

Patient satisfaction with primary health care services in two districts in Lower and Upper Egypt

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رضى المريض بخدمات الرعاية الصحية الأولية في مقاطعة شمالية وأخرى جنوبية في مصر
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الخلاصة: تقارن هذه الدراسة درجات رضى المرضى بخدمات الرعاية الصحية الأولية وتتعرف على العوامل المصاحبة لرضى المرضى في مقاطعتين صحيتين في مصر يدار في كل منهما برنامج للارتقاء بخدمات الرعاية الصحية الأولية منذ ثلاث سنوات. وقد أجريت مقابلات شخصية لدى مغادرة الناس للمرافق الصحية شملت 1108 مريضاً باستكمال استمارات معدة مسبقاً. وتبين أن معظم مستخدمي خدمات الرعاية الصحية الأولية من الإناث. وأن رضى المرضى كان واضحاً بالنسبة لدرجة الإناحة، وللظروف السائدة في مناطق الانتظار وأداء الأطباء والممرضات. وتركزت معظم الشكاوى على مدى توافر الأدوية الموصوفة والاستقصاءات المختبرية. بالإضافة إلى ذلك فقد وصفت مستويات الخصوصية في غرف فحص المرضى بأنها لا تبعث الرضى لدى 33% من المرضى. ولم يكن هناك ترابط بين الرضى العام لدى المرضى وبين العمر والجنس والثقافة ومستوى أو نمط الخدمات المقدمة.

ABSTRACT This study compares patient satisfaction with primary health care services and identifies factors associated with patient satisfaction in two health districts in Egypt where a project for upgrading primary health care services had been running for three years. An exit interview was conducted for 1108 patients using a structured questionnaire. The results revealed that most clients using primary health care services were females. Patient satisfaction was high for accessibility, waiting area conditions and performance of doctors and nurses. The main complaints centred on the availability of prescribed drugs and laboratory investigations. Additionally, level of privacy in the consultation room was described as unsatisfactory by 33% of patients. There was no association between overall patient satisfaction and age, gender, education level or type of service received.

Satisfaction des patients concernant les services de soins de santé primaires dans deux circonscriptions de Basse et Haute Egypte

RESUME La présente étude compare la satisfaction des patients concernant les services de soins de santé primaires et identifie les facteurs associés à la satisfaction des patients dans deux circonscriptions sanitaires en Egypte où un projet d'amélioration des services de soins de santé primaires était en place depuis trois ans. En utilisant un questionnaire structuré, 1108 patients ont été interrogés à la sortie. Les résultats ont révélé que la plupart des clients qui utilisaient les services de soins de santé primaires étaient des femmes. La satisfaction des patients était élevée pour ce qui concerne l'accessibilité, les conditions dans la salle d'attente et la prestation des médecins et des infirmières. Les plaintes principales concernaient la disponibilité des médicaments prescrits et les examens de laboratoire. En outre, le niveau d'intimité dans la salle de consultation était décrit comme insatisfaisant par 33 % des patients. Il n'y avait pas d'association entre la satisfaction générale des patients et l'âge, le sexe, le niveau d'instruction ou le type de service reçu.

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Introduction

Customer satisfaction is an important measure of service quality in health care organizations. From a management perspective, patient satisfaction with health care is important for several reasons. First, satisfied patients are more likely to maintain a consistent relationship with a specific provider. Second, by identifying sources of patient dissatisfaction, an organization can address system weaknesses, thus improving its risk management [1]. Third, satisfied patients are more likely to follow specific medical regimens and treatment plans. Finally, patient satisfaction measurement adds important information on system performance, thus contributing to the organization's total quality management. Health service quality has three dimensions: client quality, professional quality and management quality [2]. Client quality is the dimension that receives most attention in discussions of quality of health care based on how satisfied clients are with their care.

In Egypt, the health care infrastructure is reasonable in terms of facilities and personnel. The real challenge is to improve staff performance and patient satisfaction in order to minimize rework, wastage, delay and costs.

Today, we recognize that quality as perceived by the health care recipient is vitally important. As a result of this new focus, measurement of customer satisfaction has become equally important [3,4].

The aim of this study is to compare patient satisfaction with primary health care services in Lower and Upper Egypt. We explored the negative and positive aspects as perceived by patients. The results can be used to improve the performance of the primary health care system.

