EVALUATION OF PATIENT SATISFACTION WITH PRIMARY HEALTH CARE SERVICES IN PRINCE SULTAN MILITARY MEDICAL CITY, SAUDI ARABIA

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Abstract

Objective To evaluate patients' satisfaction with primary health care (PHC) services in Prince Sultan Military Medical City (PSMMC).

Methods A cross sectional study design was used. Study participants were adult patients aged 16 years and more. The study was conducted in two primary health care clinics of PSMMC, namely Non-Commissioned Officers Health Center (NCOHC), and Officers Clinic Health Center (OCHC).Subjects were selected using systematic random sampling method. The data was collected by using a pre-tested, self-administered questionnaire. The information sought included demographic data and questions to assess patients' satisfaction with primary health care services: receptionists, access, continuity of care, communication and enablement. Data was entered by using excel program, and analyses were performed using appropriate statistical tests.

Results A total of 300 patients (96% response rate) completed the questionnaire from NCOHC, and OCHC. Mean age of the respondents was 32.2 years. 52 % of the respondents were male. 31.67 % were educated to the end of primary school, 41 % had completed their education at secondary school and 27.33 % had a third level

qualification. 50% were employed, 47.67 % were unemployed and 2.33% were retired. The area of general practice with the highest level of reported satisfaction is communication(74.90 %) and the area of the poorest level of satisfaction is access(48.82%).The mean score of satisfaction with receptionist, continuity of care, and enablement were 60.87%, 49.73%, and 49.33% respectively. The mean scores of satisfaction with primary health care services were similar in NCOHC and OCHC and the difference between them was statistically insignificant. Patients of older age tend to be more satisfied with primary health care services with receptionist (P<0.0001) and continuity of care (P=0.0014) than their younger counterparts. Females were more satisfied with continuity of care (P=0.0021) than Males. Patients who were educated to the end of primary or secondary school tend to be more satisfied with continuity of care (P<0.0001) and communication (P=0.0415) than patients who had third level qualification. Employed patients were more satisfied with receptionist (P=0.0001) and less satisfied with continuity of care (P=0.0003) than unemployed.

Conclusion The level of satisfaction with primary health care services in PSMMC is relatively low. The results revealed areas in which quality improvement is required: accessibility, continuity of care and enablement.

Keywords: Primary health care; satisfaction; Patients; Saudi Arabia

Running title: PATIENT SATISFACTION WITH PRIMARY HEALTH CARE SERVICES

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Introduction

Primary health care as a concept and strategy for providing first line care and community health services has been accepted and adopted by many countries particularly developing countries. Saudi Arabia have in general calibrated their health systems according to Alma Ata declaration which was adopted by WHO in 1978, where first contact comprehensive services are offered to all eligible individuals through primary health care centers serving defined catchment's areas according to residence. Services include promotive, preventive and curative aspects centered around the eight components of PHC which are adequate food and proper nutrition, adequate safe water and basic sanitation, health education, maternal and child health including family planning, immunization against common immunizable diseases, control of endemic diseases, treatment of common diseases and injuries, and provision of essential drugs.

The strategies of PHC development in the kingdom include expanding PHC facilities, strengthening co-ordination between primary, secondary and tertiary health care as well as inter- and intra-sectorial co-ordination within the ministry of health. The strategies also aim at promoting positive relationships between PHC facilities and their consumers and developing active consumer participation [1]. Saudi Arabia has witnessed rapid urbanization, social and economic transformation and this has resulted in an increase in people's demands and expectations for high quality health services. Consequently, it has become necessary to devise accurate means of assessing patient's satisfaction that has a marked influence on certain health-related behaviors, such as compliance with medical regimens and appointment keeping, and use of medical services [2, 3].

Consumers' satisfaction is generally considered as the extent to which consumers feel that their needs and expectations are being met by the services provided. The notion of patient satisfaction lacks a concise definition, Fitzpatrick argues that most approaches to patient satisfaction view patient's experiences including cognitive evaluation together with emotional reactions to their care. Patients can express their views through complaint procedures, changing doctors, and by expressing their opinion on the quality of services received [4].

