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**ASSESSMENT OF KNOWLEDGE AND SELF-CARE PRACTICES AMONG  
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**Abstract**

The purpose of this study is to explore the levels of knowledge and self-care habits among diabetes patients, with a particular emphasis on the implications these practices have for the efficient management of the condition. Quantitative surveys and qualitative interviews were carried out with a representative sample of diabetic patients using a mixed-methods research strategy. The findings indicate that participants have various degrees of knowledge on the management of diabetes, showing gaps in comprehending the importance of essential aspects such as food, medication adherence, and monitoring blood glucose levels. Similar variations were observed in self-care practices, with considerable disparities in the degree to which individuals adhered to the suggested alterations to their lifestyle and to routine medical examinations. The implications highlight the significance of individualized educational interventions with the objective of boosting patient awareness and supporting consistent self-care behaviours in order to enhance overall disease management outcomes among diabetic populations.

**Keywords:** Knowledge, Self-Care, Practices, Diabetic Patients, Disease Management.

**1. INTRODUCTION**

Diabetes mellitus (DM), which is characterized by persistent hyperglycaemia that occurs as a result of irregularities in insulin secretion, insulin activity, or both, has emerged as a major global health concern in recent years. Based on current assessments, the prevalence of diabetes has reached alarming proportions, with an estimated total of 463 million adults affected by the condition in the year 2023, and it is anticipated that this number would rise to 700 million by the year 2045. Increasing populations, urbanization, sedentary lifestyles, and unhealthy eating habits are some of the factors that are contributing to this increase. As a result of its complexities, diabetes places a considerable burden on healthcare systems. These

complications include cardiovascular illnesses, neuropathy, nephropathy, and retinopathy, which contribute to the severity of the disease, death rates, and the number of people who require medical treatment anywhere in the world.

### **1.1.Importance of Knowledge in Diabetes Management**

In order to successfully control the condition and anticipate complications, it is essential to have knowledge about diabetes and the processes involved in its management. The patient is responsible for determining the standards for the management of their diet, actual work, adherence to their medication, and routine monitoring of their blood glucose levels. Patients benefit from having sufficient knowledge because it helps them to make decisions that are informed, participate in self-management practices, and successfully collaborate with healthcare providers. On the other hand, a lack of medical knowledge can lead to unfavorable treatment outcomes, an increased likelihood of misunderstanding, and increased expenditures associated with medical care.

### **1.2.Objectives of the study**

- ❧ To assess the level of knowledge about diabetes management among diabetic patients.
- ❧ To examine the extent of adherence to self-care practices among diabetic patients.
- ❧ To identify factors influencing knowledge levels and self-care practices among diabetic patients.

## **2. LITERATURE REVIEW**

Alhaik et.al (2019) and titled "An evaluation of self-care information among patients with diabetes mellitus" was published in the journal Diabetes and Metabolic Condition: Clinical Exploration and Surveys. The purpose of the review was to determine the extent to which diabetes patients have access to information regarding self-care. In their study, Alhaik and colleagues employed a quantitative methodology, which involved the utilization of research to gather information from a sample of diabetic patients. Their findings revealed that there were significant gaps in knowledge of diabetic self-care practices among the individuals of the group. More specifically, a significant number of patients shown a lack of comprehension about key aspects such as the management of eating routines, the adherence to medication,

and the routine monitoring of blood glucose levels. The review emphasizes the fundamental necessity of dedicated educational mediations in order to improve patient mindfulness and further develop self-care practices for the purpose of successfully managing diabetes.

Dedefo et.al (2019) and published in the BMC Exploration Notes journal. The purpose of this study was to investigate the ways in which diabetic people with diabetes in a specific region of Ethiopia conduct self-care. Research conducted by Dedefo et al. consisted of conducting organized interviews with diabetic patients in order to collect data using a cross-sectional design. According to their findings, members exhibited varying degrees of commitment to the self-care routines that were recommended to them, with notable variations in terms of nutrition control, actual work, and routine clinical checkups. In the review, financial considerations and access to medical treatment were identified as two of the most important factors that influence the manner in which diabetic patients in the district behave with regard to their own self-care.

