from 1 to 5.

Scoring Methods

PSQ-18 yields for each of the 7 different subscales: general satisfaction (2 items: 3 and 17), interpersonal manner (2 items: 10 and 11), technical quality (4 items: 2, 4, 6, 14), financial aspects (2 items: 5 and 7), time spent with doctor (2 items: 12 and 15), accessibility, and convenience (4 items: 8, 9, 16, 18). All items were scored from 1 to 5, so that high scores reflect satisfaction with medical care. After item scoring, items within each scale were averaged together to create the 7 subscale scores. The scale score represents the average for all items in the scale that were answered (12).

Ethical Approval and Consent Procedure

The study was started following approval of the study protocol by the Institutional Ethics Committee. Verbal and written consent was obtained from each participant after explaining the purpose, method, and procedures of the study. Respondents were informed that they could choose to or did not participate in the study. Only after they agreed to participate in the study, they asked to sign the informed consent form and in the case of illiterate persons, their thumb impression was taken. The respondents were informed that all responses would be noted down but would be kept confidential at all times. Privacy was ensured during the interviews. Strict confidentiality was maintained during data handling.

Analysis

Data entry was done in Microsoft Excel sheet regularly. To ensure the quality of the data, each completed questionnaire was manually checked for completeness and consistency before it was tabulated in Microsoft Excel. The analysis was done using SPSS 15.0 and Vassar Stat statistical software. Mean scores were calculated to determine satisfaction level. The association of patient satisfaction level with sociodemographic and clinical characteristics was checked by using the analysis of variance-one way and student test (2-tailed, independent).

Results

Patient Satisfaction Level

Table 1 shows the mean patient satisfaction score for each domain. The rating of satisfaction for all domains was more than 4. The overall mean satisfaction score of patients was 4.82 ± 0.23. Mean satisfaction was highest in the interpersonal manner (4.94 ± 0.30) and communication ($4.94 \pm$

Table 1. Distribution of Study Population According to Their Satisfaction Level.

Domain	Satisfaction score (mean ± SD)
General satisfaction	4.54 ± 0.67
Technical quality	4.87 ± 0.27
Interpersonal manner	4.94 ± 0.30
Communication	4.94 ± 0.28
Financial aspect	4.87 ± 0.44
Time spent with doctor	4.91 ± 0.31
Accessibility and convenience	4.65 ± 0.49
Overall Satisfaction	4.82 ± 0.23

Abbreviation: SD, standard deviation.

Table 2. Overall Mean Satisfaction Scores According to the Sociodemographic Characteristics of Respondents (n = 500).

Sociodemographic characteristics	Number and percentage of participants		Overall satisfaction score (mean ± SD)	[a]Test of significance and P value
Age, years				
20-30	81	16.2	4.79 ± 0.62	Anova
30-40	94	18.8	4.80 ± 0.22	F value
40-50	118	23.6	4.84 ± 0.18	= 1.49;
50-60	118	23.6	4.79 ± 0.24	P = .16
>60	89	17.8	4.86 ± 0.17	
Gender				
Male	251	50.2	4.81 ± 0.22	t value
Female	249	49.8	4.81 ± 0.21	= .01;
				P = .98
Religion				
Hindu	196	39.2	4.81 ± 0.22	Anova
Muslim	300	60.0	4.81 ± 0.21	F value
Christian	3	0.60	4.81 ± 0.22	= 1.0;
Others	1	0.20	4.81 ± 0	P = .71
Residence				
Urban	373	74.6	4.82 ± 0.22	t value
Rural	127	25.4	4.81 ± 0.20	= 1.51;
				P = .16
Socioeconomic status				
Upper middle	27	5.4	4.77 ± 0.21	Anova
Lower middle	122	24.4	4.81 ± 0.21	F value
Upper lower	293	58.6	4.82 ± 0.20	= 1.0;
Lower	58	11.6	4.85 ± 0.22	P = .63

Abbreviations: Anova, analysis of variance; SD, standard deviation.
[a]P < .05 considered significant.

0.28), followed by time spent with the doctor (4.91 ± 0.31), technical quality (4.87 ± 0.27), financial aspect (4.87 ± 0.44), accessibility and convenience (4.65 ± 0.49), and least in general satisfaction (4.54 ± 0.67).

