

STUDY OF SATISFACTION OF DIABETIC PATIENTS ATTENDING THE DIABETES CLINIC AT PRIMARY HEALTH CARE CENTERS IN ABHA CITY, SAUDI ARABIA

Eisa Y Ghazwani¹, Omar A Al-Jaber²

¹ Abha Regional Technical Supervisor, General Directorate of Health affairs, Asser Region, Saudi Arabia

² Mahayel Primary Health Care Center, Asser Region, Saudi Arabia

Correspondence to: Eisa Y Ghazwani (dreisaa@yahoo.com)

DOI: 10.5455/ijmsph.2014.110220141

Received Date: 10.02.2014

Accepted Date: 11.03.2014

ABSTRACT

Background: With the ageing of the population and the advances in the treatment of chronic diseases, the teamwork in the context of chronic diseases needs to be re-examined. Patients with chronic diseases have to pay repeated visits to PHC clinics, usually for the rest of their lives. These patients are usually more difficult to satisfy. Patient satisfaction is the extent to which the patients feel that their needs and expectations are being met by the service provided. It has been a widely recognized indicator of quality of care in medical practice.

Aims & Objective: This study aims to assess patients' satisfaction with the main aspects of primary health care provided at the Chronic Diseases Clinic, identify areas of health care that show low satisfaction and Identify determinants of patients' satisfaction.

Materials and Methods: A cross sectional study was carried out among a representative random sample of registered patients, at randomly selected two PHCCs in Abha, KSA. The tool used for data collection consisted of two parts; the first part was about the personal information of the participants, while the second part was the Arabic version of Modified patient satisfaction questionnaire (PSQ-18).

Results: The study include 600 patients, almost one fourth of participants aged above 60 years, while 37% of them aged 50-60 years and 38.7% of them aged below 50 years. Of the respondents, 13% were dissatisfied, while 87% were satisfied (i.e., 44% were moderately satisfied and 43% were highly satisfied). This study revealed significantly lower levels of satisfaction among diabetic patients who attended at Al-Qabel PHCC than those who attended at Al-Manhal PHCC, i.e. pre-clinic items (67.7% vs. 76%, respectively); clinic items (81% vs. 92.3%, $p < 0.001$); post-clinic items (86.3% vs. 92.3%, $p < 0.001$) and overall satisfaction (81.3% vs. 92.7%, $p < 0.001$). Regarding diabetic patients' grades of overall satisfaction, the highest proportion of dissatisfaction was observed among patients aged < 50 years, males, lower levels of education and higher monthly income. Unemployed patients expressed significantly higher grades of satisfaction than employed patients ($p = 0.005$).

Conclusion: This study concluded that diabetic patients' satisfaction grade was least toward pre-clinic (i.e., PHCC accessibility, availability of parking areas, comfortable waiting area, short waiting times and measurement of patient's vital signs before meeting the physician) followed by post-clinic items (i.e., performing the necessary routine investigations, availability and accessibility of labs within the PHCC, availability of medications within the PHCC's pharmacy). Patients' characteristics associated with less satisfaction include younger age, male gender, higher education, employment and higher monthly income.

Key Words: Diabetes; Satisfaction; Modified Patient Satisfaction Questionnaire (PSQ-18); Saudi Arabia

Introduction

Advances in medicine have increased the number of chronic conditions that can be successfully treated but have also increased the complexity of regimens. The identification or addition of team members to achieve greater concordance with complex treatment protocols by providers and patients has significantly improved outcomes in several chronic conditions.^[1,2] With the ageing of the population and the advances in the treatment of chronic diseases, the teamwork in the context of chronic diseases needs to be re-examined. Successful chronic disease interventions usually involve a coordinated multidisciplinary care team.^[3]

Patients with diabetes have to pay repeated visits to PHC clinics, usually for the rest of their lives. These patients are usually more difficult to satisfy. This usually leads to

unsatisfactory compliance and poor control of their chronic disease.^[4] Research documented that improving patients' satisfaction increases the likelihood that they will return to a given health care provider and increase their compliance toward medication.^[5]

Patient satisfaction is the extent to which the patients feel that their needs and expectations are being met by the service provided.^[6] Research on that field started during the 1960s. Initially, research focused on patient satisfaction as an intermediate condition in order to reach desirable clinical outcomes (e.g., patient compliance with recommended treatment). However, patient satisfaction was gradually shifted to a final outcome for evaluating and improving health and care services.^[7] Patient satisfaction is a special form of consumer attitude – that is, as post-experience phenomenon reflecting how much a patient liked or disliked the service.^[8] It has been a widely

recognized indicator of quality of care in medical practice.^[9] A product of expectation and experience, patient satisfaction or dissatisfaction occurs as the processes of medical care unfold. When patients are asked about satisfaction with their care, they implicitly review their experiences and compare them with expectations. Experiences that exceed expectations lead to satisfied patients, while those that fail to meet expectations cause dissatisfaction. Patient satisfaction represents “the voice of the patient,” feedback that reflects responses to experiences created by health care workers.^[10]

Assessments of patients’ satisfaction regarding primary health care (PHC) physicians is important, not only as a measure of the quality of care patients receive^[11], but also in identifying potential areas for improving the content of care provided by PHC physicians.^[12] Research proved that improving patient satisfaction with physician increases the likelihood that a patient will return to a given health care provider.^[5] Quality in PHC is demonstrated through such indicators as patient adherence to treatment recommendations, rates of malpractice litigation, and patient retention over time. Because patient satisfaction is related to each of these, it can be used as a readily obtained proxy for them.^[13,14]

