

ABSTRACT

Background: Patient satisfaction is of increasing importance and widely recognized as an important indicator of quality of the medical care. There was no homogeneous definition of patient satisfaction, since satisfaction concerns different aspects of care or settings, as well as care given by various professions.

Objective: The objective of this study is to assess the patients' level of satisfaction with diabetes care and to identify the underlying factors influencing it.

Methods: This cross-sectional study had been conducted in the Specialized Center for Diabetes and Endocrinology in Baghdad Al -Rusafa 2018. Where 150 type two diabetic patients attending their follow-up were requested to fill the questionnaire. The questionnaire identified patients, doctors, and practice related factors. For statistical analysis of the data, SPSS Version 24 was used, and the Chi-square statistical test was applied, A p-value less than 0.05 was considered statistically significant.

Results: The study showed that the overall level of satisfaction was 79.3%. There was a statistically significant association between age group, gender, profession,

educational level and marital status where P value 0.001 for all variables.

Conclusion: It was concluded from the study that patients' satisfaction was high. Majority of the diabetic patients were satisfied with health services, the level of satisfaction increases with age, female gender, and married patients, but it decreases with a high level of education and profession. High level of dissatisfaction seen on treatment services

Keyword: Patients satisfaction, type II diabetes mellitus,

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INTRODUCTION

Patient satisfaction is of increasing importance and widely recognized as an important indicator of the quality of medical care. There was no homogeneous definition of patient satisfaction, thus the interpretation of patients' satisfaction as an overall score is often difficult.^(1,2)

Many studies have focused on main components including patients', physicians' and practices' characteristics, which influenced patients' ratings of satisfaction.⁽³⁾ Satisfied patients are more likely to follow treatment instructions and medical advice, which ensure Continuity of care,⁽⁴⁾ Moreover, the characteristics of the external environment have been also considered as additional factors influencing individual evaluation.^(5,6)

Improving the quality of care for patients with chronic conditions like diabetes mellitus became an important focus of the health care system and policy.⁽⁷⁾

The focus on diabetes mellitus was increasing; studies showed that a number of adults having diabetes will be more than double between 2000 and 2030⁽⁸⁾.

The literature on diabetes mellitus has increasingly focused on the quality of diabetes care and its measurement. Health systems changed the way of thinking and delivering care i.e., the patient became the center of the overall care process, thus the quality of diabetes care widely depends on active involvement and participation of patients.⁽⁹⁻¹¹⁾

Some studies highlighted that satisfaction strongly increases when care is provided in accordance with the clinical standard procedures⁽¹²⁾. In addition to that, different psychosocial and behavioral hypotheses have been proposed to explain the association between patients' satisfaction and medical outcomes, where patient satisfaction may be both a consequence and a determinant of health status^(13,14).

Patient satisfaction represents "the voice of the patient," feedback that reflects responses to experiences created by health care workers⁽¹⁵⁾.

Concern over the quality of health services in Iraq has led to the loss of faith in public and private hospitals and increasing outflow of Iraqi patients to hospitals of neighboring countries. Under these circumstances and the absence of studies measuring healthcare quality, assessment of the country quality of health services has become imperative in which patients' voice must begin to play an important role.

The objectives of this study were to assess the level of satisfaction of patients with type two diabetes regarding diabetic care, and to identify the underlying factors affecting patient satisfaction regarding diabetic care.

METHODS

Setting and participants

This study was carried out in the Diabetes and Endocrinology Center at Al-Rusafa, Baghdad. This center consisted of tertiary care clinics providing care services for Al-Rusafa side population. It involved patients from a diffuse social and economic background, who are residing in the area and adjacent location. It also holds a diabetic clinic, which provides comprehensive diabetes care running by endocrinologist 5 days per week.

The study was descriptive cross-sectional with analytic elements. A convenient sample was used. Data collection was carried out from 1st of December to 28th of February 2019, during working hours of the study settings. The researchers visited the center (two) days per week from 10 am to 12 pm.

All type two diabetic patients, diagnosed at least >1 year, attending the above center were included. Pregnant female with gestational diabetes and patients with other chronic diseases were excluded. Handicapped and those exposed to terroristic explosion and psychological insults, also excluded.

Data was collected using a self-administered questionnaire with Type II diabetic patients attending The Specialized Center for Endocrinology and Diabetes Al Rusafa Health Directorate/ Al Nahda square in Baghdad. The questionnaire was answered individually and independently. The process of answering the questionnaire took about 15 minutes for each patient to complete.

