Evaluation of the satisfaction of users of a service specialized in diabetes mellitus


Submission: 08-08-2017 Approval: 11-02-2017

ABSTRACT

Objective: to evaluate the satisfaction of users of a service that specializes in diabetes mellitus. Method: evaluative research, with mixed approach, developed at the Integrated Center for Diabetes and Hypertension of Barbalha-CE, in the period from 2011 to 2014, with 97 users. Data concerning the characterization and satisfaction of users in relation to the dimensions of infrastructure, accessibility and the user-health team relationship were collected. Results: 77.3% were older adults, 88.7% women and 84.8%, retired. 63.9% of the users were satisfied with the service; however, dissatisfaction with the dimensions of infrastructure (offices, equipment and medicines) and accessibility (laboratory tests and medical consultations) was reported. Final considerations: most users revealed being satisfied with the service received considering the dimensions analyzed. However, studies that assess the satisfaction of users need to contemplate the participants’ reports and not rely on the use of previously structured forms only.

Descriptors: Health Assessment; Patient Satisfaction; Diabetes Mellitus; Brazilian Unified Health System; Nursing.

RESEARCH

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INTRODUCTION

In recent years, the evaluation of health services proved itself to be an important instrument for planning and managing health systems and services, not only to evaluate the effectiveness of interventions and the efficient use of the available resources, but also to satisfy all of the system’s user population.

The approach to the evaluation of the quality of health services should be broad, covering the evaluation of structure (existence of adequate physical, human and organizational resources); the evaluation of work processes in the areas of management, support services and care services (organization and documentation, protocols, standards and routines); the evaluation of the results (impact of the care provided on the patient’s health situation, knowledge and behavior); the evaluation of health professionals in relation to their work environments; and the evaluation of the satisfaction of patients in relation to the service received.

National and international publications confirm the evaluation of the satisfaction of users in primary health units and hospitals as a growing trend adopted by researchers. However, in what concerns the assessment of the quality of care provided to users with diabetes mellitus (DM), it has been noted that publications on the satisfaction of these users are still scarce, and that most of the studies are developed within the framework of Family Health Strategy, thus indicating a lack of research conducted in services that specialize in diabetes, i.e., secondary level care services.

In addition, although the satisfaction of users in health services has been studied with a focus on treatment adherence, on accessibility, on infrastructure, on wait time, on the relationship with health professionals and on case management, there is a clear knowledge gap concerning the development of evaluative research involving other dimensions, such as the user-health team relationship in Secondary Health Care.

It is based on this gap that this study was designed, having as guiding question: what evaluative dimension is related to the greater or lesser satisfaction of users with DM2 in services that specialize in diabetes?

Considering the importance of the evaluation of the satisfaction of users for the development of actions that will lead to the improvement of care, and respecting the National Agenda of Priorities in Health Research that encourages the development of studies of this nature, the objective of this article was evaluating the satisfaction of users of a service specialized in diabetes mellitus, and verifying the relationship between users’ satisfaction and glycemic control.

METHOD

Ethical aspects

This study was approved by the Research Ethics Committee of the Federal University of Ceará and all participants signed the informed consent form.

Study design, location and period

The study encompassed an evaluative research with mixed approach, developed at the Integrated Center for Diabetes and Hypertension (CIDH) of Barbalha-CE, in the period from 2011 to 2014.

Population and sample

Initially, the medical records of all patients with DM (N = 1,076) registered in the city’s CIDH were analyzed. The following inclusion criteria were used: being diagnosed with DM2 and having a record of two or more medical consultations, per year, in the service, in the period between 2007 – 2009 (time required for full deployment of the Care Protocol for Diabetes Mellitus and Hypertension in Barbalha, which advocates the need for at least two appointments per year).

It should be noted that the user population with DM excluded from the study included those with a medical diagnosis of DM1 (n=71), those who had left treatment (n=613), those without record of two or more appointments (n=207), those who had died (n=85), those who had moved to another city (n=2) and those who had been hospitalized at the time of collection (n=1). In this way, the final sample of the present study encompassed 97 participants.

Study protocol

For the collection of data (relating to the characterization and satisfaction of users) participants were interviewed at the service in the room reserved for this purpose. The interviews were taped with the consent of the users and had an average duration of 25 minutes. For those unable to go to the study’s location, the interview took place at their own homes.

To verify user satisfaction, a validated form consisting of two parts was applied. The first refers to the characterization of the respondent and included the following variables: gender, age, education, occupation, family income, health insurance and frequency of use of and the most used services at the CIDH.