Patients’ satisfaction is increasingly recognized as an important consideration in planning general practice services, especially for those with chronic disease. Satisfied patients are more likely to follow treatment instructions and medical advice. Continuity of care, the physician’s ability to communicate well, the availability of health information and the opportunity to self-manage chronic disease have been identified as factors that patients consider important. However, no studies have specifically assessed whether particular characteristics of PHC are associated with patients’ satisfaction with diabetes care.^[14]

Since the assessments of patients’ satisfaction is an essential issue, as a measure of quality of PHC that patients receive and in identifying potential areas for improving the content of care provided by PHC physicians, this study aimed to assess type 2 diabetic patients’ satisfaction toward provided primary health care at the Chronic Diseases Clinic.

Materials and Methods

This is a cross sectional study performed in Abha City, the capital of Aseer Region, which lies at the south-western part of Saudi Arabia, about 3300 m above the sea level. It has 6 PHCCs, which provide both preventive and curative services. It included Type 2 diabetic patients, registered at

one of the two selected primary health care centers in Abha City and regularly attending the chronic diseases clinic.

Using the random table numbers, two PHCCs were randomly selected, i.e., Al-Manhal and Al-Qabel PHCCs. The minimum sample size of participant patients for this study has been decided according to Dahiru et al.^[15] The calculated minimum sample size is 600. The researcher followed a consecutive sample to interview 600 PHCC attendants (300 in each PHCC).

Tools for data collection included patients’ interview data sheet, patient satisfaction questionnaire. This questionnaire was constructed by the researcher based on thorough review of relevant literature. ^[16-20] It comprises 27 statements covering all the steps of health care provided by the physician to the diabetic patient at the diabetes clinic, i.e., 7 statements on the pre-clinic steps (i.e., PHCC accessibility, availability of parking areas, comfortable waiting area, short waiting times and measurement of patient’s vital signs before meeting the physician), 11 on the items within the clinic (e.g., listening to the complaints, performing clinical examination, explaining how to take medication, offering health education, spending enough time with physician, receiving answers to all questions, the possibility of meeting a specialist, etc.) and 8 statements on post-clinic items (e.g., performing the necessary routine investigations, availability and accessibility of labs within the PHCC, availability of medications within the PHCC’s pharmacy, etc.). In addition, there is one statement on patient’s general satisfaction toward provided health care.

The patient responded to each statement according to a 5-point Likert scale (i.e., fully satisfied = 5, satisfied to some extent = 4, neutral = 3, dissatisfied = 2 and fully dissatisfied = 1). All items were scored so that high scores reflect higher patient satisfaction, i.e., an item toward which the patient is fully satisfied were assigned a score of 5 while a fully dissatisfied response were assigned a score of 1. Cut-offs for the total scores were decided by the researcher as <60% = “not satisfied”; 60-80% as “moderately satisfied” and >80% as “highly satisfied”. To test the questionnaire’s content validity, the questionnaire was revised by a family medicine consultant and a professor of family and community medicine.

The researcher conducted a pilot study to test the wording and reliability of the constructed questionnaire. The pilot study was conducted at a PHCC other than the two PHCCs which constitute the study setting. The Directors of the two

selected Primary Health Care Centers were visited and a copy of the proposal and the data collection tools were given to them. The objectives were fully explained to them, asking their official approval and support. The researcher personally interviewed all study patients so as to include those who are illiterate and also to avoid any misunderstanding toward the questionnaire statements from the side of the patient.

Data Analysis

The Statistical Package for Social Sciences (SPSS version 16.0) was used for data analysis. Descriptive statistics were calculated and the appropriate test of significance (i.e., χ^2) was applied accordingly. A statistically significant difference was considered when p-values were less than 0.05.

Results

The study included 600 diabetic patients. Table 1 shows that almost one fourth of participants aged above 60 years, while 37% of them aged 50-60 years and 38.7% of them aged below 50 years. Most participants were males (72.7%). Almost one third of participants were illiterate (29.2%), almost one fourth of them had primary level of education (24.5%), 11.3% had intermediate level of education, 13.5% attained their secondary level of education, 16.8% were university graduates, while 4.7% has postgraduate levels of education. Most participants were married (89%), 6.5% were divorced, 3.5% were single and 1% were widowed. Almost one third of participants were unemployed (30.3%). The monthly income of almost three fourths of participants was less than 10,000 SR (71.3%), while 28.7% had a monthly income of 10,000 SR or more.

Figure 1 illustrates the overall satisfaction of the respondents. Of the respondents, 13% were dissatisfied, while 87% were satisfied (i.e., 44% were moderately satisfied and 43% were highly satisfied). Table 2 show that 28.2% of patients were dissatisfied regarding pre-clinic items, while 71.8% were satisfied (i.e., 31.8% were moderately satisfied, while 40% were highly satisfied). Regarding patients' satisfaction toward clinic items, 13.3% were dissatisfied, while 86.7% were satisfied (i.e., 41% were moderately satisfied and 45.7% were highly satisfied). Patients' satisfaction toward post-clinic items, 10.7% were dissatisfied, while 89.3% were satisfied (i.e., 63.5% were moderately satisfied, while 25.8% were highly satisfied).

