

Research Article**Type 1 and type 2 Diabetes Patients' Perspectives on Self care:
management of disease****Govindraj Telang, Vikas Kasle and Meenesh Bhondare**Novel Medical College,
Ashta, Maharashtra, India
Email:govindrajtelang@gmail.com

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Abstract:

The objective of this qualitative study is to investigate the perspectives of patients with type 1 and insulin-treated type 2 diabetes regarding SMBG, including the barriers and facilitating factors in performing SMBG, and whether differences in perspectives exist between patients with type 1 and type 2 diabetes. This study aimed to identify areas for improvement in diabetes self-management.

Food and drinks: the category of the questionnaire regarding the Eating and drinking is necessary throughout the day, but the amount of carbohydrates always needs to be taken into account. This question was agreed by 42 patients with High priority, 9 moderate priority and 1 responded LOW priority. Exercising: theme of second question is- Exercise is healthy to exercise scheduled daily. For this question 39 patients pointed HIGH, 8 patient pointed moderate and 5 patient pointed LOW.

Medication: Need of medication to overcome the disease. Every form of medication necessitates careful monitoring of food consumption and exercise, and living a healthy lifestyle can help to lessen the need for medication. 40 patients choose HIGH, 12 patients chose Moderate. Being in control: Theme of question for the desire of the patients to overcome from DM. People with diabetes desire glycemic management that is within their control. All the participants chose at HIGH priority.

The findings highlight the significance of medicine, physical activity, and dietary control. Additionally, patients express a desire for control over their health and a need for knowledge, highlighting the importance of education in diabetes management. Overall, there is a clear consensus on the high priority of self-care and support systems.

Keywords: diabetes management, self-care and support systems, perspectives, SMBG, type 1 and type 2 diabetes.

Introduction

Diabetes mellitus is a growing healthcare challenge. Currently, 415 million adults worldwide have diabetes, a number that is expected to rise to 642 million by the year 2040 [1]. Patients with DM have a high risk of developing diabetes-related complications, such as cardiovascular diseases, retinopathy and kidney disease. Therefore, it is of vital importance to develop and implement more cost-effective and efficient strategies for the

treatment of DM. People living with diabetes (hereafter called patients) need and deserve high-quality, individualised care.[2,3] Type 1DM diabetes is called a young diabetes, it is almost evolving in a young age people; and although type 1 diabetes could also be found in adults. In this type of diabetes, the body is not being able to produce the sufficient insulin because the immune system of the body which shows resistance against the bacteria to infect

your body, injurious elements and other viruses which attacked on those cell which produce insulin in the human body [4]. Type 2 DM is generally characterized by insulin resistance, where the body does not fully respond to insulin. Because insulin cannot work properly, blood glucose levels keep rising, releasing more insulin. For some people with type 2 diabetes this can eventually exhaust the pancreas, resulting in the body producing less and less insulin, causing even higher blood sugar levels (hyperglycaemia). In order to obtain good glycemic control, self-monitoring of blood glucose (SMBG) is essential in insulin-treated patients with diabetes [5-7]. To prevent long-term complications, to be able to take adequate decisions in relation to diet, exercise, and medication, to evaluate the effects of these decisions, and to detect hypo- and hyperglycemia [8,9]. Many patients, however, monitor their blood glucose less than is recommended by their healthcare provider [10-12]. Qualitative research on patients' perspectives on SMBG, including the barriers and facilitating factors is scarce [14-17]. The behavior of the patient, not knowing how to correctly respond to the glucose readings, and being in poor glycemic control. However, in most of these studies the focus is mainly on patients with type 1 and 2 diabetes, not treated with insulin. More qualitative research is needed to increase the insight into perspectives of SMBG in insulin-treated patients with diabetes. These insights can help professionals support the patients in their self-management regarding SMBG [13,17,18].

The objective of this qualitative study is to investigate the perspectives of patients with type 1 and insulin-treated type 2 diabetes regarding SMBG, including the barriers and facilitating factors in performing SMBG, and whether differences in perspectives exist between patients with type 1 and type 2 diabetes. This study aimed to identify areas for improvement in diabetes self-management.