Sociodemographic Characteristics of Respondents and Its Association With Patient Satisfaction

The sociodemographic characteristics of the respondents and its association with patient satisfaction score is provided

Table 3. Overall Mean Satisfaction Scores According to Clinical Characteristics of Respondents (n = 500).

Clinical characteristics	Number and percentage of participants		Overall satisfaction score mean (±SD)	Test of significance and P value
Present health problem				
Cardiovascular disorders	10	2.0	4.80 ± 0.15	Anova
Gastrointestinal disorders	35	7.0	4.78 ± 0.19	F value
Gynaecological disorders	40	8	4.85 ± 0.19	= 1.39;
Metabolic disorders	24	4.8	4.85 ± 0.13	P = .15
Musculoskeletal disorders	144	28.8	4.80 ± 0.24	
Neurological disorders	110	22.0	4.82 ± 0.22	
Psychiatric disorders	2	0.4	4.57 ± 0.20	
Respiratory disorders	18	3.6	4.79 ± 0.20	
Skin disorders	33	6.6	4.75 ± 0.37	
Sexual disorders	3	0.6	4.80 ± 0.29	
Surgery	68	13.6	4.90 ± 0.14	
Others	13	2.6	4.78 ± 0.17	
Perception about treatment effectiveness				
Highly effective	134	26.8	4.85 ± 0.17	Anova
Moderately effective	286	57.2	4.83 ± 0.21	F value
Minimally effective	61	12.2	4.71 ± 0.30	= 8.26;
Not effective	19	3.8	4.69 ± 0.30	P = .002[a]
Duration of response to treatment (days)				
Within 30	347	69.4	4.83 ± 0.21	Anova
Within 60	134	26.8	4.80 ± 0.18	F value
No effect observed	19	3.8	4.77 ± 0.26	= 2.23;
				P = .08
Side effects observed during treatment				
Yes	2	0.4	3.64 ± 0.8	t value
No	498	99.6	4.82 ± 0.2	= 2.06;
				P = .28

Abbreviations: Anova, analysis of variance; SD, standard deviation.
[a]P < .05 considered significant.

in Table 2. Majority of them (47.2%) were in the age-group of 40 to 60 years, and the respondents' mean age was 46.98 ± 14.73. Nearly equal representation was of both sexes. Most of the respondents were Muslims (60%), followed by Hindus. Majority of the respondents (73.6%) were from urban areas. Most respondents (58.6%) were from the upper lower class followed by the lower-middle and lower classes. No sociodemographic variables, that is, age, gender, marital status, religion, residence, and socioeconomic status, was found to be significantly associated with satisfaction score (P > .05).

Clinical Profile of Respondents and Its Association With Patient Satisfaction

The clinical profile of the respondents and its association with patient satisfaction score is provided in Table 3. Most of the respondents visited the hospital for musculoskeletal problems, followed by neurological problems and surgery. The majority of respondents (57.2%) found that Unani

treatment was moderately effective for their health problems. Treatment response was observed by patients on an average in 12 days. A large number of patients (99.6%) did not experience any side effects during treatment. In clinical characteristics, only 1 variable treatment effectiveness ($P =$ .002) was found to be significantly associated with the satisfaction score.

Discussion

High satisfaction score has been found in this study in all domains of patient satisfaction (general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with the doctor, and accessibility and convenience). Mean satisfaction in the interpersonal manner and communication domain was highest and lowest in general satisfaction.

The findings of other studies are not directly comparable with this study, since, to the best of our knowledge, this is the first study that assessed the patient satisfaction level in Unani Medicine hospitals. There are no reported statistics on the level of patient satisfaction with the quality of medical care services provided in Unani hospitals. Hence, we equate our study findings with previous patient satisfaction studies conducted in AYUSH hospitals.

Our results are consistent with previous studies conducted by Nabi et al [13] and Boovaragasamy and Narayanan [14], which have recorded high rates of satisfaction among patients visiting AYUSH hospitals. Boovaragasamy and Narayanan recorded that 71.23% of patients found their experience with the health care providers as very good or excellent and in terms of satisfaction with service facilities, the rating as very good or excellent ranged from 64.47% to 93.93% across the different AYUSH primary health centers. Nabi et al reported that more than 80% of respondents commented AYUSH doctor's service as satisfactory and good.