Personal Characteristics		No.	%
Age Groups	<50 years	232	38.7
	50-60 years	222	37.0
	>60 years	146	24.3
Gender	Males	436	72.7
	Females	164	27.3
Level of Education	Illiterate	175	29.2
	Primary	147	24.5
	Intermediate	68	11.3
	Secondary	81	13.5
	University	101	16.8
Marital Status	Postgraduate	28	4.7
	Married	534	89.0
	Divorced	39	6.5
	Single	21	3.5
Employment	Widowed	6	1.0
	Unemployed	182	30.3
	Employed	418	69.7
Monthly Income	<10,000 SR	428	71.3
	10,000 SR or more	172	28.7

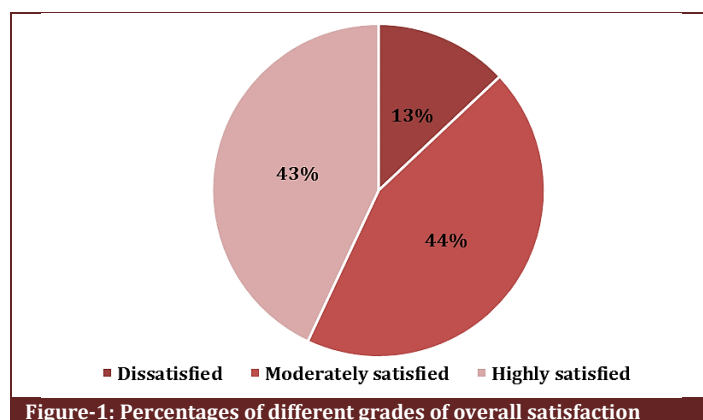


Figure-1: Percentages of different grades of overall satisfaction

Grades of satisfaction		No.	%
Pre-clinic	Dissatisfied	169	28.2
	Moderately satisfied	191	31.8
	Highly satisfied	240	40.0
Clinic	Dissatisfied	80	13.3
	Moderately satisfied	246	41.0
	Highly satisfied	274	45.7
Post-clinic	Dissatisfied	64	10.7
	Moderately satisfied	381	63.5
	Highly satisfied	155	25.8
Overall satisfaction	Dissatisfied	78	13.0
	Moderately satisfied	264	44.0
	Highly satisfied	258	43.0

Grades of satisfaction	Al-Manhal		Al-Qabel		p value	
	N	%	N	%		
Pre-clinic	Dissatisfied	72	24.0	97	32.3	<0.001
	Moderately satisfied	81	27.0	110	36.7	
	Highly satisfied	147	49.0	93	31.0	
Clinic	Dissatisfied	23	7.7	57	19.0	<0.001
	Moderately satisfied	103	34.3	143	47.7	
	Highly satisfied	174	58.0	100	33.3	
Post-clinic	Dissatisfied	23	7.7	41	13.7	0.001
	Moderately satisfied	181	60.3	200	66.7	
	Highly satisfied	96	32.0	59	19.7	
Overall Satisfaction	Dissatisfied	22	7.3	56	18.7	<0.001
	Moderately satisfied	117	39.0	147	49.0	
	Highly satisfied	161	53.7	97	32.3	

Table-4: Comparison of different grades of satisfaction toward pre-clinic items according to patients' personal characteristics

Personal Characteristics		Pre-Clinic items						p value
		Dissatisfied		Moderately Satisfied		Highly Satisfied		
		N	%	N	%	N	%	
Age Groups	<50 years	53	22.8	59	25.4	120	51.7	<0.001
	50-60 years	85	38.3	57	25.7	80	36.0	
	>60 years	31	21.2	75	51.4	40	27.4	
Gender	Males	144	33.0	115	26.4	177	40.6	<0.001
	Females	25	15.2	76	46.3	63	38.4	
	Illiterate	39	22.3	43	24.6	93	53.1	
Level of Education	Primary	36	24.5	47	32.0	64	43.5	<0.001
	Intermediate	10	14.7	26	38.2	32	47.1	
	Secondary	24	29.6	45	55.6	12	14.8	
	University	49	48.5	23	22.8	29	28.7	
Marital Status	Postgraduate	11	39.3	7	25.0	10	35.7	<0.001
	Single	2	9.5	16	76.2	3	14.3	
	Married	164	30.7	145	27.2	225	42.1	
Employment	Widowed	2	33.3	2	33.3	2	33.3	<0.001
	Divorced	1	2.6	28	71.8	10	25.6	
	Unemployed	32	17.6	61	33.5	89	48.9	
Monthly Income	Employed	137	32.8	130	31.1	151	36.1	<0.001
	<10,000 SR	108	25.2	117	27.3	203	47.4	
	≥ 10,000 SR	61	35.5	74	43.0	37	21.5	

Table-5: Comparison of different grades of satisfaction toward clinic items according to patients' personal characteristics

Personal Characteristics		Clinic Items						p value
		Dissatisfied		Moderately Satisfied		Highly Satisfied		
		N	%	N	%	N	%	
Age Groups	<50 years	51	22.0	91	39.2	90	38.8	<0.001
	50-60 years	12	5.4	113	50.9	97	43.7	
	>60 years	17	11.6	42	28.8	87	59.6	
Gender	Males	67	15.4	169	38.8	200	45.9	0.032
	Females	13	7.9	77	47.0	74	45.1	
	Illiterate	14	8.0	74	42.3	87	49.7	
Level of Education	Primary	6	4.1	59	40.1	82	55.8	<0.001
	Intermediate	15	22.1	19	27.9	34	50.0	
	Secondary	15	18.5	35	43.2	31	38.3	
	University	20	19.8	51	50.5	30	29.7	
Marital Status	Postgraduate	10	35.7	8	28.6	10	35.7	0.190
	Single	2	9.5	5	23.8	14	66.7	
	Married	71	13.3	228	42.7	235	44.0	
Employment	Widowed	1	16.7	3	50.0	2	33.3	<0.001
	Divorced	6	15.4	10	25.6	23	25.6	
	Unemployed	8	4.4	85	46.7	89	48.9	
Monthly Income	Employed	72	17.2	161	38.5	185	44.3	0.064
	<10,000 SR	52	12.1	168	39.3	208	48.6	
	≥ 10,000 SR	28	16.3	78	45.3	66	38.4	