Study was approved by Institutional Ethics Committee of Novel Medical College, Ashta,

Maharashtra, India All patients provided written informed consent. Patients were assured that their anonymity is guaranteed throughout the study. All information collected will be treated with the utmost confidentiality. Patient names will be disassociated from the data to ensure that individual responses remain anonymous. The integrity and privacy of patient information are paramount, and measures have been implemented to protect this sensitive data.

Methods

Data-collection and Study Design

Each coauthor was involved in every phase of the study process, from objective definition to analysis and debate. We conducted interviews face-to-face. Patients with type 1 and type 2 diabetes were recruited from the District hospital in the Latur, Maharashtra, India. Inclusion criteria included being above the age of 18, being diagnosed with type 1 or type 2 diabetes, and self-monitoring blood glucose for at least six months. We enrolled patients of all ages, genders, socioeconomic backgrounds, education levels, and diabetes types. All subjects agreed and provided informed consent. Among the 52 patients, 27 had type 1 diabetes and 25 had type 2 diabetes. Table 1 summarizes the patients' demographic and background data.

Data-analysis

We conducted a theme analysis, which entailed frequently reading the samples and organizing them into categories. Themes were discussed among members of the analytic team until agreement was reached.[24]

Demographics of participants

Total number of patients were 52, among 32 were males and 20 were females, mean age of T1DM were 42(36-49) and T2DM were 62(58-73), 24 married and eight patients were single in marital status observed. Among them in T1DM 16 patients educated till 10th STD, 9 upto 12th STD and 2 were graduate and above, in T2DM 19 were educated upto 10th STD, 4 upto 12th STD and 2 were educated graduated and above.

Variables	n=52	Diabetes Mellitus Type 1 n=27(%)	Diabetes Mellitus Type2 n=25 (%)
Gender	Male	15 (55.55)	17 (62.96)
	Female	12 (44.44)	8 (29.62)
Age (years)		42(36-49)	62(58-73)
Marital status	Married	21 (77.77)	23 (85.18)
	Single	6 (22.22)	2 (7.40)
Education:	Upto 10 th STD	16 (59.25)	19 (70.37)
	Upto 12 th STD	9 (33.33)	4 (14.81)
	Graduate and above	2 (7.40)	2 (7.40)
Type of insulin therapy:	1 insulin injection per day		18 (66.66)
	2 insulin injections per day	11 (40.74)	6 (22.22)
	4 insulin injections per day	12 (44.44)	1 (3.70)
	insulin pump	4 (14.18)	

Table1: Demographic details of patients with type1 and type 2 diabetes (n=52)

In T1DM 11 patients were taking 2 insulin injections per day, 12 patients taking 4 insulin injections per day and 4 were taking the insulin pump. In T2DM 18 patients were taking 1 insulin injection per day, 6 patients taking 2 insulin injections per day and 1 were taking 4 insulin injections per day.

The individual interviews encompassed the frequency of self-monitoring of blood glucose (SMBG), its objectives, impact on daily life, knowledge, patient proficiency, confidence in self-care, diabetes management, patient involvement in treatment, the influence of relatives, the role of healthcare providers, and any obstacles and facilitators to conducting SMBG.

Categories	Themes of questionnaire	Responses n=52		
		High	Moderate	Low
Food and drinks	Eating and drinking is necessary throughout the day, but the amount of carbohydrates always needs to be taken into account.	42	9	1
Exercising	It is healthy to exercise scheduled daily	39	8	5
Medication	Every form of medication necessitates careful monitoring of food consumption and exercise, and living a healthy lifestyle can help to lessen the need for medication.	40	12	0
Being in control	People with diabetes desire glycemic management that is within their control.	52	0	0
Knowledge	Patients often perceive a high level of informational need	45	4	3
Desire self-care and living life.	Individuals in need of medical care want to have a lengthy	52	0	0
Managing diabetes	Assistance from loved ones, adaptability, participation in social activities, and personal accountability are all-necessary for patients.	52	0	0

Table: Patients' knowledge and Desire to control the DM.

