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Frequency Of Patient Satisfaction And Its Association With Socio-Demographic Characteristics: A Cross-Sectional Study Of Public And Private Family Medicine Clinics In Karachi, Pakistan

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Abstract

Objective: To determine patient satisfaction with family medicine clinics at selected public and private tertiary care hospitals in Karachi, Pakistan. The study also determined sociodemographic factors associated with patient satisfaction at family medicine clinics.

Methods: A cross-sectional survey was conducted at a public and private tertiary care hospital. PSQ-18 was used to measure patient satisfaction. Patients visiting the facility were selected using convenient sampling. Data was analyzed using SPSS vs. 24.

Results: 89.3% (n =299) of all the study participants were satisfied with the services provided at family medicine clinics. The frequency of patient satisfaction was significantly higher at public clinics i.e. 90.9% (n=150) as compared to patients visiting private clinics i.e. 87.6% (n=149) (p-value <0.001). Married patients were more likely to be satisfied with services as compared to unmarried (adj. OR: 3.2, 95% CI; 1.5-6.7, p-value 0.002). Patients from middle socioeconomic status (adj. OR: 0.19, 95/5 CI: 0.10-0.35, p-value <0.001) and high socioeconomic status (adj. OR: 0.23, 95/5 CI: 0.10-0.51, p-value <0.001) were less likely to be satisfied with the services. No significant association was observed for age, sex, education and employment status.

Conclusion: Sociodemographic factors seem to have a substantial effect on perceived satisfaction with family medicine clinics. Large-scale studies are required to determine the role of patients` sociodemographic characteristics on patients` satisfaction with healthcare services. This will help in designing and implementing specific interventions to address specific expectations from the family medicine services to achieve patient satisfaction.

Keywords: patient satisfaction, healthcare services, family medicine

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Introduction

Family medicine is a crucial component of an effective healthcare system for any country. Estimating the patient's satisfaction with this frontline healthcare resource is of vital importance for continuous quality improvement.[1] Patient satisfaction is a patient's contentment with the care that they receive from any healthcare provider or healthcare system that they have experienced.[1] Literature has been reporting multiple attributes of patient satisfaction playing an important role in deciding patients` satisfaction with healthcare services. Provider`s attitude, technical competence, efficacy of treatment provided and financial and physical accessibility to the services are the healthcare services-related factors affecting patient satisfaction. On the other hand patients` characteristics such as demographics, socioeconomic status, and personality type are the individual-level factors affecting patient satisfaction with healthcare services.
Evidence advocates the two-way positive impact of patient satisfaction on patient healthcare services.[2,3]

High patient satisfaction results not only in better compliance with the treatment and better clinical outcomes but also in improving patients` trustworthiness towards the services and high number of referrals.[3-5] Therefore, to achieve excellence in healthcare service provision it is essential to understand the patients and patient-related factors affecting their satisfaction with the services rather than an assessment of professional practice standards alone.[5]

Family medicine is still an emerging specialty in Pakistan and people are still not fully aware of the scope of its services. It is the frontline for primary healthcare to cater to all the basic healthcare needs of the population. A study from Turkey has reported that a successfully implemented model of family medicine which ensures the provision of universal health coverage can considerably improve patient satisfaction with healthcare services.[6] Despite limited research focus on family medicine services recent studies have attempted to estimate patient satisfaction for family medicine clinics located at public as well as private tertiary care hospitals and found high patient satisfaction rates in Pakistan.[7,8] However, at large; the deficiencies in scientific methods have been limiting the scope of previous research conducted to measure patient satisfaction with health care services.[9] Measuring patient satisfaction with family medicine clinics at public and private hospitals and identifying the associated sociodemographic factors is of prime importance in developing targeted interventions. Hence, this was conducted to determine the frequency of patient satisfaction among patients visiting family medicine clinics at selected public and private tertiary care hospitals in Karachi, Pakistan. The study determined the sociodemographic factors associated with patient satisfaction with services at family medicine clinics. The findings of this study will help in identifying the specific interventions in the existing health services model as well as current practices.