The second part of the instrument included open and closed questions relating to user satisfaction in the following dimensions: infrastructure, accessibility and user-health team relationship. The closed questions were assigned a scale (excellent, good, average, poor, very bad, I don’t know). Answers to the open questions inherent to each dimension investigated,
Results analysis and statistics

Quantitative data were subjected to double typing, stored in a database built on Microsoft® Excel, and processed with the statistical program Statistical Package for the Social Sciences, version 20.0. The mean, median and standard deviation were calculated along with their respective confidence intervals (CI = 95%). For the association of the variables user satisfaction and glycemic control, the mean of the HbA1c values was calculated and the nonparametric methods Chi-square ($\chi^2$) test and reason of verisimilitude were used.

The users’ answers to the interview were transformed into a scale of 0 to 100, when their normalcy was verified through the Kolmogorov-Smirnov test. In this way, a value greater than 50 was established for the classification of users as satisfied.

As for qualitative data, content analysis was used, by following the steps: pre-analysis, assessment of the material, processing of results obtained and their interpretation\(^{[14,15]}\). The reports obtained were categorized according to the dimensions studied.

RESULTS

The results showed that 77.3% were older adults, with an average age of 68.7 years old (SD = 10.2); 88.7% were women, 84.8% were retired, 56.7% had incomplete primary education, 62.9% received two monthly minimum wages and 8.2% had private health insurance. In addition, most participants reported using the CIDH with greater frequency for receiving medicines (99.0%), followed by medical consultation (89.7%).

In relation to the satisfaction of users with the service provided at the CIDH, 63.9% were satisfied. It was also found that 72.2%, 67.0% and 92.8% were satisfied with its infrastructure, accessibility and with the user-health team relationship, respectively.

Table 1 presents data relating to the infrastructure variables:

In relation to infrastructure, most of the items evaluated were categorized as “good”. In what concerns physical appearance, the data gathered from the reports of the respondents confirm this positive assessment.

Table 1 – Variables related to the infrastructure of the Integrated Center for Diabetes and Hypertension of Barbalha, Fortaleza, Brazil, 2016

<table>
<thead>
<tr>
<th>Variables related to infrastructure</th>
<th>Excellent n</th>
<th>Good n</th>
<th>Average n</th>
<th>Poor n</th>
<th>Very bad n</th>
<th>I don’t know n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical appearance of the CIDH*</td>
<td>8</td>
<td>62</td>
<td>63.9</td>
<td>23</td>
<td>2.1</td>
<td>-</td>
</tr>
<tr>
<td>Quality and quantity of equipment</td>
<td>14</td>
<td>70</td>
<td>72.2</td>
<td>12</td>
<td>1.0</td>
<td>-</td>
</tr>
<tr>
<td>Availability of medicines</td>
<td>18</td>
<td>43</td>
<td>44.3</td>
<td>22</td>
<td>2.1</td>
<td>-</td>
</tr>
<tr>
<td>Availability for examinations</td>
<td>-</td>
<td>26</td>
<td>26.8</td>
<td>24</td>
<td>6.2</td>
<td>2</td>
</tr>
<tr>
<td>Availability for procedures</td>
<td>3</td>
<td>23</td>
<td>23.7</td>
<td>14</td>
<td>14.4</td>
<td>43</td>
</tr>
</tbody>
</table>

Note: *Integrated Center for Diabetes and Hypertension
If they did everything here it’d be good. They don’t do examinations, y’know? If we could have them done here we wouldn’t need to move around so much. (E85)

They don’t do examinations, vaccination, wound dressing, but they should. (E19)

[..] If they offered vaccination it’d be better […]. (E74)

Regarding the dimension of accessibility, a significant portion of the users considered the following variables as “good”: access to scheduled consultations, waiting time for scheduled consultations, time spent during consultations, access to complementary examinations, access to specialized consultations, working hours, and commute to the CIDH.

However, for some variables analyzed, the sum of participants who deemed them as “average” and “poor” surpasses those who considered them to be “good”.

The users reported being dissatisfied in relation to the scheduling of medical consultations, emphasizing the difficult access to these consultations and long waiting time, especially for follow-up consultations.

Consultations are troublesome. If you show up on the wrong day then you’ve lost your chance. You can only schedule them on the 1st. I’ve come here twice and still haven’t been able to do it. (E28)

If you’re here five in the morning on the 1st then you’re able to do it. You have to schedule them one month early. I think that’s awful. (E36)

It takes too long! You can’t even tell how long. I’ve been waiting for four months. (E33)

With regard to access to non-scheduled consultations, according to the users, the CIDH does not undertake these cases, as may be noted in the following reports:

They send you immediately to the hospital. (E20)

When they can’t see you, they refer you to the hospital. (E8)

The delay in access to complementary and specialized examinations was also described by the users, as may be noted in the following reports:

Sometimes two, three months go by. I once had to wait a whole year for an examination. (E3)

He requested an eye examination and I was able to schedule it. It was good, I only had to pay to schedule it at Juazeiro. I had to pay because it was for the bottom of my eye. (E91)

In relation to the working hours, according to some users, they would like it if their consultations were scheduled for the mornings, due to the difficulty of commuting during the afternoon to the countryside. An excerpt from one of the reports illustrates this.