Contrary to our findings, Farha Naaz [15] recorded that overall 43% and Anandaraj et al [16] reported 41.8% of the patients were satisfied with the AYUSH hospital's medical services.

Many factors may be attributed to the high level of satisfaction scores in the present study. First, the NIUM hospital is a tertiary care hospital of Unani Medicine, while previous studies were conducted at the primary or secondary care level AYUSH hospitals. Hence, the standard of care in tertiary care hospitals is often higher than hospitals at primary or secondary level. Second, the NIUM hospital is India's first National Accreditation Board of Hospital (NABH)-certified Unani hospital [17] and being an NABH-approved hospital; this hospital has a high quality of care compared with other AYUSH hospitals. Third, being a central government hospital, most of the services provided in this hospital are at minimal cost or free of charge [17], so financial factor does not become a barrier to the use of medical facilities in this hospital. Fourth, the better connectivity of the NIUM hospital to other areas of the city makes it convenient and

accessible for the patients to reach the hospital from any corner of the city.

Besides, some research shows that satisfaction increases with age, the older the age-group of patients, the more satisfied they are with [18,19]. Patients with weak financial situation and those with less education are usually found to be more satisfied with health care than those with better financial conditions [20,21]. These might also be the likely reasons in the present study for a high satisfaction score. As in the present study, there were a significant proportion of patients in the middle ages and lower socioeconomic strata.

The highest satisfaction score in interpersonal manner and communication domains describes the doctor–patient relationship and also highlighted the professional competency of the hospital's doctors.

No sociodemographic variable, that is, age, gender, marital status, religion, residence, and socioeconomic status, are found to be significantly associated with satisfaction score in the present study. This finding is consistent with earlier authors' findings [20,22,23] but contradicts the findings of Ibraheem et al [24] and Jena and Gupta [25].

Sadjadian et al [22] reported that none of the demographic variables had any significant association with patient satisfaction. Hall and Dornan [23] found no significant association between race, sex, income, and patient satisfaction. Afzal et al [20] reported that no association between place of residence and patient satisfaction level was found.

Ibraheem et al [24] reported in their study that there was a significant association between the overall satisfaction and all the demographic variables except marital status and the income levels of the patient. However, on regression analysis, only age and place of residence were found to be statistically significant independent predictors of patient satisfaction. Jena and Gupta [25] found that only 2 demographic variables, employment status and education level, were significantly associated with patient satisfaction; while no other demographic characteristics were found to be significantly related.

The insignificant association in the present study may be because almost all the respondents were highly satisfied with the quality of medical services and there was very little variability in the satisfaction scores of different age-groups, ethnic, socioeconomic groups, and gender.

In the present study, effectiveness of treatment is found to be significantly associated with satisfaction score, which is in line with the finding of previous studies. Kim et al [26] reported that treatment effectiveness positively affects satisfaction regarding medical services quality and it has a more significant impact on satisfaction compared to facilities and hospital environment. This finding highlighted the fact that treatment effectiveness significantly affects the satisfaction of users with health care services. Health policy-makers and health care providers should take this into account when analyzing the health services.

The practical contribution of this study is that it specifically provides answers relating to the perception of patients,

who availed the medical services of this hospital. In addition, these findings will provide invaluable advocacy support to the concerned health care organization in developing a plan of action to provide improved dimensions of service quality in patient care.

The study's main limitation is the convenience sampling method, which may restrict the generalizability of the results. Second, the study was confined to a single hospital of Unani Medicine; the findings of the study could not be extrapolated to all Unani Medicine hospitals across the country. Hence, further studies on a larger and randomized sample are needed to better assess patients' satisfaction level with the quality of medical care provided in Unani medicine hospitals.

Conclusion

Overall findings showed that patients were highly satisfied with the quality of medical care services provided at this hospital. The highest satisfaction score was found in the domain of interpersonal manner and communication; which describes the doctor–patient relationship, the willingness of the doctors to listen and clarify to the patients about their health issues. The lowest satisfaction score was found in general satisfaction, which indicates that certain aspects need to be addressed to enhance the patient experience. Furthermore, the study showed a significant association between treatment effectiveness and patient satisfaction level. This finding underlines the fact that treatment effectiveness has a more significant effect on patients' satisfaction as compared to facilities and hospital environment.

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