Methodology

A cross-sectional prospective study was conducted among patients visiting Out-Patient Departments (OPDs) of Family Medicine at a public and a private hospital in Karachi i.e. Dr Ruth K.M., Civil Hospital Karachi and Dow University Hospital, Karachi, respectively. Both the study settings included in the study were tertiary care settings representing a considerable proportion of the general population. The study was conducted from January 2024 to April 2024. All the adult patients of 18 years or above of either sex, attending Family Medicine OPD during study duration were invited to participate in the study by applying a non-probability consecutive sampling technique due to lack of sampling frame. However, the patients who had a language barrier and were unable to understand the Urdu language, patients who were mentally unstable to respond to the questions such as patients with cognitive dysfunction and patients who refused to provide the informed consent were excluded from the study. The sample size for this study was calculated using the WHO sample size calculator. With an anticipated patient satisfaction rate of 76.8% for patient satisfaction, a precision of 5% and a 5% level of significance, we obtained a minimum sample size of 274.[8,9] After adjustment for a 22% expected non-response rate we finally, obtained a sample size of 335. The sample was further divided equally between the two selected study sites i.e. a public and a private healthcare setting resulting in the recruitment of 168 participants from each.

Data was collected using a structured questionnaire which was translated into Urdu and pre-tested before the actual data collection. The initial section of the questionnaire collected information regarding sociodemographic characteristics of the patients included in the study such as age in completed years, sex, marital status, type of clinic, occupation, reason for consultation, number of family members earning in the house and average monthly income per household. The average monthly income was used to categorize the patients into income strata while using the same reference categories as defined by a household economic survey of Pakistan (2018-2019).[10] The second section of the questionnaire measured the level of patient satisfaction using a previously validated tool i.e. Patient Satisfaction Questionnaire -18 (PSQ-18).[11] It is a shorter version of a previously validated tool Patient Satisfaction Questionnaire-III (PSQ-III).[12] PSQ-18 is reported to have high reliability and validity for measuring the level of patient satisfaction in various populations.[12-14] The PSQ-18 collects patients' responses on 18 items to measure patient`s level of satisfaction with healthcare services by using a five-point Likert scale. PSQ-18 measures satisfaction regarding seven different components of healthcare services ranging from general satisfaction, interpersonal communication, financial aspects and accessibility to the services. Each component is measured by a collective score of specific questions; hence dividing the PSQ-18 into seven small sub-scales. Each scale has a predefined in-built scoring system and the overall average of the 7 subscales is considered to score patient satisfaction. After calculating the final scores patient satisfaction scores were categorized into two categories i.e. satisfied and unsatisfied; based on average scores on PASQ-18. Any patient with an overall score below the sample average was considered to have low satisfaction or unsatisfied with the services while patients with a score equivalent to the sample average or above were considered as satisfied with the family medicine services they received at the respective family medicine clinic.

For the sake of this study, PSQ-18 was translated into local language i.e. Urdu for better understanding of the study participants which was found to have high reliability in the study population with a Cronbach's alpha value of 0.8. The questionnaire was first translated into Urdu and then back-translated to English to ensure validity.

Data was collected by trained data collectors who were not involved in the provision of care to the study participants. Written informed consent was obtained from each participant and privacy was ensured at the time of data collection. All the research information was kept confidential besides maintaining the anonymity of the study participants.

Data was analyzed using SPSS version 24. Descriptive statistics were calculated for sociodemographic characteristics. Mean and standard deviation were calculated for quantitative continuous variables such as age, number of earning family members and average monthly income per household. For categorical variables, such as sex, marital status, education, occupation, type of clinic and reason for consultation, patient satisfaction, frequencies and proportions will be reported. The frequency of patient satisfaction was calculated and the chi-square test of significance was applied to calculate any significant differences in the patient satisfaction based on differences in the sociodemographic characteristics. Binary logistic regression was applied to determine the factors associated with patient satisfaction with healthcare services. A P-value of 0.05 or less was considered statistically significant

Results:

The median age of study participants was 35 years with an IQR of 21 years. 53.4% (n=179) of all study participants belong to the age group 18-35 years. 33.7% (n=113) of the participants were male while 66.3% (n=222) were female. 46% of the study participants reported having formal education up to primary or less. 18.8% of study participants belonged to the lowest socioeconomic class while only 22.7% belonged to the highest socioeconomic class. 49.3% (n=165) of all study participants were recruited from a family medicine clinic at a public hospital whereas 50.7% (n=170) were recruited from a family medicine clinic at a selected private hospital. (Table: 1)

Table: 1 Distribution of Sociodemographic characteristics among adult patients presenting at public and private family medicine clinics in Karachi, Pakistan (n =335)