Table 3 shows that regarding pre-clinic items, diabetic patients attending Al-Qabel PHCC were more dissatisfied than those attending Al-Manhal PHCC (32.3% vs. 24%). On the other hand, there were less highly satisfied diabetics attending Al-Qabel PHCC than those attending Al-Manhal PHCC (31% vs. 49%). Differences in satisfaction grades were statistically significant ($p < 0.001$). Regarding patients' satisfaction toward clinic items, patients attending Al-Qabel PHCC were more dissatisfied than those attending Al-Manhal PHCC (19% vs. 7.7%). On the other hand, there were less highly satisfied diabetics attending Al-Qabel PHCC than those attending Al-Manhal PHCC (33.3% vs. 58%). Differences in satisfaction grades were statistically significant ($p < 0.001$). Regarding patients' satisfaction

toward post-clinic items, patients attending Al-Qabel PHCC were more dissatisfied than those attending Al-Manhal PHCC (13.7% vs. 7.7%). On the other hand, there were less highly satisfied diabetics attending Al-Qabel PHCC than those attending Al-Manhal PHCC (19.7% vs. 32%). Differences in satisfaction grades were statistically significant ($p < 0.001$). Regarding patients' overall satisfaction, patients attending Al-Qabel PHCC were more dissatisfied than those attending Al-Manhal PHCC (18.7% vs. 7.3%). On the other hand, there were less highly satisfied diabetics attending Al-Qabel PHCC than those attending Al-Manhal PHCC (32.3% vs. 53.7%). Differences in satisfaction grades were statistically significant ($p < 0.001$).

Table-6: Comparison of different grades of satisfaction toward post-clinic items according to patients' personal characteristics

Personal Characteristics		Post-Clinic Items						p value
		Dissatisfied		Moderately Satisfied		Highly Satisfied		
		N	%	N	%	N	%	
Age Groups	<50 years	42	18.1	119	51.3	71	30.6	<0.001
	50-60 years	8	3.6	168	75.7	46	20.7	
	>60 years	14	9.6	94	64.4	38	26.0	
Gender	Males	55	12.6	256	58.7	125	28.7	<0.001
	Females	9	5.5	125	76.2	30	18.3	
	Illiterate	10	5.7	113	64.6	52	29.7	
Level of Education	Primary	9	6.1	84	57.1	54	36.7	<0.001
	Intermediate	9	13.2	41	60.3	18	26.5	
	Secondary	13	16.0	57	70.4	11	13.6	
	University	15	14.9	68	67.3	18	17.8	
Marital Status	Postgraduate	8	28.6	18	64.3	2	7.1	0.383
	Single	2	9.5	9	42.9	10	47.6	
	Married	57	10.7	341	63.9	136	25.5	
Employment	Widowed	1	16.7	4	66.7	1	16.7	<0.001
	Divorced	4	10.3	27	69.2	8	20.5	
	Unemployed	5	2.7	116	63.7	61	33.5	
Monthly Income	Employed	59	14.1	265	63.4	94	22.5	<0.001
	<10,000 SR	44	10.3	254	59.3	130	30.4	
	≥ 10,000 SR	20	11.6	127	73.8	25	14.5	

Table-7: Frequency and percentage of different grades of overall satisfaction items according to patients' personal characteristics

Personal Characteristics		Overall Patient's Satisfaction						p value
		Absent		Moderate		High		
		N	%	N	%	N	%	
Age Groups	<50 years	50	21.6	64	27.6	118	50.9	<0.001
	50-60 years	17	7.7	130	58.6	75	33.8	
	>60 years	11	7.5	70	47.9	65	44.5	
Gender	Males	71	16.3	168	38.5	197	45.2	<0.001
	Females	7	4.3	96	58.5	61	37.2	
	Illiterate	24	13.7	57	32.6	94	53.7	
Level of Education	Primary	2	1.4	87	59.2	58	39.5	<0.001
	Intermediate	6	8.8	27	39.7	35	51.5	
	Secondary	17	21.0	37	45.7	27	33.3	
	University	22	21.8	46	45.5	33	32.7	
Marital Status	Postgraduate	7	25.0	10	35.7	11	39.3	0.165
	Single	3	14.3	8	38.1	10	47.6	
	Married	71	13.3	227	42.5	236	44.2	
Employment	Widowed	1	16.7	3	50.0	2	33.3	0.005
	Divorced	3	7.7	26	66.7	10	25.6	
	Unemployed	22	12.1	64	35.2	96	52.7	
Monthly Income	Employed	56	13.4	200	47.8	162	38.8	0.002
	<10,000 SR	52	12.1	173	40.4	203	47.4	
	≥ 10,000 SR	26	15.1	91	52.9	55	32.0	

Table 4 shows that, regarding diabetic patients' grades of satisfaction toward pre-clinic items, the highest proportion of dissatisfaction was observed among patients aged 50-60 years (38.3%). Differences in grades of satisfaction according to age groups were statistically significant ($p < 0.001$). Males expressed significantly higher proportion of dissatisfaction than females (33% vs. 15.2%, respectively, $p < 0.001$). Significantly higher grades of dissatisfaction were expressed by patients with higher levels of education ($p < 0.001$). Married and widowed patients expressed the highest proportion of dissatisfaction ($p < 0.001$). Employed patients expressed significantly higher proportion of dissatisfaction than unemployed patients ($p < 0.001$). Patients with higher monthly income had significantly higher proportion of dissatisfaction (35.5% vs. 25.2%, respectively, $p < 0.001$).