Yekta et.al (2023) and published in the Diary of Exploration in Wellbeing Sciences. It was expected that this examination would evaluate self-care practices and related characteristics among diabetic patients who were located in an urban environment. With the help of a quantitative approach, Yekta and colleagues conducted a review of diabetes patients and explored the elements that influence the manner in which they behave when it comes to self-care. Their findings indicated that there was a modest level of adherence to self-care routines, with factors such as educational level, socioeconomic situation, and access to healthcare coverage all having an impact on the overall adherence rates. The review emphasizes the necessity of individualized mediations and strategy drives in order to further enhance self-care practices and improve the outcomes of diabetes management in metropolitan regions of Iran.

Tuha et.al (2021). The findings of this study were included in the book Diabetes, Metabolic Disorder and Stoutness: Targets and Treatment. The purpose of this study, which utilized a combination of research methods, was to investigate the diabetic foot self-care practices and related factors among patients seen at a reference clinic in Ethiopia. In order to compile information that was comprehensive, combined quantitative research with conversations that were more subjective. The findings of their research revealed that patients' levels of knowledge and adherence to diabetic foot care routines varied, depending on factors such as

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their level of health expertise, their access to healthcare facilities, and their socio-social beliefs. The analysis highlights the necessity of incorporating healthcare practices that place an emphasis on ongoing education and constant monitoring in order to prevent complications related to diabetic foot conditions.

Shrivastava et.al (2020) and colleagues were the authors of the review. Research into the spread of disease and the health of people all around the world. A survey of the information and self-care practices of diabetic patients in the coastal region of Karnataka, India, was anticipated to be conducted for this study. By conducting structured interviews with diabetic patients who were visiting tertiary healthcare offices were able to collect information. This was accomplished through the utilization of a cross-sectional design. The findings of their investigation revealed gaps in knowledge concerning diabetes mellitus and a lack of commitment to self-care routines among the participants of the group. It was determined that factors such as educational level, socioeconomic condition, and openness to healthcare administrations were among the components that had an impact. The evaluation focuses on the fundamental role that healthcare providers have in educating patients and promoting self-care habits that are persuasive in order to further develop diabetes management outcomes in the district.

### **3. RESEARCH METHODOLOGY**

#### **🔗 Study Design**

In this study, a cross-sectional design was applied to assess the levels of knowledge and self-care habits among patients who were diagnosed with type 2 diabetes mellitus and who visited a diabetes facility at a showing emergency clinic in the month of May 2023.

#### **🔗 Study Population and Sampling**

Patients who were traveling to the diabetes facility were included in the review population. Accommodation testing was used for this population selection. Incorporating all of the qualified patients who visited the facility during the study period resulted in a total of 117 individuals who agreed to take part in the review and gave their consent to participate.

#### **🔗 Informed Consent and Ethical Considerations**

Prior to the gathering of information, the purpose of the review was explained to each and

every member, and informed consent was obtained from them. Throughout the entirety of the exploration cycle, numerous precautions were taken to ensure the members' safety and privacy, as well as to ensure that their privileges and respect were respected.

### **🔗 Data Collection Instruments**

A poll that was regulated and semi-organized was developed in order to collect input from a few different locations.

### **🔗 Sociodemographic Information**

As part of this section, questions were asked about age, orientation, educational status, and financial status. These questions were surveyed using Kuppuswamy's classification, which took into consideration the monthly income of the entire family, the status of the word, and the level of educational satisfaction.

### **🔗 Diabetes Specific Information**

The members were questioned regarding the duration of their ailment, the levels of their momentum glycemic index, the technique of therapy, and the extent to which clinical care workers were involved in their management.

### **🔗 Knowledge Regarding Diabetes**

Through the use of questions concerning the concept of diabetes, methods for recognizing it, and the role of food, exercise, and adherence to prescriptions in the management of the condition, the levels of knowledge were evaluated.