Variable	Frequency (n)	Percentage (%)
Age (in completed years)		
18-35 years	179	53.4
36- 54 years	117	34.9
55 years and above	39	11.6
Sex		
Male	113	33.7
Female	222	66.3
Marital Status		
Single	87	25.9
Married	248	74.1
Level of Education		
Primary or no education	154	46.0
Middle to secondary	83	24.8
Higher Secondary	61	18.2
Graduate or above	37	11.0
Clinic type		
Public	165	50.7
Private	170	49.3
Employment status		
Employed	240	71.6
unemployed	95	28.4
Socioeconomic status		
Lowest income group	63	18.8
Low-middle income group	57	17.0
Middle-income group	48	14.3
High income	91	27.2
Highest income group	76	22.7

The majority of the patients visiting public and private family medicine clinics were young between the ages of 18-35 years. On bivariate analysis, the study found statistically significant differences in the sociodemographic characteristics of the patients visiting family medicine clinics based on differences in the type of facility i.e. public and private clinic, except age and sex (p-value $\leq$ 0.05). Overall, 89.3% (n =299) of all the study participants were satisfied with the services provided at family medicine clinics. The frequency of patient satisfaction was significantly higher among patients visiting public clinics i.e. 90.9% (n=150) as compared to patients visiting private clinics i.e. 87.6% (n=149) (p-value $\leq$0.001) (Table: 2).

Among all the seven service components as assessed through 7 sub-scales of PSQ-18 highest rate of patient satisfaction was observed in communication followed by financial aspects with a proportion of 99.1%(n=332) and 97.6%(n=327) respectively. The lowest patient satisfaction was observed for accessibility and convenience i.e. 86.6 (n=290) (Figure: 1).

On bivariate analysis, no significant differences were observed in the satisfaction on seven subscales of satisfaction based on sociodemographic characteristics except for differences in satisfaction with accessibility among male and female patients, while satisfaction with technical quality was higher among patients visiting private clinic as compared to public clinic (p-value: <0.001). The study also found a higher frequency of satisfaction with interpersonal manners w among patients visiting public clinics as compared to those visiting private clinics (p-value: 0.012). The patients who were highly educated had a significantly higher proportion of patients satisfied with communication (p-value: 0.022), financial aspects (p-value: 0.001) and accessibility & convenience (p-value: 0.01).