Satisfaction studies started to appear in the literature about half a century ago with a growing awareness of the patient satisfaction as an evaluator of health care. With time it became more sophisticated and specialized, and multidimensional scales were suggested for measurement of satisfaction [5-8]. Patient satisfaction is regarded as an outcome of care itself, and it has become a prime objective in the planning and evaluation of health services [9, 10]. Patients' evaluation can be used as a tool for quality improvement at a practice and at national levels [11].

Patient's expectations and satisfaction may be affected by various factors, which could be related to demographic or related to hospital staff structure or to the complexity of administrative procedures in the hospitals concerned [12]. Affordability, accessibility, availability and equity, have been shown to play an important role in patient satisfaction with the health care delivery system [13]. Patients tend to be less satisfied with younger doctors [14, 15]. Longer consultation times, the use of a regular doctor, and the continuity of provider or provider setting are all associated with higher rating of patient satisfaction [13, 16-18]. Single-handed practices tend to be given higher scores due to more personal care [16, 19, 20]. Previous research has shown that patients are more satisfied with general practice if they experience short waiting times [20]. Lower levels of patient satisfaction can lead

to changing doctor and sometimes 'shopping around' for doctors [15, 19, 21]. Changing doctors for reasons other than moving to another address can thus be seen as a patient's complaint about the care provided and used as an indication for the need of quality improvement [11, 19, 22].

Although some researchers ,for example Weiss, have found little or no association of patient satisfaction with socio-demographic characteristics of service users , a number of consistent findings can be identified in the literature that relate patient characteristics to their level of satisfaction with care [3]. The socio-demographic categories that have demonstrated the most consistent relationships with service satisfaction are the age and sex of patients. It is generally reported that older patients tends to be more satisfied with health care than their younger counterparts. This seems to be particularly true in relation to communication and attitude of health care staff but less true in term of access to care and outcomes of care. It is not clear whether this association represents a difference between generations or whether individuals per se become more satisfied as they grow older. Female patients appear to be more satisfied in general than males although at least one study reports higher satisfaction in men than women [23]. Although one review suggests that less educated persons tend to be less satisfied with the conduct of health care providers [24], the general trend in satisfaction studies is for more specific dissatisfaction to be expressed by the better educated patients.

Few studies were conducted in Saudi Arabia to assess patient satisfaction with primary health care centers services [25-29]. In a study conducted in Jeddah, included 75 adult patients attending PHCC to assess patient satisfaction with services provided by primary health care centers, the overall satisfaction with the services provided was 2.45 points out of a maximum of 5 points [28]. Another study conducted in Riyadh,

included 466 randomly selected adult patients from six PHCC to assess the patient satisfaction with different aspects of the primary health care centers services, showed a high rate (90%) of overall satisfaction [29].

In this study, author tried to include all factors that affect the patient satisfaction in the questionnaire and used valid and reliable self-administered questionnaire (The General Practice Assessment Questionnaire or GAPQ) to assess patient satisfaction with primary health care service [30]. The aim of this study is to assess patient satisfaction with health care and to evaluate health care services provided by primary health care centers attached to PSMMC and to explore if this questionnaire can be used as a tool for total quality management.

Methodology

A cross-sectional study was conducted in two primary care clinics in PSMMC. The data was collected by using pilot tested self-administered questionnaire developed after reviewing literature. The items included in the questionnaire mainly obtained from internationally validated and reliable questionnaire (The General Practice Assessment Questionnaire or GPAQ). Two Questions about race and accommodation were omitted and one question about level of education was added to GPAQ. Questionnaire was pre-tested in OCHC by conducting a pilot study of 20 patients to check for the understandability and clarity of questions, and all valid comments were taken into consideration in the main survey. The information sought included socio-demographic data in form of gender, age, education level, and occupation. The questionnaire also contained another 11 questions to assess the attendees' satisfaction with receptionists (Q2), accessibility to services (Q3-8),continuity of care (Q9), communication during consultation (Q10), enablement

(Q11) and one question about overall satisfaction with services (Q12) see Table I. A rating scale was used for the questions seeking the extent of satisfaction of the respondents. The calculation of scale scores involves the following stages for each respondent:

1. Changing all out of range,' does not apply' and 'don't know' responses to missing values.

2. Determination of whether sufficient questions have been rated for a scale score to be calculated. If there are insufficient responses recorded for any scale, then the scale as a whole should be listed as missing.