Methods

Sites of the study

Two governorates were selected randomly from 6 governorates in which a project to upgrade primary health care services had been implemented for 3 years (1998–2001). One governorate (Sharqiya) was selected from 4 governorates (Minufiya, Kafr El Sheikh, Sharqiya, and Beheira to represent Lower Egypt and another (Minya) was selected from 2 governorates (Minya and Sohag) to represent Upper Egypt.

Ten primary health care units/centres were selected randomly from Belbis district in Sharqiya governorate. Another 10 primary health care units/centres were selected in a similar way from Abu Korkas district in Minya governorate.

Sample

According to the sample size calculation, a sample of 514 patients for each site was required. Allowing for incomplete or unreliable answers, an extra 10% of the sample size was added. The final sample eligible for analysis was 554 patients for each study area. The following criteria were used for sample size calculation: confidence interval 95%; power of the test 80%; expected satisfaction rate 93% in Belbis district and 97% in Abu Korkas district.

Tools

This was a cross-sectional study followed by comparison between the study sites. An exit interview questionnaire was administered to patients in the selected primary health care facilities. The questionnaire was tested on 50 patients attending the primary health care facilities in each study site in order to identify any unclear or improper questions and to estimate the overall satisfaction rate. Minor changes were made,

and the final form of the questionnaire was approved by the investigators and some key personnel from the Ministry of Health and Population.

The survey was administered by a specially trained female social worker working in the same facility. The study investigators visited each site to train the interviewers, explain the objectives of the study and stress the importance of obtaining exact answers. The investigators then observed several demonstration exit interviews in order to gauge the capabilities of each interviewer.

The questionnaire collected sociodemographic characteristics and rated each patient's satisfaction level with regard to accessibility of primary health care facilities, waiting area conditions, clinical examination and drug prescription.

Patients had the option of answering as satisfied, not satisfied or neutral, but very few survey subjects described themselves as neutral on any of the questions; and the overwhelming majority (99%) answered either satisfied or not satisfied. Therefore, the investigators decided to consider answers of neutral as not satisfied.

Statistical analysis

The questionnaire was recoded to suit the computer statistical package *SPSS*, version 9.0. Mean, median, standard deviation and frequency distribution were calculated. Both chi-squared test for qualitative data and the Mann-Whitney U test for quantitative non-parametric data were done. The level of significance was set at 0.05.

Results

The majority of clients were between 20 and 60 years old with only a slight difference between the two districts regarding

age distribution (Table 1). Women made up 70.6% and 61.4% of survey recipients in Belbis and Abu Korkas respectively. In terms of educational status, there was a significant difference between the districts ($P < 0.001$), with 57.7% illiteracy among survey recipients in Abu Korkas compared to 35.9% in Belbis. There was also a significant difference between the two districts in terms of the type of health care services being received. Whereas in Belbis, 63.2% were outpatient clients and 20.4% were clients seeking antenatal care, in Abu Korkas the corresponding figures were 77.1% and 6.3% respectively; results for all types of services are given in Table 2.

Table 2 shows that primary health care facilities were described as easily accessible by 83.0% of Belbis respondents and 91.9% in Abu Korkas. There was no signi-

Table 1 Sociodemographic characteristics of patients attending the outpatient activities in primary health care units and centres

Variable	Belbis (n = 554)		Abu Korkas (n = 554)	
	No.	%	No.	%
<i>Age (years)</i>				
<20	171	30.9	173	31.2
21-60	351	63.4	355	64.1
>60	32	5.8	26	4.7
<i>Sex**</i>				
Male	163	29.4	214	38.6
Female	391	70.6	340	61.4
<i>Education***</i>				
Illiterate	199	35.9	320	57.7
Read and write	75	13.5	83	15.0
Primary/secondary	242	43.7	124	22.4
University	38	6.9	27	4.9