Tools of data collection

Data was collected by using a self-administered questionnaire designed by the researchers (after revision of previous researches) which consisted of two parts:

Part I : This part consisted of the demographic information of patients: (Gender, Marital status, Profession, and education

Part II: This included multiple questions on patient satisfaction, concerned with the availability and accessibility of services, adequacy of information, providers' competence in providing different services. Patient satisfaction is a multidimensional construct, which focuses on patient perceptions and evaluation of the treatment and care they received. We used such established questions about patient satisfaction for this study to elicit patient satisfaction with the overall (or global) experience during the treatment visit, staff

respect, privacy and confidentiality, staff attitudes, communication, staff competency, and physical environment. The responses for satisfaction outcomes were categorically satisfying and dissatisfied and use score 0, 1 which represent dissatisfied and satisfied respectively.

$$\text{Satisfaction score} = \frac{\sum \text{satisfied items}}{\text{total items}} * 100$$

If the calculated score is more than 50%, the studied subject considered as satisfied

a) Health care

1. Time spent with the doctor
2. Medical care received today
3. Care received from Nurse
4. Waiting time to see a doctor

b) Health workers communication

1. Explanation your condition by a doctor
2. Treatment services
3. Courtesy, respect by Doctor
4. Doctor explanation about drug
5. Doctor listening to your worries.

c) Health workers attitude

1. Courtesy, respect by Doctor
2. Courtesy, respect by a nurse
3. The way staff treated you
4. Acceptance of opinion by staff

d) Environment

1. Amount of freedom in the ward

2. Amount of privacy in the ward
3. Facility cleanliness

Statistical Analysis

Statistical Package for Social Sciences (SPSS), software (version 24) was used to analyze the data via descriptive statistics, in form of tables and figures to show the results, frequencies, and percentages for dichotomous data. Pearson Chi-square test to examine the effects of socio-demographic data on the satisfaction of patients. P-value level of < 0.05 was considered for the significant association.

RESULT

Table (1) Shows majority of patients were older than 40 years old (50.6%), most of them were males(52%), and unemployed (62.7%).primary or below educational level patients were the majority (43.3%), 56% of patients were married.

Table (2) shows that 79.3% of patients were satisfied. Table (3) shows that there was a statistically significant association between all sociodemographic variables and their level of satisfaction, where P value 0.001 for each variable.

Table (4) shows that Patient satisfaction on health services was good especially for time spent with a doctor (77.3%), explanation patient`s condition by doctor (74.7%) the same percentage for courtesy respect by nurse and facility cleanliness ,respect by doctor(85.3%), (82%) for amount of freedom in the ward.

Table 1: distribution of studied sample regarding sociodemographic characteristics

Variables		Total no. 150	
		No.	%
Age group	31-40 years	28	18.7
	30 years	46	30.7
	> 40 years	76	50.6
Gender	Male	78	52
	Female	72	48
profession	Employed	56	37.3
	Unemployed	94	62.7
Educational Level	≥ Primary	65	43.3
	Secondary	27	18
	University	58	38.7
Marital status	Single	20	13.3
	Married	84	56
	divorced, widowed	46	30.7

Table 2: Distribution of sample according to the level of satisfaction

Levels of satisfaction	Frequency	%
Satisfied	119	79.3
Dissatisfied	31	20.7
Total	150	100.0

Table 3: Association between Sociodemographic variables of patients and their level of satisfaction

	No.	% Total no. 150	Satisfied. (119)				Dissatisfied (31)		P
			No.	%	No.	%	No	%	
Age group	30 years	46	30.7	42	35.3	4	13	0.001	
	31-40 years	28	8.7	10	8.4	18	58		
	> 40 years	76	50.6	67	56.3	9	29		
Gender	Mal	78	52	53	44.5	25	80.6	0.001	
	Female	72	48	66	55.5	6	19.4		
Profession	Employed	56	37.3	53	44.5	3	9.7	0.001	
	Unemployed	94	62.7	66	55.5	28	90.3		
Education	≥ Primary	65	43.3	53	44.5	12	38.7	0.001	
	Secondary	27	18	19	16	8	25.8		
	University	58	38.7	47	39.5	11	35.5		
Marital status	Single	20	13.3	9	7.5	11	35.5	0.001	
	Married	84	56	72	60.5	12	38.7		
	Others	46	30.7	38	32	8	25.8		