Table 1. Scales of the General Practice Assessment Questionnaire

Scale	Question/s in scale	Number of questions in scale	Minimum number of valid responses needed to calculate scale score
Receptionists	2	1	1
Access	3a, 4b, 5b, 7b, 8a, 8b	6	3
Continuity of care	9b	1	1
Communication	10a, 10b, 10c, 10d, 10e, 10f, 10g	7	4
Enablement	11a, 11b, 11c	3	2
Overall satisfaction	12	1	1

3. The mean score of the completed questions is calculated. Then, for each scale, 0-100 scale is calculated by using this formula:

$$\text{Scale score} = \frac{(\text{mean score of completed questions} - \text{lowest possible question value}) \times 100}{(\text{Maximum question range})}$$

Table 2. Scale score of the General Practice Assessment Questionnaire

Scale	Lowest question value	Highest question value	Maximum question range
Access	1	6	5
Receptionists	1	6	5
Continuity	1	6	5
Communication	1	6	5
Enablement	1	3	2
Satisfaction	1	4	3

The target population was adult patients aged 16 years and more attending primary care clinics in PSMMC, which was estimated to be 8970 eligible patients in year 2011. Subjects were selected from two primary care health centers, namely Officer Clinic Health Center (OCHC) and Non-Commissioned Officer Health Center (NCOHC). The average number of patient aged 16 years and more attending OCHC and NCOHC are 25-35 per day and 35-40 per day consequently. These centers were operated during morning, and afternoon, 5days a week (Saturday through Wednesday).

Based on using 5% significance level ($\propto$ =0.05), the effective sample size was calculated to be a minimum of 150 participants from each center. Subjects were selected by systematic random sampling, by choosing every fourth eligible patient attending these clinics. The data was collected over a 2-months period from October to November, 2012. The survey was anonymous, and all the collected data was kept confidential. The study participants were informed through the questionnaire about the purpose of the study and that their participation is voluntary. The patients were informed about the survey when they register in at reception and were asked to complete the questionnaire after they have seen the doctor and the questionnaire was collected by receptionist. The receptionist in charge received some instructions about

method of data collection (see appendix II). The questionnaire was self-administered. The data were manually checked for completeness.

An Excel program was used to enter, formulate, calculate, filter the raw data and produce the tables. Descriptive statistics were executed employing Graph Pad Instat and Graph Pad Prism programs. Data comparisons of the services' qualities, with respect to the two clinics and differences between means of paired data were analyzed by *t*-tests whilst further multiple comparisons were done by one-way analysis of variance (ANOVA) with post tests, where appropriate. Associations between respondents' characteristics and the services' quality were evaluated by Multiple Regression and ANOVA, employing Graph Pad Instat. Confidence interval limits (95%) and *P*-Values ($\alpha = 0.05$) were considered to indicate significance.

Results

Eight patients refused to participate in the study. Table 3 shows their socio-demographic characteristics. A total of 304 questionnaires were returned in the study period. Four questionnaires were returned not filled out. Questionnaires from 300 respondents (96% response rate) entered the final analysis. 150 Questionnaires from NCOHC and another 150 Questionnaires from OCHC. Mean age of the respondents was 32.2 years. 52 %(n=156) of the respondents were male and 48 %(n=144) were female. The educational attainment of the respondents indicated that 31.67 %(n=95) were educated to the end of primary school, 41 %(n=123) had completed their education at secondary school and 27.33 %(n=82) had a third level qualification. 50% (n=150) were employed, 47.67 %(n=143) were unemployed and 2.33 %(n=7) were retired. Socio-demographic characteristics frequency distribution of the respondents in NCOHC and OCHC were summarized in table 4.