If there was a doctor to see us in the mornings, it would be better because it would help with that difficulty we have when coming here by car. (E52)

In relation to the commute to the CIDH, in general, most used public transportation (bus) to reach the service. Others came by foot and had to face uneven terrain on the way, which was not referred to as reason of dissatisfaction.

I’m satisfied with the commute here. It’s located near a bus stop. (E2)

There’s a small hill only, but it’s no trouble. (E44)

In the case of the third dimension, the user-health team relationship, most participants deemed it as “good” for all associated variables.
Table 3 – Variables related to the user-health team relationship of the Integrated Center for Diabetes and Hypertension of Barbalha, Fortaleza, Brazil, 2016

<table>
<thead>
<tr>
<th>Variables associated to the user-health team relationship</th>
<th>Excellent n</th>
<th>Excellent %</th>
<th>Good n</th>
<th>Good %</th>
<th>Average n</th>
<th>Average %</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Competence/technical quality of the health team</td>
<td>29</td>
<td>29.9</td>
<td>66</td>
<td>68.0</td>
<td>2</td>
<td>2.1</td>
</tr>
<tr>
<td>b) Service provided at the reception</td>
<td>32</td>
<td>33.0</td>
<td>62</td>
<td>63.9</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>c) Service provided by the nursing staff</td>
<td>30</td>
<td>30.9</td>
<td>66</td>
<td>68.0</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>d) Medical care</td>
<td>35</td>
<td>36.1</td>
<td>59</td>
<td>60.8</td>
<td>3</td>
<td>3.1</td>
</tr>
<tr>
<td>e) Explanations offered by the professionals</td>
<td>26</td>
<td>26.8</td>
<td>67</td>
<td>69.1</td>
<td>4</td>
<td>4.1</td>
</tr>
</tbody>
</table>

The reports below show that most users are satisfied with this health service. All of them declared that they would recommend the CIDH to others for its competence:

[...] Because it was here that I discovered my own health [...]. (E6)

I would recommend it, like I have many times before. Here the service is more comprehensive, we have access to a nutritionist, nurses, specialized doctors. (E83)

DISCUSSION

With regard to the infrastructure of the evaluated service, the findings showed that most of the users were satisfied. A similar result was found in another investigation that reported high satisfaction of users with the physical conditions of the health units in the municipalities of Ceará (23). However, the data are not unanimous. A research also conducted in the Northeast of Brazil, Caxias-MA, verified that all health units evaluated have been identified as inadequate by users (16).

The analysis of the answers of the subjective questions showed that the users have identified major structural problems that undermined the accessibility for older adults and those with visual or motor disorders. This perceived weakness of the service’s physical structure is worrisome, especially since most users with DM2 in the study were older adults.

It should be noted that this precarious or unsatisfactory structure of the service goes against what is foreseen in the National Policy for Older Adults that, among other things, ensures accessibility to older individuals, with reduction of architectural and urban barriers. Furthermore, a humanized and warm service practiced by skilled professionals in environments that are clean, comfortable and accessible to all, must be ensured to citizens in accordance with the Charter of Rights of the Brazilian Unified Health System (17).

The lack of adequate infrastructure evidenced here reflects a national and international issue (5-16, 18-19). Health units are often installed in temporary buildings, not having been planned and built specifically to meet the needs of users and professionals who work there. However, the ambience of the health services is not one of the main quality indicators identified by users, but rather the access and the bond with the health team (5, 20).

This fact can be understood when considering that user satisfaction is multidimensional in nature, involving not only technical aspects, but also symbolic dimensions, in which the subject’s perceptions, conceptions and actions, the social representations of the health-disease process and the way the health system is organized to meet the needs of users are included. In addition, authors have corroborated with this idea, as the relationship with the health team assumes a relevant role in minimizing the effects of an unsatisfactory service, when there is lack of sufficient infrastructure to meet the needs of the user (21).

The participants’ reports also evidenced their satisfaction with the mere fact of receiving care in the service. Other authors point out in their research that “being served” is one of the quality indicators highlighted by the users and that it may be historically associated with the difficult experiences of access to public health services (3).

Researchers point out that low-income users, usually due to their low education level and sociodemographic characteristics, not often express dissatisfaction with the quality of the services provided in the SUS, as they have no other option (19), also mentioning that the high level of satisfaction with the health service may be related to feelings of gratitude and low expectations (22).