**Significant at $P < 0.01$.

***Significant at $P < 0.001$.

Table 2 Patient satisfaction regarding the accessibility of health services

Variable	Belbis (n = 554)		Abu Korkas (n = 554)	
	No.	%	No.	%
<i>Type of service***</i>				
Outpatient	350	63.2	427	77.1
Child vaccination	41	7.4	49	8.8
Antenatal care	113	20.4	35	6.3
Family planning	44	7.9	15	2.7
Emergency	6	1.1	28	5.1
<i>Accessibility of primary health care facility**</i>				
Easy	460	83.0	509	91.9
Difficult	94	17.0	45	8.1
<i>Method of arrival</i>				
Walking	414	74.7	428	77.3
By car/motorcycle	126	22.7	117	21.1
Animal	14	2.5	9	1.6
<i>Time needed to reach primary health care facility (minutes) **</i>				
< 10	225	40.6	319	57.6
11-15	160	28.9	80	14.4
> 15	169	30.5	155	28.0
<i>Cost of service**</i>				
Reasonable	515	93.0	541	97.7
Unreasonable	39	7.0	13	2.3

Significant at $P < 0.01$.*Significant at $P < 0.001$.

ficant difference between the two districts regarding the patients' methods of reaching the primary health care facility ($P > 0.05$). In terms of the amount of time needed to reach primary health care facilities, 40.6% of Belbis respondents said they were less than 10 minutes away and 28.9% said it took between 11 and 15 minutes, while in

Abu Korkas the corresponding figures were 57.6% and 14.4%. In Belbis, 7% of the clients stated that the cost of the service was unreasonable compared to 2.3% in Abu Korkas ($P < 0.01$).

Patient satisfaction with the facilities in the waiting areas is shown in Table 3.

Regarding patient satisfaction with examination rooms and clinical consultations (Table 4), 99.6% of respondents in Belbis said they were satisfied with the performance of the nurses compared with 96.8% in Abu Korkas ($P < 0.01$). There was no significant difference ($P > 0.05$) between the two districts regarding whether patients felt the doctor had listened attentively to their complaints. In Belbis 16.2% of clients stated that there was more than one patient inside the examination room, while in Abu Korkas the figure was 50.7% ($P < 0.001$). In both districts, more than 97% of clients said they felt they had been examined

Table 3 Patient satisfaction with waiting area

Variable	Belbis (n = 554)		Abu Korkas (n = 554)	
	No.	%	No.	%
<i>Availability of seats**</i>				
Enough	493	89.0	466	84.1
Not enough	61	11.0	88	15.9
<i>Comfort of seats</i>				
Comfortable	484	87.4	467	84.3
Not comfortable	70	12.6	87	15.7
<i>Ventilation*</i>				
Satisfactory	522	94.2	541	97.7
Not satisfactory	32	5.8	13	2.3
<i>Cleanliness**</i>				
Clean	529	95.5	547	98.7
Dirty	25	4.5	7	1.3

*Significant at $P < 0.05$; **Significant at $P < 0.01$.

Table 4 Patient satisfaction regarding examination room and clinical consultation

Variable	Belbis (n = 554)		Abu Korkas (n = 554)	
	No.	%	No.	%
<i>Patient-nurse relationship**</i>				
Proper	552	99.6	536	96.8
Improper	2	0.4	18	3.2
<i>Listening and discussion about the patient's complaint</i>				
Proper	534	96.4	540	97.5
Improper	20	3.6	14	2.5
<i>More than one patient inside the examination room***</i>				
Yes	90	16.2	281	50.7
No	464	83.7	273	49.3
<i>Patient examination by doctor</i>				
Proper	544	98.2	541	97.7
Improper	10	1.8	13	2.3
<i>Cleanliness of beds, covers, and linens</i>				
Clean	537	97.0	543	98.0
Not clean	17	3.0	11	2.0
<i>Explanation of treatment by doctor</i>				
Yes	546	98.6	544	98.2
No	8	1.4	10	1.8
<i>Availability of laboratory investigations when requested*</i>				
Available at primary health care facility	398	71.8	435	78.5
Not available	156	28.2	119	21.5

*Significant at $P < 0.05$; **Significant at $P < 0.01$;
***Significant at $P < 0.001$.

properly by doctors ($P > 0.05$) and 97.0% and 98.0% in Belbis and Abu Korkas respectively said they were satisfied with the cleanliness of the bedlinen ($P > 0.05$). In both districts, more than 98% of respon-

dents were satisfied with the doctors' explanation of the treatment ($P > 0.05$).