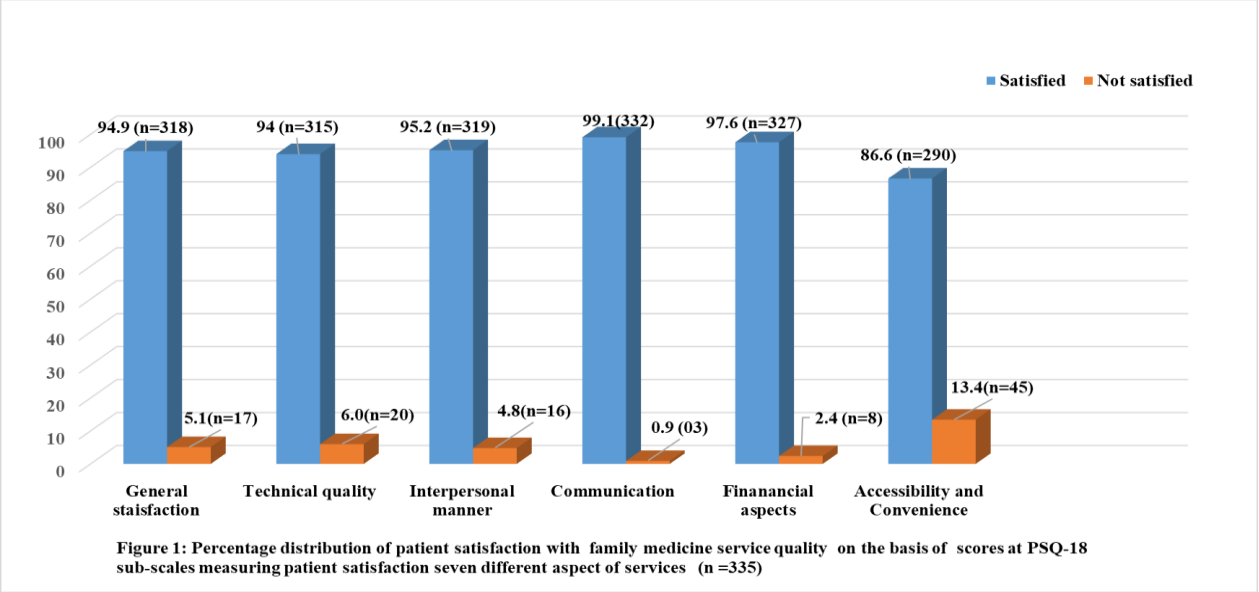

Figure 1: Percentage distribution of patient satisfaction with family medicine service quality on the basis of scores at PSQ-18 sub-scales measuring patient satisfaction seven different aspect of services (n =335)

Figure 1: Percentage distribution of patient satisfaction with family medicine service quality on the basis of scores at PSQ-18 sub-scales measuring patient satisfaction seven different aspect of services (n=335)

Table: 2 Comparison of sociodemographic characteristics among patients presenting at public and private clinics, Karachi

Variable	Public (n=165)	Private (n=170)	p-value
Age (in completed years)			
18-35 years	79(47.9)	100(58.8)	
36-54 years	68(41.2)	49(28.8)	0.058
55-72years	18(10.9)	21(12.4)	
Sex			
Male	49(29.7)	64(37.6)	0.134
Female	116(70.3)	106(62.4)	
Marital Status			
Single /divorced	31(18.8)	56(32.9)	0.004
Married	134(81.2)	114(67.1)	
Level of Education			
Primary or no education	96(58.2)	58(34.1)	
Middle to secondary	45(27.3)	38(22.4)	<0.001
Higher Secondary	14(8.5)	47(27.6)	
Graduate or above	10(6.1)	27(15.9)	
Employment status			
Employed	54(31.8)	41(24.8)	0.18
Unemployed	116(68.2)	124(75.2)	
Socioeconomic status			
Lowest income group	39(23.6)	24(14.1)	
Low-middle income group	45(27.3)	12(7.1)	<0.001
Middle-income group	24(14.5)	24(14.1)	
High income	29(17.6)	62(36.5)	
Highest income group	28(17.0)	48(28.2)	
Patient Satisfied with services			
Yes	150 (90.9)	149(87.6)	<0.001
No	15 (9.1)	21(12.4)	

(n=335)

In multivariate analysis of sociodemographic factors, the study found that married patients were more likely to be satisfied with services as compared to unmarried (adj. OR: 3.2, 95% CI; 1.5-6.7, p-value 0.002). The study also found a positive association between patient satisfaction with an education level of primary or below and age between 36-54 years but these findings were statistically not significant. The study also found a statistically significant negative association between socioeconomic status and patient satisfaction with the services at the family medicine clinic.
The patients from middle socioeconomic status (adj. OR: 0.19, 95/5 CI: 0.10-0.35, p-value <0.001) and high socioeconomic status (adj. OR: 0.23, 95/5 CI: 0.10-0.51, p-value <0.001) were less likely to be satisfied with the services. Similarly, patients with education level of middle to intermediate were less likely to be satisfied with the services (adj. OR: 0.14, 95% CI: 0.17-0.99, p-value: 0.47) (Table: 3).

Table 3: Table Factors associated with patient satisfaction with healthcare services (n=335)

Variable	Unadjusted Odds Ratio	Adjusted Odds Ratio (95% CI)	p-value
Age (completed \years)			
18-35 years	1	1	
36-54 years	2.01(1.24-3.26)	1.47(0.81-2.67)	0.19
55-72years	0.97(0.46-2.06)	0.78(0.31-1.95	0.62
Sex			
Male	1	1	
Female	0.81(0.49-1.28)	0.73(0.34-1.59)	0.43
Marital Status			
Single	1	1	
Married	3.7(2.04-6.92)	3.2 6(1.55-6.78)	0.002
Level of Education			
Primary or no education	1	1	
Middle to secondary	0.23(1.04-5.09)	1.21(0.6-2.47)	0.44
Higher Secondary	0.18(0.76-4.16)	0.4(0.17-1.02)	0.47
Graduate or above	0.52(0.19-1.42)	0.8(0.30-2.33)	0.68
Employment status			
Employed	1	1	
Unemployed	1.14(0.69-1.88)	1.12(0.50-2.52)	0.77
Socioeconomic groups			
Low income	1	1	
Middle income	0.17(0.10-0.30)	0.19(0.1-0.35)	<0.001
High income	0.17(0.90-0.33)	0.23(0.1-0.51)	<0.001