Regarding diabetic patients' grades of satisfaction toward clinic items, table 5 shows that the highest proportion of dissatisfaction was observed among patients aged <50 years (22%). Differences in grades of satisfaction according to age groups were statistically significant ($p < 0.001$). Males expressed significantly higher proportion of dissatisfaction than females (15.4% vs. 7.9%, respectively, $p = 0.032$). Significantly higher grades of satisfaction were attained by patients with lower levels of education ($p < 0.001$). Single patients expressed significantly least dissatisfaction (9.5%). Differences in grades of satisfaction according to marital status were statistically significant ($p < 0.001$). Employed patients expressed significantly higher proportion of dissatisfaction than unemployed patients (17.2% vs. 4.4%, respectively $p < 0.001$). Patients with higher monthly income had significantly higher grades of dissatisfaction (16.3% vs. 12.1%, respectively, $p < 0.001$).

Table 6 shows that, regarding diabetic patients' grades of satisfaction toward post-clinic items, the highest proportion of dissatisfaction was observed among patients aged <50 years (18.1%). Differences in grades of satisfaction according to age groups were statistically significant ($p < 0.001$). Males expressed significantly higher proportion of dissatisfaction than females (12.6% vs. 5.5%, respectively, $p < 0.001$). Single patients expressed significantly least dissatisfaction (9.5%). However, grades of satisfaction did not differ significantly according to marital status. Significantly higher grades of satisfaction were attained by patients with lower levels of education ($p < 0.001$). Employed patients expressed significantly higher proportion of dissatisfaction than unemployed patients (14.1% vs. 2.7%, respectively, $p < 0.001$). Patients with higher monthly income expressed significantly higher

proportion of dissatisfaction (11.6% vs. 10.3%, respectively, $p < 0.001$).

Table 7 shows that, regarding diabetic patients' grades of overall satisfaction, the highest proportion of dissatisfaction was observed among patients aged <50 years (21.6%). Differences in grades of satisfaction according to age groups were statistically significant ($p < 0.001$). Males expressed significantly higher proportion of dissatisfaction than females (16.3% vs. 4.3%, respectively, $p < 0.001$). Significantly higher grades of satisfaction were attained by patients with lower levels of education ($p < 0.001$). Grades of satisfaction did not differ significantly according to marital status. Unemployed patients expressed significantly higher grades of satisfaction than employed patients ($p = 0.005$). Patients with higher monthly income had significantly higher proportion of dissatisfaction (15.1% vs. 12.1%, respectively, $p = 0.002$).

Discussion

Patient satisfaction is one of the desired outcomes of health care, an element in health status, a measure of the quality of care, and as indispensable to assessments of quality as to the design and management of health care systems.^[21] Patient satisfaction is important to achieve in management of chronic diseases since the effectiveness of health care is determined by satisfaction with the services provided.^[22] A satisfied patient is more likely to utilize health care services, comply with medical treatment and continue with the health provider.^[21] Donabedian^[23] regarded patient's satisfaction/dissatisfaction as a patient's judgment upon the quality of care in all its aspects.

Ware et al.^[24] argued that patient characteristics are the determinants of satisfaction, whereas interpersonal manner, technical quality, accessibility, cost, continuity, the physical environment and availability of resources are the components of satisfaction. Consequently the present research aimed to assess the proportion of satisfaction among diabetic patients toward health care provided at the Chronic Diseases Clinics of PHCCs in Abha City, to identify areas of health care that show low satisfaction and to identify diabetic patients' characteristics associated with incomplete satisfaction.

To assess diabetic patients' satisfaction this study explored 27 items related to overall satisfaction toward health care received by diabetic patients. These items covered pre-clinic (which describe the steps performed before meeting the physician); clinic (which cover the physicians'

communication and clinical skills) and post-clinic items (which include referral, laboratory and pharmacy services). Results of this study showed that not all diabetic patients experienced overall satisfaction toward provided primary health care services. In other words, only 87% of diabetic patients were satisfied with provided health care at the primary health care chronic diseases clinics. The proportion of satisfied diabetic patients differed according to different aspects of care, i.e., 71.8% of diabetic patients were satisfied with pre-clinic items, 86.7% were satisfied with clinic items, while 89.3% were satisfied with post-clinic items. Findings of the present study revealed that pre-clinic items had the lowest proportion of diabetic patients' satisfaction, followed by clinic items.