Table 4: The level of diabetic patient satisfaction regarding some aspects of health services

.Variables		Satisfied	
		No.	(%)
Health care	Time spent with the doctor	116	77.3
	Medical care received today	94	62.7
	Care received from Nurse	90	60
	Waiting time to see a doctor	87	58
Health workers communication	Explanation your condition by a doctor	112	74.7
	Treatment services	50	33.3
	Doctor explanation about drug	87	58
	Doctor listening to your worries	105	70
Health workers attitude	Courtesy, respect by Doctor	128	85.3
	Courtesy, respect by a nurse	112	74.7
	The way staff treated you	109	72.7
	Acceptance of opinion by the staff	90	60
Environment	Amount of freedom in the ward	123	82
	Amount of privacy in the ward	110	73.3
	Facility cleanliness	112	74.7

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⁽¹⁶⁾

The results showed that diabetic patients satisfaction with the provided services were good. These findings are approximately the same as diabetic patients satisfaction on health services in Kuwait where Al-Dousari et al reported that patients satisfaction ranged from 75.2% to 78.4%. However, in Mexico, Doubova et al reported that only half of the diabetic patients were satisfied with their provided services. Other studies showed a high level of satisfaction in comparison with this study where the level of satisfaction reported by Kamien et al reached 90% in Australia.^(17,18,19)

This study revealed that older participants were more satisfied with health care than younger patients; Thiedke stated that older patients tend to be more satisfied with their provided health care. Possible explanations for this common finding were stated, including lower expectations of health care and reluctance to articulate their dissatisfaction.^(20,21)

The current study showed that females were more satisfied with health services than males. This finding is in accordance with that reported by Al-Dousari et al in Kuwait,⁽²²⁾ however, Moemen reported no significant association between patients' satisfaction and gender as regard provided health care. On the other hand, Al-Eisa et al reported that males had significantly higher satisfaction than females regarding provided health care services.^(23,24)

The educated patients were less satisfied with health care than the non-educated. The relationship between diabetic patients' satisfaction with health care and education was statistically significant. This study is in agreement with the findings of a study conducted in Bamako where the illiterate individuals were more satisfied with the provided health services than the educated patients. Also, Ayatollahi found that patients' level of education was inversely associated with their satisfaction. However, Gadallah et al in Egypt found no association between overall patient satisfaction and their educational level. In this study, the educated patients may have gained more attention and higher expectation to have good health care whereas the lower educated usually appreciate getting any health care.^(25,26,27)

In this study the marital status was statistically significant with the level of satisfaction, this finding is not in accordance with that of Gadallah et al and Narayan et al who found no statistically significant differences in diabetics patients grades of satisfaction according to their marital status.^(28,29)

In addition to this, perceived waiting time was significantly associated with patient satisfaction. This is consistent with the study done in Eastern Ethiopia, where the level of satisfaction decreased with an increase in the perceived length of waiting time.⁽³⁰⁾

Patients satisfaction toward health workers communication in this study was fairly good except on treatment services where most of the patients were not satisfied because of the absence of medications needed by patients to control their diabetes.

A study in Ethiopia found poor staff communication skills and lack of empathy to be factors affecting patient satisfaction.⁽³¹⁾

In addition to, patients' satisfaction toward health workers attitude was good because the respect by staff and the way that the staff treated the patient was good.

This study revealed patients satisfaction toward the environment which includes (cleanliness, freedom, and privacy) was also good. Privacy and confidentiality have been found to be strong predictors of patient satisfaction when seeking and utilizing care.⁽³²⁾

Patients' ability to freely talk about missed or their problems with their healthcare provider is important for improving treatment outcomes and adherence which are essential for the full treatment benefits for diabetes patients⁽³³⁾.

CONCLUSION

1- Majority of the diabetic patients were satisfied with health services, the level of satisfaction increases with age, female gender and married patients and decreases with a high level of education.

2- High level of dissatisfaction seen on treatment services.

Recommendations:

- 1) Improving health services process, maintaining a close relationship between physician and patients, reducing waiting time to see a doctor will have a positive outcome on patients' satisfaction.
- 2) Enhancement of health workers communication, health workers attitude, facility cleanliness, privacy with physician and provide treatment services.