Food and drinks: the category of the questionnaire regarding the Eating and drinking is necessary throughout the day, but

the amount of carbohydrates always needs to be taken into account. 42 patients agreed this question with High priority, 9 moderate priority and 1 responded LOW priority.

Exercising: theme of second question is- Exercise is healthy to exercise scheduled daily. For this question, 39 patients pointed HIGH, 8 patient pointed moderate and 5 patient pointed LOW.

Medication: Need of medication to overcome the disease. Every form of medication necessitates careful monitoring of food consumption and exercise, and living a healthy lifestyle can help to lessen the need for medication. 40 patients choose HIGH, 12 patients chose Moderate.

Being in control: Theme of question for the desire of the patients to overcome from DM. People with diabetes desire glycemic management that is within their control. All the participants chose at HIGH priority.

Knowledge: Patients often perceive a high level of informational need, 45 patients agreed to HIGH, 4 agreed Moderately, and 3 patients had Low response.

Desire self-care and living life. Individuals in need of medical care want to have a lengthy, all the participants opted HIGH.

Managing diabetes: Assistance from loved ones, adaptability, participation in social activities, and personal accountability are all-necessary for patients. All the participants opted HIGH.

Patients reported feeling encouraged in self-management, but felt they needed to learn everything about diabetes on their own. Participants reported a lack of motivation for exercise.

The findings highlight the significance of medicine, physical activity, and dietary control. Additionally, patients express a desire for control over their health and a need for knowledge, highlighting the importance of education in diabetes management. Overall, there is a clear consensus on the high priority of self-care and support systems.

Discussion

Although adults diagnosed with type 1 diabetes in childhood did not report diagnosis-related emotions in this study, adults with new-onset type 1 diabetes [19] and type 2 diabetes face

emotional challenges. [20] Therefore, people with all types of diabetes may need to work through denial, anger or fear at different stages of living with the disease in order to accept the presence of the disease in their lives and to move on to making positive lifestyle changes. Maintaining proper glycemic control requires individuals with diabetes to make difficult decisions and perform daily care tasks. Our study found that respondents prioritized knowledge, control, diet adaptation, exercise, regular routine, and adherence to complex prescription regimens. Our findings highlight two key factors to consider when designing user-centered self-management support programs for diabetes patients. To effectively help someone, it's crucial to intervene throughout their regular activities. Two-glycemic control decreases. For example, key challenges faced by people recently diagnosed with diabetes were accepting the diagnosis and becoming motivated to change their lifestyle, while more experienced patients were challenged by issues related to complications and medications. [21] Our findings also align with research suggesting that for people to maintain their desired level of diabetes self-management, they need the support of those around them [22,23]. This research's strength lies in its emphasis outside of the medical environment. Participants indicated comfort in discussing their experiences with diabetes and self-management. This study examined the self-management and support requirements of people with diabetes. The sample size was sufficient for this qualitative investigation, which aimed to get deep insights into individuals' experiences. To determine the generalizability of the findings, the current investigation should be replicated with a larger patient population. This may require a different technique. This research does not yet reveal what patients now lack in terms of self-management help. Further research is needed to improve self-management help. Our findings suggest avenues to improve diabetes care and management.

Conclusions

This research focuses on a hitherto unresearched patient population, providing unique insights for this group. This study highlights the necessity for a personalized approach to help individuals with DM and maintain stable glycemic control. Further research is needed to have a more comprehensive understanding of the findings. Improving support for self-management improves patients' lifestyle and health outcomes, motivates effective self-management, and reduces complications and costs.

Abbreviations

DM: diabetes mellitus

SMBG: Self-monitoring of blood glucose

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Availability of data and materials

The interview records are not publicly available to protect participant confidentiality, but are available from the corresponding author on reasonable request.

Ethics approval and consent to participate

All patients participating in the study gave written informed consent.

Competing interests

All authors declare that they have no conflict of interest.

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