This finding is in agreement with that reported by Kamien et al.^[25] who found that 90% of diabetic patients reported their satisfaction toward primary care in Australia. In Kuwait, Al-Dousari et al.^[26] reported that patients' satisfaction ranged from 75.2% to 78.4%. However, in Mexico, Doubova et al.^[27] reported that only half of diabetic patients were satisfied with their provided primary health care services. Ramirez et al.^[28] noted that the proportion of diabetic patients' satisfaction range from 64.8% to 88.0%. Several aspects of care before, during and after being in the clinic, cause greater dissatisfaction than others; provision of little information by the doctor, a perception that care was untimely, difficulty in obtaining an appointment, long waiting times and drug shortage are found by patients to be particularly annoying.

In Kuwait, Al-Doghaither et al.^[29] reported that PHC physician's communication skills (i.e., length of time spent with patients, explaining and responding to their queries, offering reassurance and support, etc.) were strong and important correlates of patients satisfaction. Moreover, in Saudi Arabia, Saeed et al.^[30] noted that about two-thirds of patients reported that careful listening of the doctor to patient's complaints is an important characteristic of an ideal physician. The presence of communication gaps between diabetic patients and their family physician leads to their dissatisfaction. Informing patients on different aspects of their health and about the care they need are very important for those with chronic conditions and treating them as co-participants in the process of decision-making has been repeatedly emphasized as an important patient right.^[22] When patients are well-informed and participate in treatment decisions, their anxiety decreases and their therapeutic adherence improves, thus increasing the chances of getting better health outcomes.^[31] Effective family doctor-patient communication requires sufficient consultation time.^[27]

Doubova et al.^[27] emphasized that patient's satisfaction can greatly influence their contribution to disease management, which is important for better control of their conditions. Diabetic patients with chronic conditions receive long-term care and this should be reliable, periodic, continuous, and coordinated among different providers. This study revealed significantly lower levels of satisfaction among diabetic patients who attended at Al-Qabel PHCC than those who attended at Al-Manhal PHCC, i.e. pre-clinic items (67.7% vs. 76%, respectively); clinic items (81% vs. 92.3%, $p < 0.001$); post-clinic items (86.3% vs. 92.3%, $p < 0.001$) and overall satisfaction (81.3% vs. 92.7%, $p < 0.001$).

In addition, this study revealed that grades of satisfaction differed significantly according to diabetic patients' age group, where higher grades of satisfaction were observed among older diabetic patients. The highest proportion of dissatisfaction toward pre-clinic items was observed among patients aged 50-60 years, while patients aged <50 had the highest proportion of dissatisfaction toward clinic and post-clinic items. Regarding overall satisfaction, the highest proportion of dissatisfaction was observed among patients aged <50 years. This finding is in agreement with that of several researchers. It is generally observed that older respondents generally record higher satisfaction toward provided health care services.^[32-34] Thiedkel^[35] stated that older patients tend to be more satisfied with their provided health care. In addition, Moemen^[36] reported that younger patients were less satisfied than older patients. Possible explanations for this common finding were stated, including lower expectations of health care and reluctance to articulate their dissatisfaction.^[37]

This study revealed that grades of satisfaction differed significantly according diabetic patients' gender, where higher proportions of dissatisfaction regarding pre-clinic, clinic and post-clinic as well as overall satisfaction were observed among male diabetics. This finding is in accordance with that reported by Al-Dousari et al.^[26] in Kuwait, who found that female patients experienced higher satisfaction than males. However, Moemen^[36] reported no significant association between patients' satisfaction and gender as regard provided health care. On the other hand, Al-Eisa et al.^[38] reported that males had significantly higher satisfaction than females regarding provided health care services. Thiedkel^[35] pointed out that there is a controversy regarding the relation between patient's gender and his/her satisfaction. She explained this by that, due to differences in gender-roles within societies, results of studies about the effect of gender on patients' satisfaction are contradictory, with some studies showing

that women tend to be less satisfied and other studies showing the opposite. In the Kingdom of Saudi Arabia, males (i.e., husbands, brothers, sons and fathers) exceptionally take the full social responsibility toward their female family members (i.e., wives, sisters, daughters or mothers). This may explain why diabetic males are less satisfied with their regular trip to receive their health care services at the PHCC.

This study revealed that grades of satisfaction differed significantly according diabetic patients' educational status, where higher proportions of dissatisfaction regarding pre-clinic, clinic and post-clinic as well as overall satisfaction were observed among patients with higher levels of education. This finding is in accordance with those of several studies. Ayatollahi^[39] found that patients' level of education was inversely associated with their satisfaction. Moreover, Moemen^[36] found that illiterate patients and those who attained basic education only were significantly more satisfied than those receiving higher education. However, Gadallah et al.^[40] in Egypt, found no association between overall patient satisfaction and their educational level. Moemen^[36] explained this finding by that more educated patients have higher expectations of the service, whereas the lower educated usually appreciate getting any health care. Similarly, Babic-Banaszak et al.^[41] and Al-Doghaither^[29] added that less educated patients are generally more satisfied since they are less demanding. Moreover, Al-Dousari et al.^[26] added that explained this finding by that educated patients tend to be more aware of their rights and the limits of the primary health care role.

This study concluded that, with the exception of pre-clinic items, grades of satisfaction did not differ significantly according diabetic patients' marital status. Married and widowed patients expressed the highest proportion of dissatisfaction toward pre-clinic items. This finding is in accordance with that of Gadallah et al.^[40] and Narayan et al.^[42] who found no statistically significant differences in diabetic patients' grades of satisfaction according to their marital status.