Table 3. Demographic characteristics of non- respondents

Variable		OCHC	NCOCHC	Total
Age (years)		n	n	n
	16 - 39	3	2	5
	40 - 54	2	1	3
	≥ 55	0	0	0
	Total	5	3	8
Sex				
	Female	4	3	7
	Male	1	0	1
	Total	5	3	8
Education				
	Primary	2	1	3
	Secondary	1	0	1
	University	2	2	4
	Total	5	3	8
Employment				
	Employed	4	1	5
	Unemployed	0	1	1
	Retired	1	1	2
	Total	5	3	8

Table 4. Demographic characteristics of respondents

Variable		OCHC		NCOCHC		Total	
Age (years)		n	(%)	n	(%)	n	(%)
	16 - 39	114	(76.00)	118	(78.67)	232	(77.33)
	40 - 54	34	(22.67)	29	(19.33)	63	(21.00)
	≥ 55	2	(1.33)	3	(2.00)	5	(1.67)
	Total	150		150		300	
Sex							
	Female	71	(47.30)	73	(48.67)	144	(48.00)
	Male	79	(52.70)	77	(51.33)	156	(52.00)
	Total	150		150		300	
Education							
	Primary	48	(32.00)	47	(31.33)	95	(31.67)
	Secondary	55	(36.67)	68	(45.33)	123	(41.00)
	University	47	(31.33)	35	(23.33)	82	(27.33)
	Total	150		150		300	
Employment							
	Employed	86	(57.33)	64	(42.67)	150	(50.00)
	Unemployed	61	(40.67)	82	(54.67)	143	(47.67)
	Retired	3	(2.00)	4	(2.66)	7	(2.33)
	Total	150		150		300	

Table 5 illustrates the mean score of satisfaction with different scales of primary health care services. This table shows that the area of general practice with the highest level of reported satisfaction is communication (74.90 %) and the area of the poorest level of satisfaction is access (48.82%).The mean score of satisfaction with receptionist, continuity of care, and enablement were 60.87%, 49.73%, and 49.33% respectively. The mean scores of satisfaction with primary health care services were similar in NCOHC and OCHC and the difference between them was statistically insignificant (P>0.05).

Table 5. Comparison of services satisfaction in respondents between clinics

Quality of Service	Officers Clinic mean	NC Officers Clinic mean	Overall Mean	P-Value
Receptionist	60.13	61.60	60.87	0.6499
Access	49.23	48.41	48.82	0.6833
Continuity of Care	48.93	50.53	49.73	0.6838
Communication	75.17	74.64	74.90	0.7860
Enablement	50.10	48.57	49.33	0.6746
Overall Satisfaction	54.94	58.27	56.61	0.3194

Further analysis was conducted to examine the significance of the respondents' socio-demographic background on their responses. Patients of older age tend to be more satisfied with primary health care services than their younger counterparts. This seem to be particularly true in relation to receptionist (P<0.0001) and continuity of care (P=0.0014).Patients' age did not have a significant effect on satisfaction with

access, communication and enablement (table 6). Females were more satisfied with continuity of care (P=0.0021) than Males (table 7).

Table 6. The relation of age to services' satisfaction in respondents

Quality of Service	Age ranges (years)			
	16 - 39	40 - 54	≥ 55	P-Value
Receptionist	57.07	71.61	96.67	< 0.0001
Access	47.97	51.29	56.00	0.2379
Continuity of care	33.33	37.10	53.53	0.0014
Communication	75.16	75.10	63.00	0.2222
Enablement	48.97	50.65	50.00	0.9322
Overall satisfaction	52.91	50.65	50.00	0.8417

Table 7. The relation of sex to services' satisfaction in respondents

Quality of Service Components	Female (n=144)	Male (n=156)	P-Value
Receptionist	58.75	62.82	0.2075
Access	49.07	48.59	0.8100
Continuity of care	55.97	43.97	0.0021
Communication	75.92	73.97	0.3229
Enablement	49.86	48.85	0.7813
Overall satisfaction	54.66	58.40	0.2637

Patients who were educated to the end of primary or secondary school tend to be more satisfied with continuity of care (P<0.0001) and communication (P=0.0415) than patients who had third level qualification (table 8). Employed patients were more

satisfied with receptionist (P=0.0001) and less satisfied with continuity of care (P=0.0003) than unemployed (table 9). Patients' age, sex, level of education and employment had no significant effect on overall satisfaction (P>0.05).