The dissatisfaction with the lack of some medicines evidenced in this study, which could compromise the metabolic control of users with diabetes, has also been mentioned in other researches (3, 23). This fact denotes an important weakness in the dimension of the service’s structure. This lack of medicines may be related to the breach in the logistic cycle of medicines, especially in relation to the programming stage, which aims to ensure the availability of previously selected medicines, in adequate amounts and in a timely manner, to meet the needs of a given population, in a given period of time.

As was demonstrated with regard to the dimension of accessibility, one of the most significant aspects to the dissatisfaction of users was the wait time for consultations, and for the scheduling of examinations. These findings corroborate with other studies developed in Brazil (3, 24), as well as internationally (22). Such a finding is worrisome, since the time elapsed between consultations and routine exams is essential to the evaluation and subsequent implementation of therapeutic measures in people with diabetes.

Despite the users’ dissatisfaction with the waiting time for consultations and examinations, they felt satisfied with the time...
spent during consultations. The duration of the consultation contributes to the users’ overall satisfaction (25), and is also relevant to the quality of care, being associated with greater attention, qualified listening, valuing of the users’ complaints and careful collection of data for the anamnesis.

In what concerns the access to complementary examinations and specialized consultations, a significant percentage of the users were satisfied with it, however, in their reports, dissatisfaction regarding the difficulty in scheduling these procedures may be noted. Such dissatisfaction has been portrayed in the literature (24).

An alternative to minimize the problems identified by the users would be the municipal management’s adhesion to the National Regulation System (SISREG), created by the Ministry of Health, which brought major challenges to the governance of the SUS, but has been used for the management of access to the various levels of health care (26-27).

Still with regard to accessibility, in relation to working hours and commute to the service, the users were mostly satisfied. However, those residing in the countryside expressed dissatisfaction with regard to consultations needing to be scheduled for the afternoon, since the difficulty of access to transportation in this period makes it difficult to commute to the service. In fact, the literature has already pointed out that the distance to the health services and the inadequate transportation system has hampered the population’s access to secondary care, often generating a significant rate of absenteeism (18).

Transportation, for being a means of access to the services provided in the Health Care Network (RAS), is of fundamental importance, but has been reported as being one of the biggest obstacles to this same access. The Health Transportation System is part of one of the components of RAS’s operational structure, the logistical system. It connects the different health care centers to diagnostic and therapeutic support systems, being intended for the users of the SUS with physical and/or economic disabilities that render them unable to use the ordinary means of transport (27).

The user-health team relationship was the dimension that obtained the participants’ highest rate of approval in the study, especially with regard to communication with the health team. Maintaining a good relationship with the health professionals appears as an indispensable element for the ensuring of quality, encompassing: the professionals’ communication and listening skills; the explanations and information offered about the patients’ problems; the professional’s attentiveness and patience; the proper treatment of and respect for the patients; the ability to solve problems; education, kindness and friendliness (39).

Other studies emphasize the importance that should be given to the user-health team relationship (28-29). It becomes clear that the users’ satisfaction with the health services involves the different dimensions that relate not only to their technical quality, but also to the attention received and to the emotional relations between the subjects.

**Study limitations**

The limitation of this research consists in the small number of participants and, with this, it is suggested that other studies involving larger samples are carried out.

**Contributions to public health**

The knowledge on the satisfaction of users in relation to the quality of care provided to patients with diabetes mellitus provides subsidies for the planning and management of care, not only for the location where the research was conducted, but for all services that specialize in diabetes. This fact becomes especially relevant considering the scarcity of studies on the satisfaction of users of services that specialize in diabetes, in the secondary level of care.

In addition, it is important to emphasize that studies that assess the satisfaction of users need to contemplate the participants’ reports and not rely on the use of previously structured forms only. In this way, more reliable data that may contribute to the quality of the care provided in the health services can be obtained.

**CONCLUSION**

This study made it possible to assess the degree of satisfaction of users of the Integrated Center for Diabetes and Hypertension of Barbalha. Most users revealed being satisfied with the care received, all dimensions considered (infrastructure, accessibility and user-health team relationship). The fact that the user-health team relationship obtained the highest prevalence of satisfaction, while the dimension of accessibility obtained the lowest, stands out.

However, the users’ reports also evidenced their dissatisfaction with the dimension of infrastructure, having addressed the need for reforms and improvements in the equipment and offices, as well as in relation to planning so as to avoid the lack of some medicines.

Furthermore, they exposed their dissatisfaction in relation to the dimension of accessibility, when reporting the impossibility of conducting laboratory tests and other necessary procedures at the CIDH, as well as the difficult access to the scheduling of medical consultations and the long waiting time for the service.

**REFERENCES**