### **🔗 Self-Care Practices**

It was determined how members behaved in relation to monitoring their glucose levels, adhering to smart diet plans, participating in workout regimens, giving their assent to prescribed medications, and conducting normal foot exams.

### **🔗 Data Analysis**

Graphical insights, such as frequencies and extents, were applied in order to summarize the sociodemographic characteristics, diabetes-specific data, knowledge levels, and self-care habits of the individuals who participated in the review. The use of inferential measurements, particularly the chi-square test, was employed in order to investigate the considerable association that exists between glycemic control and various self-care activities.

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#### 4. RESULTS

Table 1 provides a comprehensive summary of the characteristics that are considered to be standard among the diabetes patients who took part in the review. It is interesting to note that the age distribution of the responses is diverse, with 19 patients being less than 40 years old, 59 patients lying within the age range of 41-50 years, 41 patients maturing between 51-60 years, and 14 patients being older than 60 years old. The orientation circulation reveals that there are a somewhat greater number of male members than female members, with 75 males and 62 females participating in the review. During the process of analyzing the patients' financial situations, it was determined that fourteen individuals were classified as belonging to the upper social class, thirty-eight patients were from the working class, and the majority of the patients, eighty-nine, were from the lower social class.

**Tables 1: Baseline Characteristics of Diabetic Patients**

Variable	Category	Value
Age	< 40 years	19
	41-50 years	59
	51-60 years	41
	> 60 years	14
Gender	Male	75
	Female	62
Socioeconomic status	Upper class	14
	Middle class	38
	Lower class	89
Duration of onset of diabetes mellitus	< 1 year	11
	1-5 years	73
	5-10 years	39
	> 10 years	5

A similar variation was observed in the patients' ages at which they first experienced symptoms of diabetes mellitus. Eleven patients had been diagnosed with diabetes for a period of time that was less than one year, 73 patients had a disease span of one to five years, 39 patients had been living with diabetes for five to ten years, and only five patients had been

managing the condition for more than ten years. The following table provides information regarding the various demographics and financial backgrounds of the diabetic patients who were included in the review, as well as the fluctuations in the length of time they have been coping with their diabetes. This comprehensive information provides essential pieces of knowledge that are necessary for comprehending the various aspects of diabetes treatment and the specific requirements of diverse patient groups.

## 5. DISCUSSION

An investigation on the knowledge and self-care habits of diabetes patients was carried out by means of a series of inquiries, and the results are depicted in the controlled qualities. When asked whether diabetes is a genetic condition, 85 patients (72.65%) responded in the affirmative, while 32 patients (27.35%) did not answer in the affirmative. 92 patients, which is 78.63 percent, correctly identified that diabetes is not irresistible, while 25 patients, which is 21.37 percent, had the opposite perspective than the majority of the patients. In terms of the identification of diabetes, 104 patients, which accounts for 88.89% of the total, considered glucose testing to be the suggestive practice. Eighty patients, or 68.38 percent, agreed that practice was beneficial for controlling diabetes, while thirty-seven patients, or 31.62%, disagreed with this statement. A total of 90 patients, or 76.92%, believed that dietary modification was beneficial, while 27 patients, or 23.08%, did not believe that it was significant. A total of 81 patients, or 69.23%, believed that quitting smoking or drinking alcohol would be beneficial for control, while 36 patients, or 30.77%, did not agree. In response to the question of whether or not drugs should be continued even after glucose levels have been brought under control, 70 patients (59.83%) believed that they should be stopped, whereas 47 patients (40.17%) agreed that they should not be stopped. After that, when asked whether diabetes may be alleviated, 67 patients (57.26%) responded with a certain answer, whereas 50 patients (42.74%) disagreed with the statement. The results of this definitive evaluation provide valuable insights into the knowledge and practices of diabetes patients, highlighting areas in which additional training and intervention may be anticipated to further develop disease management.