This study documented that grades of satisfaction differed significantly according to diabetic patients' employment status, where higher proportions of dissatisfaction regarding pre-clinic, clinic and post-clinic as well as overall satisfaction were observed among employed diabetics. Moreover, this study revealed that grades of satisfaction differed significantly according diabetic patients' monthly income, where higher proportions of dissatisfaction regarding pre-clinic, clinic and post-clinic as well as overall satisfaction were observed among diabetics with higher

monthly income. This finding is not in accordance with that of Al-Dousari et al.^[26] who found that, the extent of patient satisfaction significantly increased as family income increased. On the other hand, Thiedke^[35] noted that most studies have found that unemployed individuals and those with lower socioeconomic status tend to be less satisfied with their health care.

The fact that diabetic patients with higher monthly income have wider choices for obtaining better health care services than that provided at the primary health care level, may explain the finding of this study that diabetic patients with higher monthly income were less satisfied. This study has provided important findings on several aspects of primary health services provided to diabetic patients, which reflect the quality of provided healthcare. This study is expected to help policy makers and healthcare providers better understand patients' views which can be optimally utilized in planning, controlling and delivering healthcare services. This would eventually improve the healthcare system toward the fulfilment of better patient health care and patient satisfaction.

Conclusion

This study concluded that, (i) Diabetic patients' satisfaction grade was least toward pre-clinic (i.e., PHCC accessibility, availability of parking areas, comfortable waiting area, short waiting times and measurement of patient's vital signs before meeting the physician) followed by post-clinic items (i.e., performing the necessary routine investigations, availability and accessibility of labs within the PHCC, availability of medications within the PHCC's pharmacy). (ii) Patients attending Al-Manhal PHCC experience higher satisfaction than those attending Al-Qabel PHCC. (iii) Patients' characteristics associated with less satisfaction include younger age, male gender, higher education, employment and higher monthly income.

RECOMMENDATIONS

- There is a pressing need to remedy the areas that received low level of patient satisfaction in the present study such as (i.e., pre-clinic and post-clinic items).
- To improve patients' satisfaction toward clinic-items, physicians in PHCCs should be better trained to increase their clinical and communication skills.

References

1. Aubert RE, Herman WH, Waters J, Moore W, Sutton D, Peterson BL, et al. Nurse case management to improve glycemic control in diabetic patients in a health maintenance organization. A randomized, controlled trial. *Ann Intern Med* 1998; 129:605-21.
2. Greineder DK, Loane KC, Parks P. A randomized controlled trial of a