Conversely, 28.2% of respondents in Belbis and 21.5% in Abu Korkas ($P < 0.05$) said that laboratory investigations recommended by the doctor were not available. As shown in Table 5, there was a highly significant difference between the two districts for satisfaction regarding the availability of prescribed drugs from the primary health care facility: 63.7% in Belbis compared with 84.1% in Abu Korkas. In addition, the satisfaction level regarding the amount of drugs prescribed was 52.2% in Belbis and 81.2% in Abu Korkas ($P < 0.001$).

Table 6 shows the average amount of the time spent in the facility. Mean time spent waiting for entry to the examination room was 22.2 minutes \pm 24.7 minutes with median value 15.0 minutes in Belbis, while in Abu Korkas, mean waiting time was 18.1 minutes \pm 23.3 minutes with

Table 5 Patient satisfaction regarding drug prescription

Variable	Belbis (n = 554)		Abu Korkas (n = 554)	
	No.	%	No.	%
<i>Drug prescribed available</i>				
Yes	353	63.7	466	84.1
No	201	36.3	88	15.9
<i>Satisfaction with the quantity of the prescribed drugs***</i>				
Satisfied	289	52.2	450	81.2
Not satisfied	265	47.8	104	18.8
<i>Overall satisfaction for the health care provided</i>				
Satisfied	541	97.7	541	97.7
Not satisfied	13	2.3	13	2.3

***Significant at $P < 0.001$.

Table 6 Time spent seeking medical care, as perceived by patient (minutes)

How time was spent	Belbis				Abu Korkas				P-value ^a
	Range	Mean	Median	s	Range	Mean	Median	s	
Waiting for entry to examination room	5-160	22.2	15	24.7	5-180	18.1	10	23.3	<0.01
Having physical examination	1-30	12.1	10	6.6	1-30	6.7	5	5.2	<0.001
Waiting to get drugs	5-120	18.5	15	15.5	5-60	10.9	10	6.8	<0.001

^aUsing Mann-Whitney U test.

s = standard deviation.

median value 10.0 minutes ($P < 0.01$). The duration of the physical examination ranged from 1 minute to 30 minutes with a mean of 12.1 minutes \pm 6.6 minutes in Belbis and a mean of 6.7 minutes \pm 5.2 minutes in Abu Korkas with the difference statistically significant ($P < 0.001$). The mean time spent actually obtaining the prescribed drug was 18.5 minutes \pm 15.5 minutes in Belbis (median 15 minutes) and 10.9 minutes \pm 6.8 minutes (median 10 minutes) in Abu Korkas district ($P < 0.001$).

The overall satisfaction level with the health care provided was similar in both districts, at about 98%.

The results also revealed (not tabulated) that there was no significant relationship between patient satisfaction level and a respondent's age, sex, education level, type of service received or time needed to reach the primary health care facility.

Discussion

This study assessed the overall patient satisfaction level for health care provided by primary health care facilities in two geographical areas, one in Upper and one in Lower Egypt. The sociodemographic characteristics of 1108 patients, 554 in each study area, revealed that the majority of

those using primary health care facilities were middle-aged and female. A large majority of female patients had been expected from the start due to the fact that outpatient hours at the clinics were in the morning and early afternoon, when most of the men at both sites were at work.

The illiteracy rate among both male and female respondents was noted as being significantly higher in Abu Korkas (Upper Egypt) than in Belbis (Lower Egypt). This was consistent with similar illiteracy rates reported in the most recent national census (1996).

Accessibility is one of the principles of health for all, as stated in Alma Ata declaration on primary health care (1978) [5]. Our results showed that the vast majority of respondents in both districts had convenient access to primary health care. Moreover, about 58% of patients in Abu Korkas and about 41% in Belbis said they could reach their primary health care units/centres within 10 minutes. Similar results were obtained in Trinidad and Tobago regarding accessibility of primary health care facilities [6]. In a Saudi Arabian study, 13% of patients were dissatisfied with the accessibility to health care centres [7].

In terms of costs, primary health care in Egypt is relatively inexpensive as all preventive services are provided free of

charge and the unit cost of a visit to outpatient facilities affiliated with the Ministry of Health and Population is 12.38 Egyptian pounds (1 Egyptian pound = US\$ 0.22). The patient's contribution is 6.69 Egyptian pounds, which includes the ticket price and cost of examination, investigations and drugs [8]. The vast majority of respondents (95%) described the cost of a ticket (1 Egyptian pound) as reasonable.