**Table 2: Knowledge and Self-Care Practices Among Diabetic Patients**

Question	Yes	No
Is diabetes Hereditary?	85 (72.65%)	32 (27.35%)
Is diabetes Infectious?	92 (78.63%)	25 (21.37%)
How can diabetes be detected?	104 (88.89%)	-
Is exercise beneficial for control?	80 (68.38%)	37 (31.62%)
Is dietary modification beneficial for control?	90 (76.92%)	27 (23.08%)
Stop smoking / alcohol is beneficial?	81 (69.23%)	36 (30.77%)
Once controlled drugs should be stopped?	70 (59.83%)	47 (40.17%)
Diabetes can be cured?	67 (57.26%)	50 (42.74%)

**Table 3: Glycaemic Control and Self-Care Practices Among Diabetic Patients**

Variables	Glycaemic control achieved (70)	Glycaemic control not achieved (47)	Total (n=117)	P value
Test blood sugar regularly	65	41	106	0.78
Follow healthful eating plan	60	29	89	0.05
Participate in exercise	33	13	46	0.05
Good Drug compliance	54	26	80	0.04
Check feet	15	0	15	0.08
Carry quick acting sugar	32	18	50	0.35

In Table 3, the relationship between glycaemic control and various self-care activities among diabetes patients is presented, with a total of 117 patients serving as examples. Sixty-five of the seventy patients who were able to achieve glycaemic control checked their glucose levels on a regular basis. In contrast, forty-one of the forty-seven patients who were unable to



achieve glycaemic control did not check their glucose levels. This resulted in a total of 106 individuals with a P value of 0.78. An energizing eating plan was followed by sixty patients who achieved glycaemic control, whereas 29 patients who did not achieve control did the same. This resulted in approximately eighty-nine patients with a crucial P value of 0.05. It was found that cooperation in practice was accounted for by a total of 46 patients, with 33 patients having glycaemic control and 13 patients not having control, indicating that it was significant with a P value of 0.05. There were a total of 80 patients, and a wonderful P value of 0.04 was observed in 54 patients who achieved glycaemic control and 26 patients who did not achieve it. An excellent medication consistency was observed in both groups. The practice of checking feet was performed by 15 patients who had control of their blood glucose levels, whereas none of the patients who did not have control participated in this study. This resulted in a total of 15 patients and a P value of 0.08. Finally, the administration of sugar with a rapid onset of action was a successful method for 32 patients who achieved glycaemic control and 18 patients who did not, resulting in a total of 50 patients with a P value of 0.35. The following table provides an explanation of the value of specific self-care practices in the process of achieving glycaemic control among diabetic patients. It emphasizes the significance of regular monitoring, healthy eating, physical activity, and medication compliance.

## 6. CONCLUSION

The article titled "Appraisal of Knowledge and Self-Care Practices Among Diabetic Patients: Suggestions for Disease Management" demonstrates, without a doubt, that patients who have a greater amount of knowledge about diabetes and who consistently engage in self-care practices are more likely to achieve better glycemic control and to effectively manage their condition. Standard health education, which raises patient awareness about the concept of diabetes, its genetic and non-irresistible characteristics, and the necessity of lifestyle adjustments, has a significant role in the management of the condition, according to the findings of the research. It is possible to significantly enhance glycemic control by providing patients with the ability to adhere to a stimulating eating plan, participate in standard activity, adhere to their medication routine, and monitor their glucose levels. Patients should be

educated about the benefits of quitting smoking and alcohol, as well as the necessity of continuing to take medication even after they have achieved control of their glucose levels. This is an additional factor that supports the importance of disease management. Based on the findings of the research, it is recommended that healthcare providers can reduce the overall burden of healthcare by integrating health education into the treatment cycle and promoting self-care management. This would also assist patients in achieving optimal disease control with minimal complications over the long term. Not only does this comprehensive approach make it possible for patients to take charge of their own health, but it also emphasizes the value of self-awareness and proactive management in the treatment of diabetes.

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