REFERENCES

1. Hornsten A, Lundman B, Selstam EK, Sandstrom H. Patient satisfaction with diabetes care. *J Adv Nurs* 2005;51:609-17
2. Kersnik J. An evaluation of patient satisfaction with family practice care in Slovenia. *Int J Qual Health Care* 2000;12:143-7.
3. Lubeck DP, Litwin MS, Henning JM, Mathias SD, Bloor L, Carroll PR. An instrument to measure patient satisfaction with healthcare in an observational database: Results of a validation study using data from CaPSURE. *Am J Manag Care* 2000;6:70-6.
4. 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.
5. Stubbe JH, Brouwer W, Delnoij DM. Patients' experiences with quality of hospital care: The consumer quality index cataract questionnaire. *BMC Ophthalmol* 2007;7:14.
6. 6-Kollen BJ, Groenier KH, Berendsen AJ. Patients' experiences with continuum of care across hospitals. *A*

- multilevel analysis of consumer quality index continuum of care *Patient Educ Couns* 2011;83:269-72.
7. 7-Gulliford MC, Naithani S, Morgan M. Continuity of care and intermediate outcomes of type 2 diabetes mellitus. *Fam Pract* 2007;24:245-51.
 8. 8-Herman WH, Zimmet P. Type 2 diabetes: An epidemic requiring global attention and urgent action. *Diabetes Care* 2012;35:943-4.
 9. 9-Maddigan SL, Majumdar SR, Guirguis LM, Lewanczuk RZ, Lee TK, Toth EL, et al. Improvements in patient-reported outcomes associated with an intervention to enhance quality of care for rural patients with type 2 diabetes: Results of a controlled trial. *Diabetes Care* 2004;27:1306-12.
 10. -Cornwell J, Goodrich J. Exploring how to enable compassionate care in hospital to improve patient experience. *Nurs Times* 2009;105:15.
 11. 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.
 12. Lantz PM, Janz NK, Fagerlin A, Schwartz K, Liu L, Lakhani I, et al. Satisfaction with surgery outcomes and the decision process in a population-based sample of women with breast cancer. *Health Serv Res* 2005;40:745-67.
 13. Katerndahl D, Calmbach WL, Becho J. Effect of comorbid depression on outcomes in diabetes and its relationship to quality of care and patient adherence: A statewide primary care ambulatory research and resources consortium study. *Prim Care Companion CNS Disord* 2012;14: PCC.11m01269.
 14. Alazri MH, Neal RD. The association between satisfaction with services provided in primary care and outcomes in Type 2 diabetes mellitus. *Diabet Med* 2003;20:486-90.
 15. 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.
 16. Westaway MS, Rheeder P, Van Ezyk 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.
 17. 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.
 18. 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.
 19. 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.
 20. Thiedke CC. What do we really know about patient satisfaction? *Fam Pract Manag* 2007;14(1):33-6.
 21. Doherty D. Measurement of patient satisfaction guidelines. Health Strategy Implementation Project. Health Services National Partnership Forum, 2003; pp. 2-37.
 22. 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.
 23. 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.
 24. Fomba S, Yang Y, Zhou H, Liu Q, Xiao PM. Patient's Utilization and Perception of the Quality of Curative Care in Community Health Centers of the Fifth Commune of Bamako. *Indian J*.
 25. Ayatollahi SM. Patient satisfaction from their consultant physician in Shiraz. *Journal of Kerman University of Medical Science* 1999;6(30):149-56.
 26. 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.
 27. 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.
 28. Abdosh B: The quality of hospital services in eastern Ethiopia: Patient's Perspective *Ethiop. J Health Dev* 2006, 20(3):199-200.
 29. Birhanu Z, Assefa T, Woldie M, Morankar S: Determinants of satisfaction with health care provider interactions at health centres in central Ethiopia: a cross sectional study. *BMC Health Serv Res*. 2010, 10: 30. PubMedCentralCrossRefPubMed.
 30. Lin YK, Lin CJ. Factors predicting patients' perception of privacy and satisfaction for emergency care. *Emerg Med J*. 2010;14:604-608. (PubMed).
 31. Paterson DL, Swindells S, Mohr J, Brester M, Vergis EN, Squier C, et al: Adherence to protease inhibitor therapy and outcomes in patients with HIV infection. *Ann Intern Med*. 2000, 133 (1): 21-30. CrossRefPubMed.
 32. Bärnighausen T, Chaiyachati K, Chimbindi N, Peoples A, Haberer J, Newell ML: Interventions to increase antiretroviral adherence in sub-Saharan Africa: a systematic review of evaluation studies. *Lancet Inf Dis*. 2011, 11 (12): 942-951. CrossRef.