- pediatric asthma outreach program. *J Allergy Clin Immunol* 1999; 103:436-60.
3. Wagner EH. The role of patient care teams in chronic disease management. *BMJ* 2000; 320:569-72
 4. Laurence CO, Gialamas A, Bubner T, Yelland L, Willson K, Ryan P, Beilby J. Point of Care Testing in General Practice Trial Management Group. Patient satisfaction with point-of-care testing in general practice. *Br J Gen Pract*. 2010; 60(572):e98-104.
 5. Singh J. A multifaceted topology of patient satisfaction with a hospital. *J Health Care Marketing* 1990; 10:8-21.
 6. Iliyasu Z, Abubakar IS, Abubakar S, Lawan UM, Gajida AU. Patients' satisfaction with services obtained from Aminu Kano Teaching Hospital, Kano, Northern Nigeria. *Niger J Clin Pract*. 2010; 13(4):371-8.
 7. Ziaei H, Katibeh M, Eskandari A, Mirzadeh M, Rabbanikhah Z, Javadi MA. Determinants of patient satisfaction with ophthalmic services. *BMC Research Notes* 2011, 4:7
 8. Reid AC, Hollis CW. Patient Expectations and Satisfaction – Drivers to Improving Medical Practice. ANZMAC Visionary Marketing for the 21st Century: Facing the Challenge, 2000; pp. 1047-1052.
 9. Press I. Patient Satisfaction: Defining, Measuring, and Improving the Experience of Care. Chicago: Health Administration Press; 2002.
 10. Wolosin, RJ. The Voice of the Patient: A National, Representative Study of Satisfaction with Family Physicians. *Qual Manag Health Care* 2005; 14(3):155-164.
 11. Aharony L, Strasser S. Patient satisfaction: what we know about and what we still need to explore. *Med Care Rev* 1993, 50:49-79.
 12. Rubin HR, Gandek B, Rogers WH, Kosinski M, McHorney C, Ware JE. Patients, ratings of outpatient visits in different practice settings. *JAMA* 1993; 270:835-40.
 13. Federman AD, Cook EF, Phillips RS, et al. Intention to discontinue care among primary care patients: influence of physician behavior and process of care. *J Gen Intern Med* 2001; 16(10):668-674.
 14. Infante FA, Proudfoot JG, Powell Davies G, Bubner TK, Holton CH, Beilby JJ, Harris MF. How people with chronic illnesses view their care in general practice: a qualitative study. *Med J Aust* 2004; 181: 70-73.
 15. Dahiru T, Aliyu A, Kene TS. Statistics in Medical Research: Misuse of Sampling and Sample Size Determination. *Ann Afr Med* 2006; 5(3):158-61.
 16. Bidaut-Russell M, Gabriel SE, Scott CG, Zinsmeister AR, Luthra HS, Yawn B. Determinants of patient satisfaction in chronic illness. *Arthritis Rheum*. 2002;47(5):494-500.
 17. Doherty D. Measurement of patient satisfaction guidelines. Health Strategy Implementation Project. Health Services National Partnership Forum, 2003; pp. 2-37.
 18. Narayan KM., Gregg EW, Fagot-Campagna A, Gary TL, Saaddine JB, Parker C, Imperatore G, Valdez R, Beckles G, Engelgau MM. Relationship between Quality of Diabetes Care and Patient Satisfaction. *J Natl Med Assoc*. 2003;95:64-70.
 19. Garratt AM, Danielsen K, Hunskaar S. Patient satisfaction questionnaires for primary care out-of-hours services: a systematic review. *Br J Gen Pract* 2007; 57: 741-747.
 20. Al-Dousari H, Al-Mutawa A, Al-Mithen N. Patient Satisfaction According to Type of Primary Healthcare Practitioner in the Capital Health Region, Kuwait. *Kuwait Med J* 2008; 40 (1): 31-38.
 21. Westaway MS, Rheeder P, Van Eyzl DG, Seager JR. Interpersonal and organizational dimensions of patient satisfaction: The moderating effects of health status. *Int J Qual Health Care* 2003; 15(4):337-44.
 22. Sitzia J, Wood N. Patient satisfaction: A review of issues and concepts. *Soc Sci Med* 1997; 45:1829-43.
 23. Donabedian A. Explorations in quality assessment and monitoring: Vol 1: The definition of quality and approaches to its assessment. Ann Arbor, MI: Health Administration Press, 1980.
 24. Ware JE, Snyder MK, Wright WR, Davies AR. Defining and measuring patient satisfaction with medical care. *Eval Prog Plan* 1983; 6:247-63.
 25. Kamien M, Ward A, Mansfield F, Fatovich B, Mather C, Anstey K. Type 2 diabetes. Patient practices, and satisfaction with GP care. *Aust Fam Physician*. 1995; 24(6):1043-9, 1051.
 26. Al-Dousari H, Al-Mutawa A, Al-Mithen N. Patient Satisfaction According to Type of Primary Healthcare Practitioner in the Capital Health Region, Kuwait. *Kuwait Med J* 2008; 40 (1): 31-38.
 27. Doubova SV, Pérez-Cuevas R, Zepeda-Arias M, Flores-Hernández S. Satisfaction of patients suffering from type 2 diabetes and/or hypertension with care offered in family medicine clinics in Mexico. *Salud Pública de México* 2009; 51(3): 231-9.
 28. Ramirez de la-Roche O, López-Serrano A, Barragán-Solis A, Arce-Arrieta E. User Satisfaction at a Social Security Institute Family Medical Center in Mexico City. *Arch Med Fam* 2005;7:22-26.
 29. Al-Doghaither AH. Inpatient satisfaction with physician services at King Khalid University Hospital, Riyadh, Saudi Arabia. *East Mediterr Health J*, 2004; 10(3):358-64.
 30. Saeed AA, Mohamed BA, Magzoub ME, Al-Doghaither AH. Satisfaction and correlates of patients' satisfaction with physician services in primary health care centers. *Saudi Med J* 2001; 22(3):262-7.
 31. Stewart MA. Effective physician-patient communication and health outcomes: a review. *Can Med Assoc J* 1995;152:1423-1433.
 32. Williams SJ, Calnan M. Convergence and divergence: assessing criteria of consumer satisfaction across general practice, dental and hospital care settings. *Soc Sci Med* 1991; 33(6):707-716.
 33. Pope C, Mays N. Opening the black box: an encounter in the corridors of health services research. *BMJ* 1993; 306:315-8.
 34. Owens D, Batchelor C. Patient Satisfaction and the Elderly. *Soc Sci Med*. 1986; 42(11):1483-1491.
 35. Thiedke CC. What do we really know about patient satisfaction? *Fam Pract Manag* 2007;14(1):33-6.
 36. Moemen MM. Patient satisfaction among attendants of outpatient clinics of different clinical departments at Alexandria main university hospital. *Alexandria Bull Alex Fac Med* 2008; 44(1):229-40.
 37. Doherty D. Measurement of patient satisfaction guidelines. Health Strategy Implementation Project. Health Services National Partnership Forum, 2003; pp. 2-37.
 38. Al-Eisa IS, Al-Mutar MS, Radwan MM, Al-Terkit AM. Patient satisfaction with primary health care services at Capital Health Region, Kuwait. *Middle East Journal of Family Medicine* 2005; 15:215-20.
 39. Ayatollahi SM. Patient satisfaction from their consultant physician in Shiraz. *Journal of Kerman University of Medical Science* 1999; 6(30):149-56.
 40. Gadallah M, Zaki B, Rady M, Anwar W, Salam I. Patient satisfaction with primary health care services in two districts in Lower and Upper Egypt. *East Mediterr Health J* 2003; 9(3):422-30.
 41. Babic-Banaszak A, Kovacic L, Mastilica M, Babic S, Budac A. The Croatian health survey-patient satisfaction with medical service in primary health care in Croatia. *Collegium Anthropologicum* 2001; 25(2):449-58.
 42. Narayan KM, Gregg EW, Fagot-Campagna A, Gary TL, Saaddine JB, Parker C, et al. Relationship between Quality of Diabetes Care and Patient Satisfaction. *J Natl Med Assoc*. 2003;95:64-70.

Cite this article as: Ghazwani EY, Al-Jaber OA. Study of satisfaction of diabetic patients attending the diabetes clinic at primary health care centers in Abha City, Saudi Arabia. *Int J Med Sci Public Health* 2014;3:436-443.

Source of Support: Nil

Conflict of interest: None declared