In general, the results showed that the majority of patients are satisfied with the conditions of the waiting areas in primary health care units/centres. The waiting areas received satisfactory rankings with regard to size, comfort level and ventilation, Table 3.

A survey of different texts analysing patient-doctor/nurse relations revealed a consensus on a number of factors which determine patient satisfaction. They include proper acknowledgement of patients immediately upon arrival, allowing patients time to fully explain their health problems, a thorough examination with complete privacy followed by a thorough explanation by the doctor. Physicians should be encouraged to be punctual and attentive to the appointment schedule, so as not to cause too long a wait among patients [9-12].

The physical environment of outpatient clinics is an important factor in client satisfaction. Proper amenities enhance patient satisfaction level and willingness to return to the facility for subsequent health care needs [13,14].

The satisfaction level among patients hinges on such factors as a relaxing physical environment and the attentiveness and "bedside manner" of the physician. These elements improve patient satisfaction and secure their intention to continue using health facilities. Regarding patient-doctor relations, especially during clinical examinations or consultations, 97% of general

practitioners were described as patient and attentive. About 98% of patients surveyed said they were satisfied with the general practitioner's clinical examination, the physician's explanation of the prescribed treatment and the cleanliness of the beds. Our study also showed that about 97% of respondents were satisfied with nurse performance.

Nevertheless, one of the most consistent patient complaints was the presence of other patients inside the examination room at the time of examination, as mentioned by 16.2% and 50.7% of patients in Belbis and Abu Korkas respectively

Another point of dissatisfaction among the respondents was the inadequacy of the unit or centre's laboratory capabilities. Often, the tests and analysis ordered by the examining physician were unavailable at the primary health care facilities.

The issue of availability also arose regarding prescribed drugs: 26% of respondents reported that the prescribed drugs were not available from government facilities, forcing them to buy from more expensive private pharmacies. The issue of drug availability is a serious one. Until recently, there was no essential drug list available at the primary health care level in Egypt, but the Ministry of Health and Population has now issued essential drug lists for all levels of health care including the primary health care level.

In addition, one-third of study patients expressed dissatisfaction with the amount of drugs prescribed to them. This complaint was voiced more frequently by patients in Belbis.

The few existing studies on waiting times and patient satisfaction in primary health care have shown mixed results—the extent of the relationship between waiting time and patient satisfaction is unclear. Many patients may overestimate the length

of their wait. Therefore, actual waiting time should be measured and compared with perceived waiting time and if the results do not differ significantly, that means the patients evaluated their waiting time fairly [14]. But in general, it can be stated that the longer customers wait for their health care, the less satisfied they will be, and therefore the less likely to return for further treatment [15,16].

The overall satisfaction of the patients regarding the health care services provided at primary health care level was about 98% in both study sites. Another study in Egypt also reported a satisfaction rate of 95.9% for patients attending the outpatient clinics of university hospitals [17]. However, Sayed et al. reported an overall satisfaction rate of 90.5% among patients attending rural health units in Egypt [18].

These figures both compare favourably with similar patient satisfaction studies conducted in other countries. In Germany, the overall satisfaction rate among patients asked to evaluate their general practitioner was 95.4% [9]. Lower satisfaction rates were reported in Saudi Arabia, where the rate was only 60%, due in large part to language barriers, the relative inaccessibility of health facilities and the absence

of specialty clinics [7]. A very low rate of satisfaction (35.1%) was also reported in Bosnia and Herzegovina due to inaccessibility of health care, facility cleanliness and frequent staff turnover [19].

The high rate of overall satisfaction in the present study may reflect the recent improvements in the district health care system through a three-year upgrading project undertaken in both sites. This project was a collaborative effort between the Ministry of Health and Population and the Social Fund of Egypt, and includes facility renovation, equipment upgrading and staff development activities. It may also be due to the easy accessibility of health care facilities in Egypt. Supporting this explanation, Mcng et al. 1997, reported that accessibility is the strongest predictor of overall satisfaction with quality of health care [20].

The primary negative aspects revealed by the study include the lack of privacy during clinical consultations and what appears to be a chronic shortage of both prescribed drugs and laboratory analysis facilities. These issues must be addressed by health authorities at both the district and national levels in order to improve the overall quality of Egyptian health care.

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