Discussion

This study is among the very few research from Pakistan which was conducted in Karachi. The study analyzed the current situation in both public and private healthcare facilities to obtain a holistic view of the situation. The current study reported a considerably high frequency of patient satisfaction among the study participants; with an overall frequency of 89.3% and a frequency of 89.3% and 87.6% for public and private clinics respectively. This finding is in line with previous evidence from Karachi, Pakistan.[7,8,15,16]
The current study also observed that the frequency of patients satisfied with existing services was significantly higher among patients presenting at public clinics as compared to patients presenting at family medicine clinics at private hospitals. These differences are also well supported by the previous evidence from Karachi, Pakistan.[7,8,15,16] This can be explained by statistically significant differences in the sociodemographic characteristics of the patients visiting public and private facilities such as age, marital status, education, and socioeconomic status. The comparison of patients showed that the patients visiting private facilities were relatively more educated and had a better socioeconomic status which makes them more capable of having a better understanding of the service quality. However, a previous evaluation of public and private hospitals in Lahore and Rawalpindi revealed contrary findings with higher patient satisfaction rates among patients visiting private facilities as compared to public facilities.[17]
The multivariate analysis of patient satisfaction with sociodemographic characteristics of study participants showed a negative association between patient satisfaction with services at a family medicine clinic and age between 36 years and 55 years or above, female sex, education level up to intermediate or above and higher socioeconomic status. However, some of these results were not statistically significant possibly because of limited sample size and unavailability of data for important confounders. The negative influence of higher education and high socioeconomic status on patient satisfaction with healthcare services is well supported by previous evidence.[18] This can be explained by an enhanced understanding of the service quality and relatively higher accessibility or more exposure to public as well as private facilities. Moreover, education is an important predictor of high self-esteem; directly affects a person`s attitude towards his or her life exposures. On the other hand, higher self-esteem has been associated with poor satisfaction with healthcare services.[18-20] This also explains the relatively higher frequency of patient satisfaction among patients

visiting public clinics as compared to those visiting private clinics. Hence, it seems that satisfying patients in older age groups and those with better socioeconomic status may require more effort to satisfy as reported previously.[4,18.] Nevertheless, previous studies from Pakistan and other countries including Pakistan, Bangladesh, Iran, Iraq, Nepal and Saudia Arabia have been showing mixed results due to differences in target population, measuring tools and insufficient sample size.[5-8,21-24] This also explains the differences in the evidence regarding various components related to service quality as measured through sub-scales.[24]

This study is a valuable addition to the local evidence regarding patient satisfaction with family medicine services and associated sociodemographic characteristics. This study specifically represents evidence from public and private family medicine clinics in Karachi. Patient satisfaction was measured using PSQ-18 which provides a good combination of positive and negative statements about the services hence; reducing the risk-biased measurement by overstating the service quality.[25] Furthermore, the study also computed the reliability of the PSQ-18 Urdu translated version used in this study and it was found to have high reliability for our study sample. Nevertheless, this study had few built-in limitations. At first this; this study only collected data from one public and one private facility hence; lacks generalizability. Secondly, the study didn't collect information regarding various confounders such as previous experience, patient`s expectations from the services, availability of health insurance, the role of ethnicity and distance travelled for the services. Third, the measurement of satisfaction was done using a 5-point Likert scale, hence lacks objectivity and might be affected by an individual`s subjective perceptions and expectations related to services. Moreover, the sample size of this study was mainly calculated considering the primary objective of the study and was not based on the association of patient satisfaction with sociodemographic characteristics which might have affected the study results. The use of non-probability sampling might have affected study results by affecting the generalizability. In addition, as the data was collected by the physicians themselves; it might have resulted in social desirability bias which has resulted in the deliberate selection of responses which can please the service provider. In the last, due to limited published research with a focus on family medicine clinics, we couldn't find many local studies with similar scope and objectives.

Conclusions

Sociodemographic factors seem to have a substantial effect on perceived satisfaction with family medicine clinics. Large-scale studies, with larger sample sizes are required to determine the role of patients` sociodemographic characteristics on patients` satisfaction with healthcare services. This will help in designing and implementing specific interventions to address patients' specific expectations from the family medicine services and to achieve patient satisfaction.

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