Table 8. The relation of educational level to services' satisfaction in respondents

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Quality of Service	Educational level			P-Value
	Primary	Secondary	University	
Receptionist	58.95	59.19	65.61	0.1961
Access	49.98	48.46	48.02	0.7202
Continuity of care	61.89	47.97	38.29	< 0.0001
Communication	76.88	76.03	70.93	0.0415
Enablement	47.32	52.15	47.44	0.4359
Overall satisfaction	53.00	57.77	59.04	0.3253

Table 9. The relation of employment status to services' satisfaction in respondents

Quality of Service	Employment			P-Value
	Employed	Unemployed	Retired	
Receptionist	65.07	54.97	91.43	0.0001
Access	47.69	50.04	48.00	0.5038
Continuity of care	42.67	57.90	34.29	0.0003
Communication	47.70	76.32	66.29	0.1957
Enablement	73.96	51.47	40.71	0.4555
Overall satisfaction	59.17	53.42	66.71	0.1522

Discussion

Patient satisfaction studies help health care providers to better understand the patients' views and making use of them in planning, controlling and delivering the services to improve the quality of health care provided in PHC.

Patient satisfaction studies in Saudi Arabia showed variable level and determinants of satisfaction. The level of overall satisfaction with primary health care services in our study was low (56.6%). Saeed et al. [27] and Al Faris et al. [29] showed that the rates of patients who were satisfied with the services offered by PHCC were 80% and 90% respectively, but in both studies the level of satisfaction was not determined. The poor satisfaction found in our study, may be due to genuine problems concerning these service items and corrective measures may need to be implemented. However, this could be because some patients are not aware of the objectives and limits of primary health care services which are not identical to secondary (hospital) health services. Patients were less satisfied with access, continuity of care and enablement and these are the areas need to be improved to achieve higher level of satisfaction.

Previous studies have shown no consistent picture of the effect of socio-demographic variables on satisfaction and that satisfaction is multifactorial. In our study, older patient were more satisfied with different primary health care services than their younger counterparts which is consistent with the findings of Al Faris et al study [29]. This might be explained by the fact that older patients are generation of consumers who experienced health services prior to the growth of welfare state or due to cognitive perceptual effect .We found in the present study that those who are less literate had generally higher level of satisfaction particularly in relation to continuity of care and communication which is congruent with the finding of Makhdoom et al.

study [33]. We found that Females were more satisfied than males except for overall satisfaction and satisfaction with receptionists. This result doesn't support the findings of Al Dawood et al. study which showed that males had a higher level of satisfaction [32]. In this study employed patients were more satisfied with receptionist and less satisfied with continuity of care than unemployed. In the other hand, Saeed et al.showed that employment had no significant effect on patient satisfaction [27].

Previous studies, which were conducted in Saudi Arabia, did not address the determinants of patient satisfaction sufficiently and utilized invalid and unreliable questionnaires to assess patient satisfaction. In this study we attempted to avoid these drawbacks by including more determinants of patients satisfaction and using the most valid and reliable questionnaire available (GPAQ). The only limitation of our study is that we used self-administered questionnaire which might affect the validity of the results because of two reasons. First, only literate patients who are able to read and write were included in the study. Secondly, no interviewers were involved in the study to clarify the items of the questionnaire to the patients .The reason why we used self-administered questionnaire is to include larger number of patients. We overcome the problem of the need of interviewers by using simple, understandable questions in our questionnaire. A pilot study of 20 patients was done to check for the understandability and clarity of questions, and all valid comments were taken into consideration in the final questionnaire.

We concluded that level of satisfaction with family practice in PSMMC is relatively low. This study revealed areas for improvement: accessibility, continuity of care and enablement. Some organizational change should take place to improve these areas like improving appointment system and telephone access, shortening waiting times, providing regular appointments with the same doctor and encouraging

physicians to spend more time explaining to patients the nature of their illnesses and how to cope with them.

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